nationalgrid

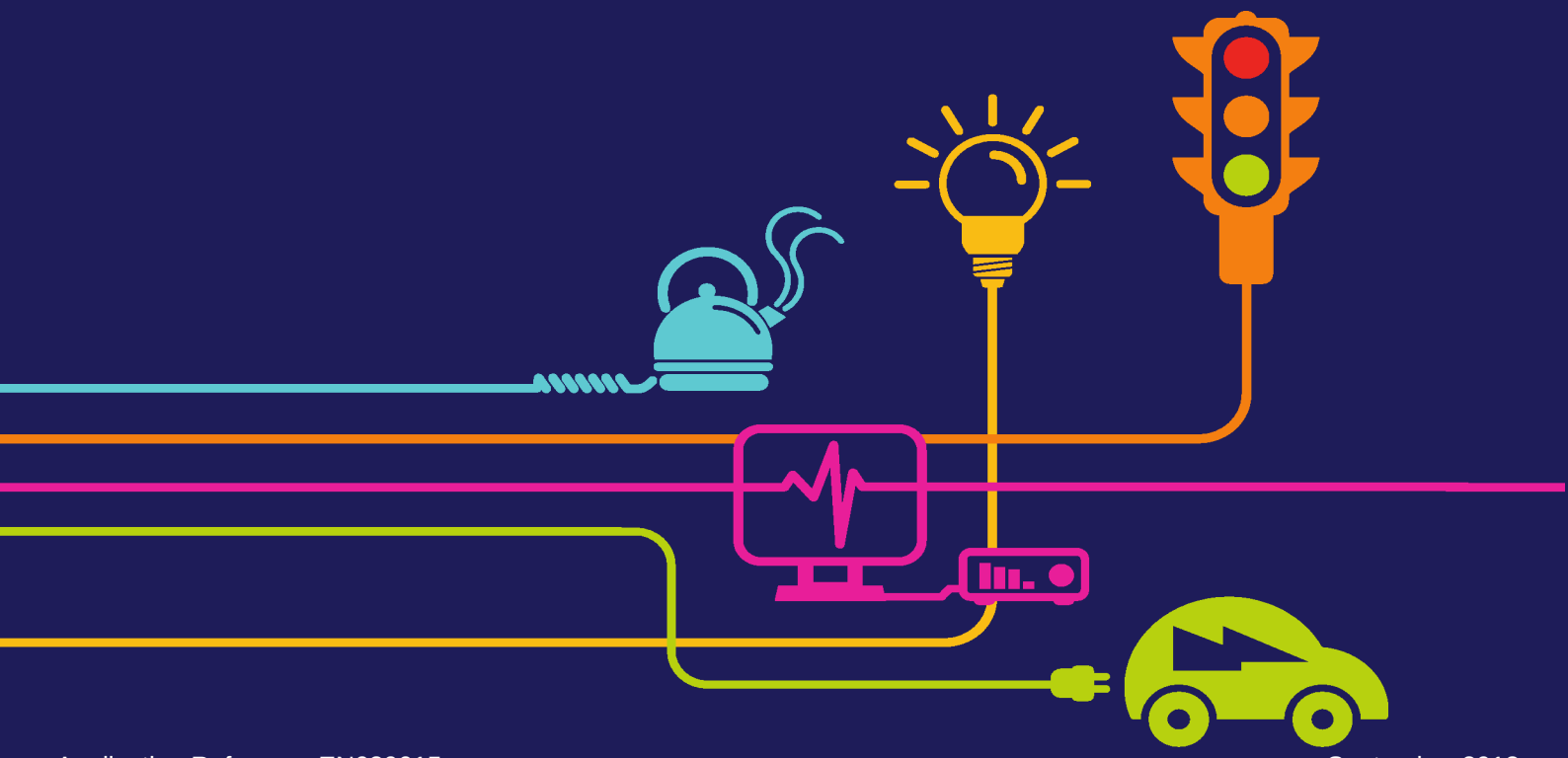
DOCUMENT 9.1

Wylfa to Pentir Overhead Electricity Transmission Line – Route Corridor Identification Report

National Grid (North Wales Connection Project)

Regulation 5(2)(q) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

First published October 2012



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North Wales Connection Project
Wylfa to Pentir Overhead Electricity Transmission Line – Route Corridor Identification Report

October 2012

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1 Introduction

The Energy Challenge

1.1 The UK is facing a major challenge in meeting projected energy needs over the coming decades, while at the same time tackling climate change. Peak demand for electricity (the largest amount of electricity used at peak time on a cold day) in Great Britain is currently over 60 gigawatts (GW), while in a year around 325 billion units of electricity, with a value of around £30 billion, are generated and consumed. The majority of electricity is generated by burning gas or coal and by nuclear power stations.

1.2 However, by 2016, 12 GW of coal-fired power stations will close as they cannot meet the requirements of European emissions legislation. At the same time, around 7.5 GW of nuclear capacity will come to the end of its life. This means a huge investment in new generating capacity is needed to replace them and meet future electricity demand. At the same time, North Sea oil and gas are in decline, so Britain's gas-fired power stations are becoming increasingly dependent on imports. Even if existing coal-fired power stations could meet EU emissions legislation, the domestic coal industry is no longer the major force it once was. Britain is therefore no longer self-sufficient in energy and increasingly reliant on imports. The movements in global energy markets have underlined concerns about the price and security of future electricity supplies.

Climate Change

1.3 Tackling climate change will have a significant influence on the electricity industry. Burning fossil fuels such as gas and coal to generate electricity creates large quantities of carbon dioxide (CO_2), which is a major greenhouse gas. The UK government is committed to reducing emissions by 34% from 1990 levels by 2020 and the Climate Change Committee has advised the Government that much of the reduction should come from the electricity industry, as CO_2 emissions from sources such as heating and transport are harder to reduce.

1.4 Currently Britain has 4.5 GW of wind generation. There are plans for another 20 GW of wind generation onshore, while licenses have been issued to develop a further 33 GW of offshore wind generation by 2020. The Government has identified ten potential sites for new nuclear power stations and National Grid has already received applications from companies wanting to build and connect new nuclear power stations at these sites. Meanwhile, the Government has introduced schemes to support the demonstration of CO_2 capture technology at fossil-fuelled power stations. As we move to less carbon-intensive methods of generating electricity, the heating and transport industries are likely to reduce their CO_2 emissions by adopting electric heating and electric vehicles, but even with big improvements in energy efficiency, demand for electricity is likely to go up rather than down.

National Grid's Role in Meeting the Energy Challenge

1.5 National Grid is responsible for transmitting electricity from where it is generated (for example, power stations and large wind farms) to towns and cities, the main centres of demand. To do this, we use a national network of overhead lines and underground cables which operate at high voltages (275 and 400 kilovolts (kV)). At these centres of demand the power is transformed to lower voltages for onwards distribution to homes and businesses through the regional electricity network by the network operator. In North Wales the network operator is SP Manweb.

1.6 The introduction of new wind generation and nuclear power over the next few years will require the reinforcement and extension this network. Most wind generation will be in remote locations, where wind speeds are favourable and sites for wind farms are available. Although some of the sites identified for new nuclear stations have existing connections to the electricity transmission system, there is a need to carry out substantial reinforcement of the system to take the higher output from the new, more efficient designs of nuclear station. Both the Government and Ofgem, the industry regulator, have recognised the huge investments that National Grid must make over the next few years to accommodate the changing patterns of electricity generation. At the same time, as part of the electricity industry "smart grid" technologies are being developed to make more efficient use of electricity and help the move towards a low carbon economy.

Electricity Transmission Network in North Wales

1.7 The electricity transmission system in North Wales was developed in the 1960s to connect new sources of power generation. Today power stations connect to the system at National Grid substations located at Wylfa (nuclear power) and at Dinorwig and Ffestiniog (pumped storage hydro power). Power from new offshore windfarms will also be connected to the system at the recently developed Bodelwyddan Substation, south of Rhyl.

1.8 This power is directed to the main interconnected system via other National Grid substations located at Pentir, Trawsfynydd and Deeside, which control and direct the flows. With the exception of Dinorwig and Ffestioniog, power is also transformed to lower voltages at these sites for onward distribution to local customers via the SP Manweb network.

1.9 Connecting these substations are a number of overhead electricity lines that transmit power between sites and into the wider transmission system. Of most significance are the 400kV double circuit lines connecting Wylfa – Pentir (across Anglesey and Menai Strait), Pentir – Deeside (running parallel to the North Wales coast) and Trawsfynydd – Deeside (and the west midlands). There is also a double circuit overhead transmission line connecting Pentir and Trawsfynydd. However only one of these circuits is currently operated by National Grid and this has limited capacity, being constrained by a section of underground cable across the Glaslyn Estuary at Porthmadog.

The Need to Undertake Works

1.10 Already the site of an existing nuclear power station, Wylfa, on the Island of Anglesey, has been identified as a potential location for a new nuclear power plant. The site identified in the Government National Policy Statement EN-6 'Nuclear Power Generation' lies adjacent to, and surrounds, the existing power station. Horizon Nuclear Power (HNP) has secured land agreements for the site. HNP has also concluded an agreement with National Grid to connect a total of 3.6 GW of new generation at Wylfa (1 GW = 1000 Mega Watts (MW) or 1 Million Kilowatts (kW)). While Horizon's shareholders, RWE npower and E.ON, are not proceeding with plans for nuclear power generation in the UK, Horizon is optimistic a new buyer will be found, and have kept the contract with National Grid in place.

1.11 In addition, an area of the Irish Sea approximately 15 km (9 miles) from Anglesey was included within The Crown Estate's Round Three offshore wind tendering process. Subsequently Centrica has been awarded exclusive rights to develop the Irish Sea zone. National Grid has concluded agreements to connect some 3 GW of this generation to the transmission system, and expects 2 GW of this contracted power will connect to the transmission system on Anglesey at or in the vicinity of Wylfa.

1.12 National Grid has also agreed to connect a number of other power generators to the transmission system on the mainland in North Wales, including two further windfarms off the north coast of Wales in Liverpool Bay ('Gwynt y Mor' and 'Burbo Bank Extension'). These sites would connect at the recently constructed Bodelwyddan Substation and would total 808 MW of power. A further agreement is in place to connect 1 GW of power at Pentir from onshore windfarms being developed in the Irish Republic by Greenwire. Greenwire is a recent development and is still being optioneered.

1.13 National Grid's technical analysis has demonstrated that there is insufficient transmission capacity in the existing electricity transmission network in North Wales to connect this level of generation in a reliable way.

1.14 Accordingly works are required to increase the capacity of the transmission network to export power from North Wales as a whole by 2018 and to increase the capacity of the network between Wylfa and Pentir by 2020.

1.15 A formal Need Case has been published and can be found at http://www.northwalesconnection.com/library-phase-1.aspx. This document explains in detail the existing capacity of the transmission system in North Wales and why additional capacity is required.

Identification of Preliminary Preferred Strategic Option

1.16 A large number of strategic-level options to increase the capacity of the transmission network have been considered, using both offshore and onshore technologies. Each of these options has been assessed at a high level against their potential environmental and socio-economic (including community) effects, technical feasibility and whole life costs. They have also been discussed them with a number of core organisations to better inform our appraisal. This process of appraisal is referred to as Strategic Options

Appraisal and more detail is provided in National Grid's 'Our Approach to Options Appraisal' and can be found in Appendix F. The main findings from the Strategic Options Appraisal are published in a Strategic Options Report (SOR), which is available at http://www.northwalesconnection.com/library-phase-1.aspx.

1.17 Following this extensive process of evaluation, a Preliminary Preferred Strategic Option has been identified which is believed to achieve the most appropriate balance between all of the important considerations that National Grid has to take into account. National Grid's preliminary preference is for a single strategic option involving the following works:

1. **A new overhead line consisting of two new circuits between Wylfa and Pentir** (including modifications at the two existing National Grid substations) with appropriate mitigation, potentially including the use of underground technologies.
2. **One new transmission circuit connecting Pentir and Trawsfynydd on existing pylons.** In order to provide this circuit without the need to build a new line it is proposed that the under-utilised capacity of the existing transmission line between the two substations be used. Works would therefore include;
    - the replacement / upgrading and 'doubling-up' of the existing underground transmission cables across the Glaslyn Estuary at Porthmadog, (including modifications to two existing compounds)
    - the replacement of the conductors ('wires') on the existing overhead line between Pentir and Trawsfynydd (including modifications at the two substations)

1.18 The context of the project, Study Area and electrical transmission network between Wylfa and Pentir is illustrated on Plate 1-A. Figures 1-0 and 1-1 in Appendix A provide more detail.

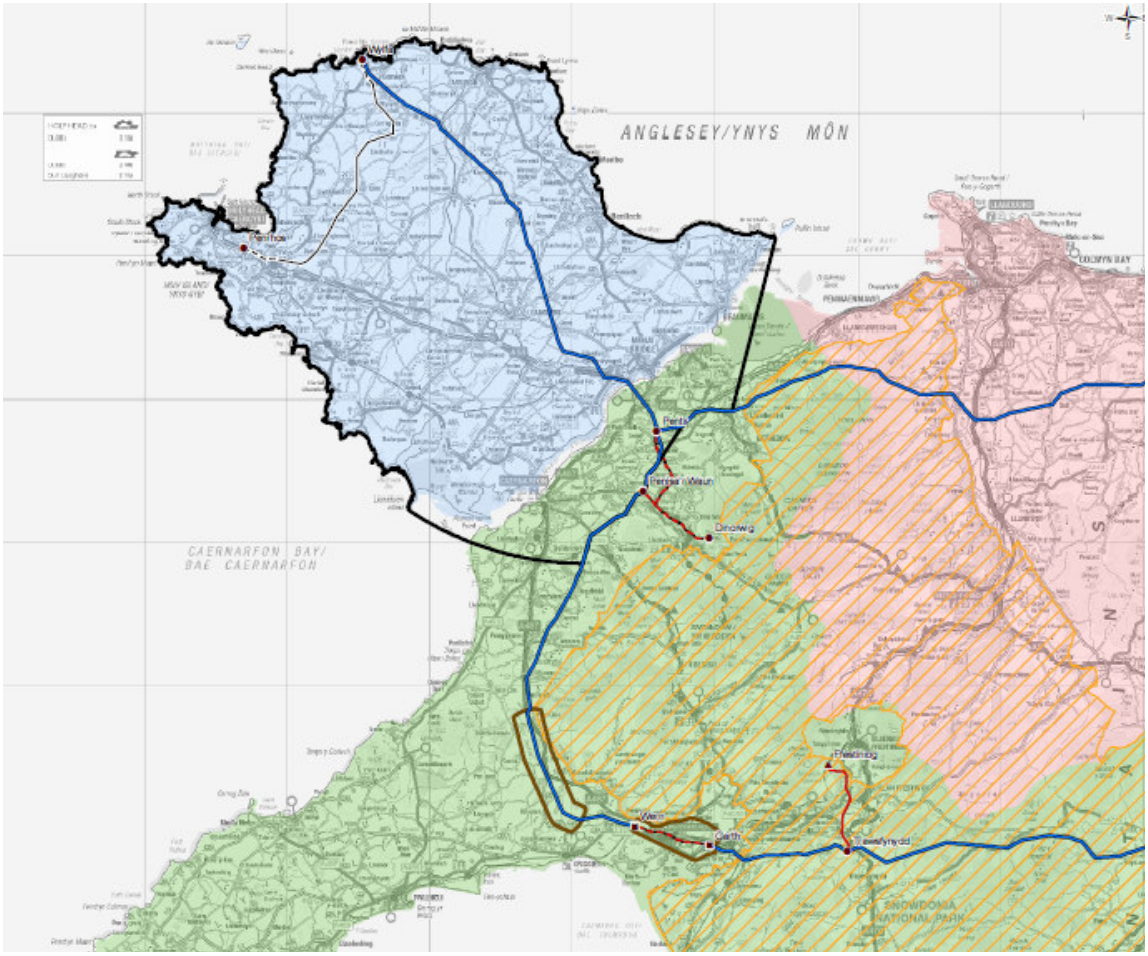

Plate 1-A: Project Overview

1.19 The second circuit on the overhead line between Pentir and Trawsfynydd is currently operated by SP Manweb who use it to carry power from Trawsfynydd to Four Crosses Substation for onward supply to homes and businesses in West Gwynedd. It is this circuit that National Grid proposes to take over to create a second 400kV circuit between Pentir and Trawsfynydd. In doing so, a new means of supplying electricity demand in West Gwynedd is required to ensure continuity of supply for customers in this area. Following discussions with SP Manweb, it is assumed that a new substation in West Gwynedd is the most suitable method for maintaining the security and flexibility of supply to the Four Crosses Substation.

1.20 In addition, the wires on two other overhead transmission lines in North Wales would need to be replaced, and modifications made at a number of existing National Grid substations in the region.

1.21 The Strategic Optioneering process assessed the different potential methods of providing a double circuit connection between Wylfa substation and Pentir substation. The SOR concluded that 'National Grid's Preliminary Preferred Strategic Option is for an overhead electricity transmission line (with appropriate mitigation, potentially including the use of underground technology) between Wylfa and Pentir'. National Grid has decided to take forward this option to the route corridor stage of the options appraisal process for further detailed appraisal and consultation.

1.22 The SOR that documents this appraisal process concluded that this option is considered to best achieve the appropriate balance between National Grid's technical, economic, amenity and environmental obligations.

1.23 This Route Corridor Report considers in more detail one element of the Preliminary Preferred Strategic Option; namely the development of two new overhead transmission circuits between Wylfa and Pentir.

Description of Works Considered in this Report

1.24 The Preliminary Preferred Strategic Option would involve the development of an overhead electrical transmission line from Wylfa to Pentir. For the purpose of this initial study it has been assumed this line would comprise a single line of lattice steel towers (pylons) capable of carrying two circuits (one on either side of the pylon). Whilst it would be possible to construct two lines of pylons each carrying a single circuit, this option has not been considered at this stage of the route corridor identification. However, consideration will be given to the most appropriate design of pylon at the next stage of project development. Illustrations of various pylon designs that could be used can be found in Figure 1-2 in Appendix A and Appendix B.

1.25 Any new 400kV line would run on lattice pylons of a similar style to those used on the existing 400kV route between Wylfa and Pentir. Standard pylons are normally between 40 metres and 50 metres in height and the standard span length is between 350 and 400 metres. Where the span length is increased beyond 400 metres the height of the pylons is likely to increase to ensure that satisfactory clearances of the power lines above ground level is maintained. Figure 12-2 in Appendix B illustrates the necessary safety clearances and details about how a typical overhead transmission line is constructed, maintained and dismantled are provided for information purposes within Appendix B.

1.26 Alternative pylon types could be employed including ‘low height’ pylons and the ‘T-Pylon’ design. The ‘low height’ design would have a standard height of approximately 35 metres but would carry more wires on the bottom arm, increasing the overall width from 17 metres to 34 metres. Figure 1-2 in Appendix A illustrates alternative pylon designs. The ‘T-Pylon’ design was selected as the winner in a recent Government design competition for new pylons. More information about the ‘T-Pylon’ design is provided in Appendix B, including some early illustration of its appearance.

2 Purpose of this Report

2.1 The purpose of this report is to document the initial work undertaken to further develop the Wylfa to Pentir element of works within Preliminary Preferred Strategic Option. Specifically this report:

- Describes a process which potential route corridors have been identified;
- Describes the sites and features within each of the potential route corridors and their sensitivity to the proposed overhead transmission line; and
- Provides information to stakeholders including statutory and non statutory bodies, and local communities, to better inform consultation feedback at the early stages of the project.

2.2 This report does not document the full environmental and socio-economic appraisal of the route corridor options. This appraisal of the Corridor Options is currently being undertaken. This report does not identify a preferred route corridor, or seek to rank corridors according to their merit. The full route corridor options appraisal will be informed by feedback from the first stage of public consultation and specialist assessments of potential environmental, socio-economic, technical and cost effects associated with each option. The results of this full appraisal will inform the selection of a preliminary preferred route corridor and will be published at the next stage of public consultation.

2.3 This report is structured in a number of sections. Sections 1 to 4 set out the context of the project and Section 5 defines the stages of work undertaken. Section 6 explains how the initial area for the study was identified (the Study Area). Sections 7 to 12 details the existing sites and features, i.e. the environmental baseline of the Study Area along with initial sensitivity assessments.

2.4 Section 13 describes how the existing sites and features have influenced the identification of route corridors. A route corridor is considered a broad corridor within which a transmission route could be located, derived from constraint mapping, desk based sensitivity assessment and site visits, as well as discussions with core stakeholders. Sections 14 and 15 describe each of the corridor options identified and summarises the key environmental and socio-economic features located within each.

2.5 Section 16 describes the next stages for this project; route corridor options appraisal, identification of a preferred route corridor, public consultation, a route alignment study and environmental impact assessment.

2.6 Whilst National Grid will ultimately have to form a view on the most appropriate form for the new connection, the acceptability of any final overhead electricity transmission line proposed will be determined by the Secretary of State for Energy, informed by the findings of a hearing held by the Planning Inspectorate.

3 Statutory Consenting Regime and Associated Guidance

Development Consent

3.1 Under the Planning Act 2008, the construction of 400kV overhead electricity transmission lines requires an application for Development Consent Order (DCO) to the National Infrastructure Directorate of the Planning Inspectorate. Any application is considered by the National Infrastructure Directorate and a recommendation made to the Secretary of State for Energy and Climate Change who grants or refuses consent for the new overhead electricity transmission line.

3.2 As part of the application process, the Local Planning Authority (LPA) is required to submit a Local Impact Report detailing their assessment of the implications of the proposed development on their administrative area.

Planning Consent

3.3 In accordance with the Planning Act 2008, the grant of a DCO by the Secretary of State negates the need for planning consent for new overhead electricity transmission line. Certain associated works connected with construction or mitigation may require separate consent, for example, access roads onto a public highway and works at either end of the overhead electricity transmission line. In Wales such works would require separate planning permission from the LPA.

Environmental Impact Assessment

3.4 The installation of new overhead electricity transmission lines fall within Schedule I and II of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 ("EIA Regulations") and therefore an Environmental Impact Assessment (EIA) is required to support any application for a DCO.

3.5 An Environmental Statement pursuant to the EIA Regulations will be prepared and submitted to the Planning Inspectorate as a supporting document to any development consent application once the final design has been established.

Habitats Regulations Assessment

3.6 The Habitats Directive provides for certain important habitats and species to be protected and there are numerous sites across Wales that are designated under these Regulations. This Directive has been transposed into UK legislation and its provisions are governed by The Conservation of Habitats and Species Regulations 2010 ("Habitats Regulations").

3.7 The Regulations only permit development in Natura 2000 sites (Special Areas of Conservation (SAC) and Special Protection Areas (SPA)) in the first instance where it is

directly connected or necessary to site management for nature conservation; or where the proposal would not have significant effects on the conservation objectives of the site, alone or in combination with other plans or projects. Where potential impacts might result on a Natura 2000 site, a Habitats Regulations Assessment (HRA) is required.

3.8 Consent for development can only be granted where it would not adversely affect the integrity of the site taking into account the manner in which the development will be carried out and any conditions that might be imposed on the consent. Where significant effects are identified it must be demonstrated that there are no alternative solutions and the development must be carried out for imperative reasons of overriding public interest. In addition, compensation must be provided to maintain the integrity of the Natura 2000 network.

3.9 There are a number of European Sites within the Study Area and as part of any subsequent appraisal work the need for an HRA will be discussed with Countryside Council for Wales (CCW) as the statutory body responsible for ecological issues. A formal Screening request will be submitted where necessary.

3.10 If an HRA is required, the scope will be agreed with CCW and sufficient information provided to inform the HRA which will be considered by the Secretary of State as the Competent Authority when the Development Consent application is submitted.

Planning Policy and Development

3.11 Planning policies seek to guide and control development and also to provide protection for environmental resources. Planning policy is relevant to the proposed development whether it is undertaken under DCO, Planning Permission or Permitted Development Rights.

3.12 For the purposes of this route corridor study, the relevant policy requirements and objectives are set out below.

National Policy Statements

3.13 National Policy Statements ("NPS") are the principal guidance documents used by the Planning Inspectorate and the Secretary of State when determining the Development Consent application.

3.14 There are two NPSs that are of particular relevance to this proposed development; National Policy Statement EN-1 "Overarching National Policy Statement for Energy" and National Policy Statement EN-5 "Electricity Networks Infrastructure".

3.15 EN-1 sets out the policy for energy infrastructure in England and Wales. It sets out:

- The high level objectives;
- Policy and regulatory framework for new energy infrastructure;
- The need and urgency for new energy infrastructure to be consented and built with the objective of contributing to a secure, diverse and affordable energy supply and

supporting the Government's policies on sustainable development in particular by mitigating and adapting to climate change;

- The need for specific technologies;
- Key principles to be followed in the consideration and examination of applications;
- Policy on good design, climate change adaptation and other matters relevant to more than one technology-specific NPS; and
- The assessment and handling of generic impacts that are not specific to particular technologies.

3.16 EN-1 identifies a number of impacts that may be relevant to an application to the Planning Inspectorate. These are listed below and have been used by National Grid as a guide in scoping this route corridor report:

- Air quality and emissions;
- Biodiversity and geological conservation;
- Civil and military aviation and defence interests;
- Coastal change;
- Dust, odour, artificial light, smoke, steam and insect infestation;
- Flood risk;
- Historic environment;
- Landscape and visual;
- Land use including open space, green infrastructure and green belt;
- Noise and vibration;
- Socio-economic;
- Traffic and transport;
- Waste management; and
- Water quality and resources.

3.17 All of these impacts will be considered as part of the route corridor study and subsequent environmental impact assessment.

3.18 EN-5 sets out UK Government policy on the development of, amongst other things, overhead electricity transmission lines. The policy covers transmission systems (operating at voltages of 400kV and 275kV), and distribution systems (lower voltage lines operating at voltages of 132kV and below from transmission substations to the end-user) which can either be carried on pylons or wood poles.

3.19 EN-5 is concerned with impacts and other matters which are specific to electricity networks infrastructure or where there are further specific considerations arising from this technology. Specifically it refers to:

- Biodiversity and Geological Conservation;
- Landscape and Visual; and

- Noise and Vibration.

3.20 EN-5 identifies the main issues related to the above environmental considerations and sets out certain mitigation measures that may be appropriate. These are defined in more detail in the topic specific sections of this report. In addition, EN-5 makes reference to National Grid's duties under the Electricity Act 1989, and these are considered further in Section 4 of this report.

3.21 EN-1 explains that the Government envisages that, wherever reasonably possible, applications for new generating stations and related infrastructure should be contained in a single application for Development Consent. EN-5 appreciates, however, that this is not always possible for electricity networks and it may not represent the most efficient approach to the delivery of new infrastructure.

National Planning Policies (Wales)

3.22 There are a number of planning policy documents relevant at a national (Welsh) and local level. These are also material considerations for any Development Consent application and are likely to be referenced in the Local Impact Report prepared by the relevant local planning authorities.

Planning Policy Wales

3.23 Planning Policy Wales is the overarching planning policy document for Wales. This document was revised and re-published in February 2011 (Version 4). The purpose of this document is to contribute towards *'sound economic development, the conservation of natural assets and to the quality of life of individuals and communities'*.

Technical Advice Notes

3.24 Technical Advice Notes (TANs) are planning guidance relevant to Welsh planning authorities. Any proposals would be considered against the guidance set out in these documents. The main TANs relevant to the selection of route corridors of an overhead electricity transmission line are:

- TAN 5: Nature Conservation and Planning (2009) - provides advice on the key principles of positive planning for nature conservation including internationally and nationally protected sites, habitats and species;
- TAN 11: Noise (1997) - provides advice on minimising the adverse impact of noise from development;
- TAN 13: Tourism (1997) - highlights that tourism makes a major contribution to the Welsh economy, provides employment in a wide variety of occupations and can bring benefits to local economies and communities in urban and rural areas; and
- TAN 15: Development and Flood Risk (2004) - provides technical guidance in relation to development and flooding and provides a framework within which risks arising from both river and coastal flooding, and from additional run-off from development in any location, can be assessed.

Welsh Office Circulars

3.25 At this time, there is not a TAN specific to Cultural Heritage. Instead, the following Welsh Office Circulars remain the current guidance:

- WO Circular 60/96 Planning and the Historic Environment: Archaeology (Welsh Office 1996) - Sets out advice on legislation and procedures relating to archaeological remains, and
- WO Circular 61/96 Planning and the Historic Environment: Historic Buildings and Conservation Areas (Welsh Office 1996) - Sets out legislation and advice on legislation and procedures relating to historic buildings and conservation areas.

Local Development Plan Policy

3.26 While the overhead electricity transmission line elements of this project will be consented under the Planning Act 2008, local planning policy will also be relevant in considering the Development Consent application and any planning applications for associated development. NPS EN-1 describes development plan documents as both important and relevant to any final consenting decision, but also states that the NPS will prevail in the event of policy conflicts. Key policies that appertain to this project are set out in Appendix C.

Anglesey Council / Sir Ynys Môn

3.27 At a meeting held on the 1st December 2005, Anglesey Council resolved to stop work on the Ynys Môn Unitary Development Plan (UDP) and move to the new Local Development Plan (LDP) system. Some parts of the UDP (which have not be adopted) have been retained as interim guidance for taking development control decisions during an interim period while work on the new LDP advances.

3.28 The Gwynedd Structure Plan of 1993 and the Ynys Môn Local Plan of 1996 are fully adopted plans and will remain part of the Development Plan Framework until the new LDP is adopted. The (stopped) UDP is a material consideration in decision making for development control purposes but does not have the status of a fully adopted plan. The weight to be attached to the various parts of the UDP will be determined on a case by case basis.

3.29 When the LDP is adopted, it will replace the current development plan framework which involves the UDP (2001), Gwynedd Structure Plan (1993) and the Ynys Môn Local Plan (1996).

Gwynedd Council

3.30 Gwynedd Council published its Unitary Development Plan for the period 2001 to 2016 in July 2009. This document supersedes the Gwynedd Structure Plan described above in respect of development within Gwynedd.

Joint Local Development Plan

3.31 Due to the similarities in the character and profile of Anglesey (Ynys Môn) and Gwynedd and the efficiency savings available, it has been decided to establish a Joint Planning Policy Unit (JPPU) to prepare a Joint Local Development Plan (JLDP) for both Authorities.

3.32 Until such time as the JLDP is adopted (anticipated 2016) the planning policy documents described above make up the local planning policy documents relevant to the proposed development.

4 National Grid's Environmental and Economic Duties and Policies

4.1 In addition to generic legislative requirements, policy and guidance (both national and local), National Grid takes into account its statutory duties and its own policies and guidance when establishing route corridors and route alignments for new transmission routes.

Licence Requirements

4.2 National Grid has a duty to connect electricity generators to the transmission network. This is set out in Licence Condition C8 (Requirement to offer terms) of National Grid's transmission licence. The form of the connection is determined by National Grid in discussion with its customers. While it has a duty to connect the generators to the transmission network, National Grid has no control over where generators choose to site their developments.

Environmental Duties and Policies

4.3 Under Section 38 and Schedule 9 of the Electricity Act 1989, National Grid has a duty to:

> *"have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest; and shall do what it reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on such flora, fauna, features, sites, buildings or objects."*

4.4 Transmission and distribution licence holders are also required under Schedule 9 of the Act to produce and publish a statement setting out how they propose to perform this duty generally.

4.5 National Grid's Stakeholder, Community and Amenity Policy sets out how National Grid will meet its amenity duties and community and stakeholder engagement duties under the Electricity Act. The Policy identifies ten commitments made when undertaking electricity works in the UK. A copy of this Policy can be found in Appendix D.

4.6 National Grid, as statutory undertaker, also has responsibilities with regards to National Parks, Areas of Outstanding Natural Beauty (AONBs) and Sites of Special Scientific Interest (SSSI) under the following legislation:

- National Parks - Section 11A(2) of the National Parks and Access to the Countryside Act 1949;
- AONBs - Section 85 of the Countryside and Rights of Way Act 2000; and
- SSSIs - Section 28G of the Wildlife and Countryside Act 1981.

Economic Duties

4.7 National Grid is required under Section 9 of the Electricity Act 1989 to *"develop and maintain an efficient, co-ordinated and economical electricity transmission system, and to facilitate competition in the supply and generation of electricity".* National Grid is regulated by Ofgem, the electricity and gas market's regulator, to ensure value for money for customers and must satisfy the various statutory duties imposed upon it.

Our Approach to the Design and Routeing of New Electricity Transmission Lines

4.8 'Our Approach to the Design and Routeing of New Electricity Transmission Lines' (a copy can be found in Appendix E) sets out how National Grid identifies the most appropriate route for any new electricity transmission route. It details how data is collected, stakeholders and communities are consulted and how feedback from consultation is used to inform the decision making process.

4.9 National Grid has a duty to *"consider the desirability of preserving amenity"* when undertaking projects which includes impacts on communities, landscape and visual amenity, cultural heritage and ecological resources. To satisfy this duty, National Grid seeks to avoid areas which are nationally or internationally designated for their landscape, wildlife or cultural significance, such as National Parks, AONBs and SSSIs.

4.10 National Grid recognises, however, that not all sites that are valued by and important for the wellbeing of local communities are included in designated sites. 'Our Approach to the Design and Routeing of New Electricity Transmission Lines' therefore ensures that National Grid considers all of the potential economic, environmental and social impacts of proposed projects, not just those relating to designated sites.

4.11 At each stage of options appraisal, National Grid gain more detailed information about the constraints that may affect a particular route. These might include designated sites but could also include non-designated sites such as particularly sensitivity landscapes or iconic views. As National Grid learns more, back checking is undertaken at each stage to see if any new information exists that would have an impact on the selected technology or route.

Our Approach to Options Appraisal

4.12 'Our Approach to Options Appraisal' (refer to Appendix F) sets out how National Grid undertakes the Options Appraisal process. Options Appraisal is a robust and transparent process used to compare options and to assess the positive and negative effects. The guidance explains how the process progresses through Strategic Options, Outline Routeing, Detailed Routeing through to an application for Development Consent.

Holford Rules

4.13 The 'Holford Rules' (1959) are a recognised set of guidelines that inform the identification of potential routes for new overhead electricity transmission lines. The Rules are

predominantly based on visual impacts and amenity values, but provide an important basis for all environmental assessment of power lines. National Grid produced supplementary guidance in 1992. EN-5 makes reference to the Holford Rules and confirms that they are the principal guidance in respect of routeing of new overhead electricity transmission line.

4.14 The central theme of the Holford Rules is that the extent of the landscape and visual effect of an overhead electricity transmission line can be reduced by careful routeing.

4.15 The Holford Rules 1 and 2 refer to the avoidance of areas of highest amenity value or scientific interest such as designated sites and advise that route alignments should be located to minimise the environmental effect on these areas.

4.16 The Holford Rules 3 to 5 advise the choice of the most direct line and use of tree and hill backgrounds and moderately open valleys to reduce the apparent height of the route in preference to sky backgrounds where poles are highly visible.

4.17 The Holford Rules 6 and 7 refer to the avoidance where possible of conflicts with other lines and infrastructure as well as residential or recreational land.

4.18 A copy of the full Holford Rules is contained within Appendix G.

5 Study Approach and Methodology

Overview

5.1 The different stages of the appraisal methodology are set out in subsequent sections of this report. However, a summary of the stages that have been undertaken to date and the stages to be undertaken are illustrated in the flow diagram in Plate 5-A below:

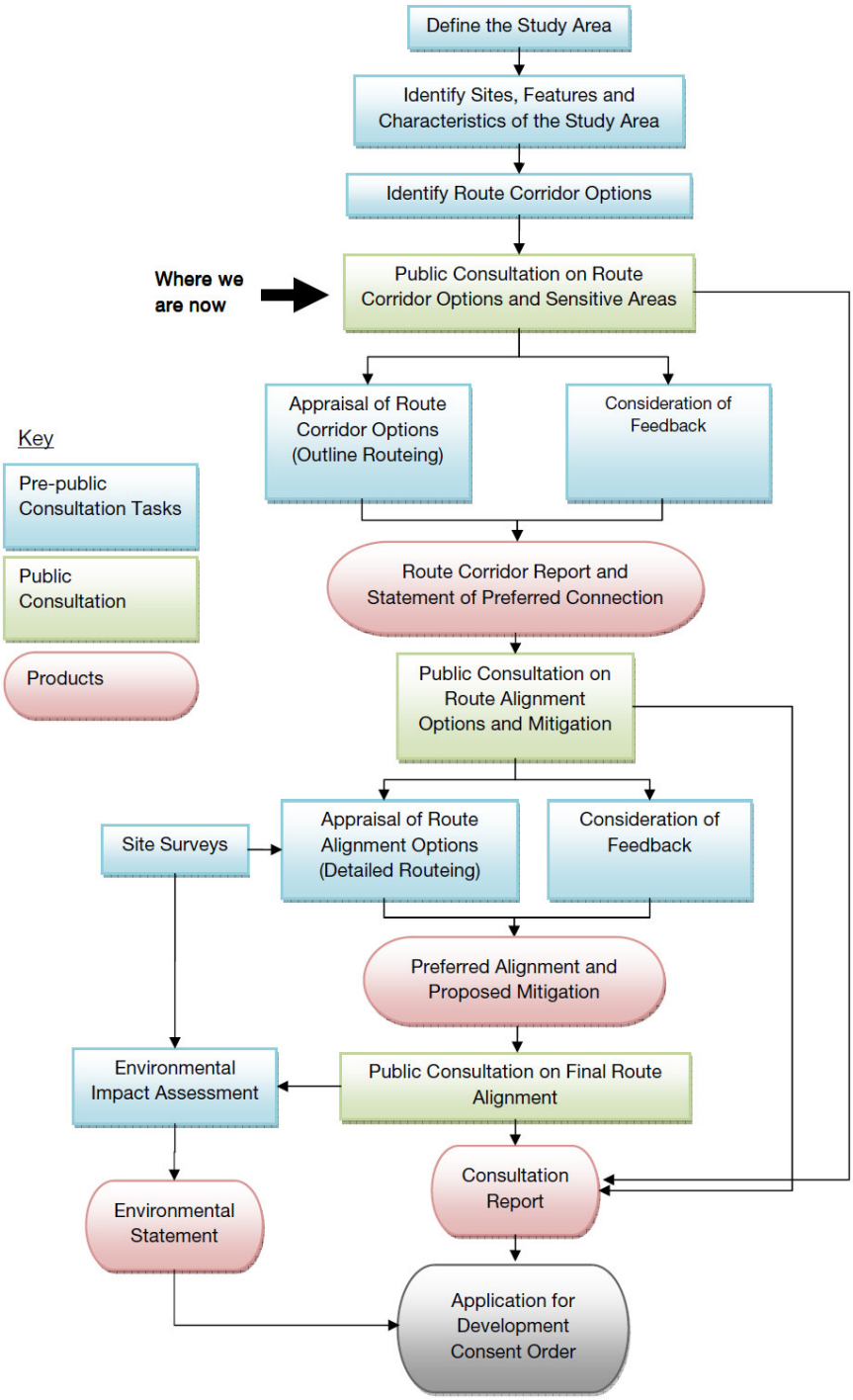

Plate 5-A: Flow Chart of Route Selection Methodology

Defining the Study Area

5.2 The Study Area has been identified to include the whole of the Isle of Anglesey and the Gwynedd coastline along the Menai Strait and continuing inland towards Pentir substation. This Study Area was defined in order to maximise the potential for finding a suitable route corridor, taking into account that, in certain circumstances, a longer route may reduce the overall environmental impact as against a shorter more direct route. The Study Area is considered in more detail in Section 6.

5.3 Appendix A presents figures which provide an overview of the project, including the Project Overview (1-0), Project Context (1-1), Transmission Tower illustrations (1-2), Principal Features in the Study Area (1-3), Features and Sites the influenced the Corridor Boundaries (1-4), Ecological Designations (1-5), Cultural Heritage Designations (1-6), Landscape Designations (1-7), Residential Density (1-8), Land Use (1-9), Tourism and Recreation (1-10) and Aviation and Safeguarding (1-11).

Identification of Features and Characteristics within the Study Area

5.4 In accordance with National Grid's Stakeholder, Community and Amenity Policy (Appendix D), National Grid has identified key environmental features and characteristics within the Study Area. This involved the collection of publicly available data from a number of sources and presenting this electronically so that it could be mapped. Further detail regarding the identification of these features and characteristics is provided in Section 7.

Appraisal of Local Sensitivity to a Potential Transmission Route

5.5 Once the environmental features had been identified, site visits were undertaken to gain a high level appreciation of the local sensitivity of the Study Area to a new overhead electricity transmission line. This appraisal also considered the potential 'opportunity corridors' within the Study Area that may guide certain route corridor options (see paragraphs 7.5 to 7.7). These are corridors where the landscape character or visual sensitivity are already affected by detracting features such as existing transport or overhead line corridors. This appraisal process involved a desk based review of the publicly available data by environmental specialists in the following key disciplines: ecology, cultural heritage, landscape and socio-economics. Further details regarding this stage are provided in Sections 8 to 12.

Identification of Route Corridor Options

5.6 Once all the key environmental sites and features had been considered, and potential opportunity corridors identified, this information was combined together and used to aid the identification of route corridor options. This is detailed further within Section 13.

Public Consultation

5.7 Statutory and core non-statutory bodies will be identified and consulted directly, while public consultation exhibitions will be undertaken at various locations across the Study Area to enable local residents and organisations to understand the proposals and discuss the options with National Grid. Consultation responses will be taken into consideration when the preferred corridor option is identified.

Next Steps

5.8 Section 16 sets out the next steps in the identification of a new transmission route from Wylfa to Pentir. These include the identification of the preferred route corridor, with mitigation as appropriate, further consultation with community and stakeholders including people with an interest in the land, the identification of a preferred route alignment, environmental impact assessment, and the submission of a Development Consent Application.

6 Defining the Study Area

6.1 The first stage in the route corridor appraisal process was to establish and define the areas of search for the key environmental sites and features, and technical constraints.

6.2 As the transmission connection under consideration would link the existing substations at Wylfa and Pentir, the Study Area identified inevitably encompasses all of the area in-between the two sites. At the strategic options stage the options appraisal was based upon a simple study area defined by a 10km standoff either side of a direct line between Wylfa and Pentir, i.e. a 20km wide corridor.

6.3 For the purposes of more detailed route corridor identification, the Study Area has been significantly extended to include all of the island of Anglesey (including Holy Island) and the entire coastline. The Study Area also includes a significant area within Gwynedd bounded by most of the Menai Strait and the existing 400kV overhead lines that run south and east from Pentir. In addition, an area south-east of Pentir has been included in the Study Area to allow flexibility in the way that an overhead line can enter the Pentir substation site. This decision to extend the original study area was taken to ensure all areas for potential corridors were considered in a comprehensive manner. The Study Area is not defined by any environmental sites or features.

6.4 All other things being equal, the shortest route length and an option with the least requirements for additional development on the wider transmission network will result in the least environmental effects. It is acknowledged that different types and levels of environmental sites and features are present in different areas. A longer route may avoid areas of high environmental sensitivity and works at different locations on the transmission network may have different environmental effects.

6.5 Figure 6-1 in Appendix H shows the extent of the Study Area used for the purposes of this route corridor study. Figures 1-4 to 1-11 in Appendix A provide an overview of how sites and features in the Study Area informed the corridor extent. Photographs of the Study Area are included in Appendix J and the location of each aerial photograph is illustrated on Figure 6-2.

7 Identification of Features, Characteristics and Designations within the Study Area

7.1 Once the Study Area was defined, the next stage of the process was to identify and collate the baseline data for these areas. Baseline data was obtained from a number of sources, including local authority plans and policies (including local and national plans), digital datasets, Ordnance Survey maps and site visits. The constraints identified in this first stage of the route corridor study are detailed Table 7-A below and baseline information is discussed further in Sections 8 to 12.

Topic	Designation / feature	Data Source
Contaminated land	Contaminated Land Register	Gwynedd Council / Anglesey Council
Cultural Heritage	Conservation Areas	Gwynedd Council / Anglesey Council
Cultural Heritage	Historic Environment Record	Gwynedd Archaeological Trust
Cultural Heritage	Listed Buildings	Cadw
Cultural Heritage	National Monument Record for Wales	Royal Commission on the Ancient and Historical Monuments of Wales
Cultural Heritage	National Trust Properties	National Trust
Cultural Heritage	Registered Historic Landscapes	Cadw
Cultural Heritage	Registered Historic Parks and Gardens	Cadw
Cultural Heritage	Scheduled Monuments	Cadw
Cultural Heritage	World Heritage Sites	Cadw
Cultural Heritage	Wreck Sites	Cadw
Ecology	Ancient and Semi Natural Woodland Sites	Countryside Council for Wales
Ecology	Local Nature Reserves	Countryside Council for Wales
Ecology	National Nature Reserves	Countryside Council for Wales
Ecology	Nature Reserve (other)	Countryside Council for Wales / Cofnod
Ecology	Phase 1 Habitat Survey Data	Countryside Council for Wales
Ecology	Ramsar sites	Countryside Council for Wales
Ecology	RSPB reserves	MAGIC.gov
Ecology	Sites of Special Scientific Interest	Countryside Council for Wales
Ecology	Special Areas of Conservation	Countryside Council for Wales
Ecology	Special Protection Areas	Countryside Council for Wales
Ecology	Woodland Trust Sites	Cofnod
Ecology	North Wales Wildlife Trust Reserves	Cofnod
Hydrology	EAW Flood Zone mapping	Environment Agency Wales
Hydrology	Main rivers	Environment Agency Wales
Hydrology	TAN15 Flood Zone mapping	Welsh Government
Hydrology	Water bodies	Environment Agency Wales
Hydrology	Watercourses	Environment Agency Wales
Infrastructure	Electricity infrastructure	National Grid / SP Manweb
Infrastructure	Gas pipelines	National Grid
Infrastructure	Railways	Ordnance Survey

Topic	Designation / feature	Data Source
Infrastructure	Roads	Ordnance Survey
Land Use	Active / Closed waste management sites	Environment Agency Wales
Land Use	Address point data	Gwynedd Council / Anglesey Council
Land Use	Agricultural Land Classification	Welsh Government
Land Use	Airfields and Aerodromes	Gwynedd Council / Anglesey Council
Land Use	Local Plan designations	Gwynedd Council / Anglesey Council
Land Use	Ministry of Defence Boundaries	Ministry of Defence
Land Use	Safeguarding areas	Jacobs created using information from MOD (fly zones) and GetMapping (DTM surface model)
Land Use	Shellfish	Environment Agency Wales
Land Use	Shellfish Waters	Environment Agency Wales
Land Use	Wind Farms	OS data mapping / Local Authority Planning
Landscape	Aerial Photography	Get Mapping
Landscape	Areas of Outstanding Natural Beauty	Countryside Council for Wales
Landscape	Country Parks	Countryside Council for Wales
Landscape	Heritage Coast	Countryside Council for Wales
Landscape	LANDMAP data	Gwynedd Council / Anglesey Council
Landscape	Landscape Character Areas	Anglesey Council / Gwynedd Council / Snowdonia National Park
Landscape	Landscape of Special and Outstanding Historic Interest	Cadw
Landscape	LiDAR data	National Grid
Landscape	National Parks	Countryside Council for Wales
Landscape	Tree Preservation Orders	Gwynedd Council
Mapping	Base Mapping	Ordnance Survey
Recreation	Common Land	Gwynedd Council / Anglesey Council
Recreation	CRoW Access Land	Gwynedd Council / Anglesey Council
Recreation	National cycle route	Gwynedd Council / Anglesey Council
Recreation	NCN cycle route link	Gwynedd Council / Anglesey Council
Recreation	Public rights of way	Gwynedd Council / Anglesey Council
Recreation	Residential Densities	Derived from Ordnance Survey Address Base Product

Table 7-A: Data Sources

Mapping of Features, Characteristics and Designations

7.2 Constraints analysis has been used throughout the appraisal process including at the following stages:

- In determining a Study Area within which an overhead electricity transmission line;
- In gathering of high level environmental baseline information relating to the Study Area; and

- In the identification of sites and features within the Study Area as part of the environmental sieving process.

7.3 Given the size of the Study Area, maps showing the designations and features within the Study Area have been split and Figure 7-1 shows how each plan relates to the other. In all cases an overall plan showing the entire search area is included in Figure 6-1.

7.4 The principle features and designations within the Study Area are recorded in Figure 7-2 and 7-2 A to D.

Opportunity Corridors

7.5 In some situations the corridors of existing 400kV and 132kV overhead electricity transmission line routes can present opportunities for routeing a new 400kV line, with limited additional landscape and visual effects. Such routes are known as 'opportunity corridors'. In particular, the landscape character and visual amenity of the area will already be affected by the overhead electricity transmission lines and there may be benefits of routeing a new overhead line in place of or parallel to the existing overhead line, rather than across areas which are currently unaffected by overhead electricity transmission line development.

7.6 It should, however, be noted that the addition of parallel overhead electricity transmission line routes does have the potential to cause cumulative landscape and visual effects, which need to be weighed against the benefits of avoiding areas not already affected by overhead electricity transmission line development. Whilst routeing two lines in close parallel limits the extent of the area adversely affected, the cumulative effect of two lines could be greater than the sum of the effects from individual corridors remote from each other. Holford Rule number 6 warns of the potential in some situations for the creation of 'wirescape' from multiple overhead electricity transmission lines: *'In country which 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 concatenation or 'wirescape'*.

7.7 In areas already affected by existing overhead electricity lines, especially multiple low voltage lines, there may be opportunities for the rationalisation of existing overhead lines either through their removal or replacing with underground cables. This may help mitigate the potential effects of any new overhead line but could also give rise to additional effects in its own right, e.g. disturbance through the installation of low voltage underground cables or the associated construction of new compounds or substations.

8 Ecology and Biodiversity Considerations

8.1 This section details the ecological sites and features found within the Study Area. They are assessed in terms of their sensitivity to overhead electricity transmission lines and pylons in order to identify those areas likely to be sensitive to overhead line development so that these areas can be taken into account when identifying route corridors for new overhead electricity transmission line.

8.2 The appraisal was undertaken at a high level and is based on paper reference and other data. No field based surveys have been undertaken. The appraisal was principally based on the nature of the designated site and the species that are supported by that site. It includes generic impacts that may occur as a result of the installation of the overhead electricity conductors as well as any ground disturbance resulting from the installation of pylons.

8.3 Sensitivity assessment also took into consideration the grade of designation. In accordance with established practice European designated sites were considered more sensitive than locally designated sites as a result of the level of protection afforded to them. Further consideration of any potential impacts and localised sensitivities will be considered further at route alignment stage.

8.4 The sensitivity appraisal of the designated ecological sites is set out in Appendix K.

Designated Sites

8.5 Local, National and International designated sites for nature conservation are shown on Figures 8-1, 8-1 A to D.

8.6 The following ecologically designated sites are found within the Study Area:

- A single Ramsar site;
- Nine SACs;
- Three SPAs;
- Sixty nine SSSI;
- Four National Nature Reserves (NNR);
- Eight Local Nature Reserves (LNR);
- Three Heritage Coasts (HC);
- Three Important Bird Areas (IBA);
- Three RSPB reserves; and
- Nine North Wales Wildlife Trust (NWWT) Reserves.

8.7 Tables 8-A and 8-B list designated protected sites for nature conservation within the Study Area. Table 8-C lists other sites managed for conservation purposes.

Designation	Site Name
Ramsar	Corsydd Môn a Llŷn / Anglesey and Llŷn Fens
SPA	Traeth Lafan / Lavan Sands, Conway Bay
SPA	Glannau Ynys Gybi / Holy Island Coast
SPA	Ynys Feurig, Cemlyn Bay And The Skerries
SAC	Y Fenai A Bae Conwy/ Menai Strait And Conwy Bay
SAC	Y Twyni O Abermenai I Aberffraw/ Abermenai To Aberffraw Dunes
SAC	Glannau Môn: Cors Heli/ Anglesey Coast: Saltmarsh
SAC	Llyn Dinam

Designation	Site Name
SAC	Afon Gwyrfai a Llyn Cwellyn
SAC	Bae Cemlyn / Cemlyn Bay
SAC	Corsydd Môn a Llŷn / Anglesey Llyn Fens
SAC	Glan-traeth
SAC	Glannau Ynys Gybi / Holy Island Coast
IBA	Traeth Lafan, Conwy Bay
IBA	Ynys Feurig, Cemlyn Bay And The Skerries
IBA	Glannau Ynys Gybi (Holy Island Coast)

Table 8-A: Internationally Designated Sites within the Study Area

Designation	Site Name
SSSI	*Afon Gwyrfai A Llyn Cwellyn
SSSI	Afon Seiont
SSSI	*Arfordir Gogleddol Penmon
SSSI	Baron Hill Park
SSSI	Beddmanarch-Cymyran
SSSI	Bwrdd Arthur
SSSI	Cadnant Dingle
SSSI	Cae Gwyn
SSSI	Caeau Talwrn
SSSI	Carmel Head
SSSI	*Cemlyn Bay
SSSI	Clegir Mawr
SSSI	Coed Y Gell And Morfa Dulas
SSSI	Coedydd Afon Menai
SSSI	*Cors Bodeilio
SSSI	Cors Bodwrog
SSSI	*Cors Erddreiniog
SSSI	*Cors Goch
SSSI	*Cors Y Farl
SSSI	Craig Wen / Cors Castell
SSSI	Eithinog
SSSI	Fferam Uchaf
SSSI	*Glannau Penmon-Biwmares
SSSI	Glannau Porthaethwy
SSSI	*Glannau Rhoscolyn
SSSI	*Glannau Ynys Gybi: Holy Island Coast
SSSI	*Glan-Traeth
SSSI	*Gwenfro And Rhos Y Gad
SSSI	Henborth
SSSI	Llanbadrig-Dinas Gynfor

Designation	Site Name
SSSI	Llyn Llywenan
SSSI	Llyn Maelog
SSSI	Llyn Padrig
SSSI	Llyn Traffwll
SSSI	*Llynnau Y Fali - Valley Lakes
SSSI	Maen Gwyn
SSSI	Malltraeth Marsh/ Cors Ddyga
SSSI	Mariandyrys
SSSI	*Morfa Dinlle
SSSI	Mynydd Parys
SSSI	Nantanog
SSSI	*Newborough Warren / Ynys Llanddwyn
SSSI	Penrhos Lligwy
SSSI	Porth Diana
SSSI	Penrhynoed Llangadwaladr
SSSI	Rhosneigr
SSSI	Rhosneigr Reefs
SSSI	Rhoscolyn Reedbed
SSSI	Rhosydd Llanddona
SSSI	Salbri
SSSI	Sgitsau Glas Ynys Môn
SSSI	*Traeth Lafan
SSSI	Traeth Lligwy
SSSI	Tre'r Gof
SSSI	*Tre Wilmot
SSSI	Trwyn Dwlban
SSSI	Ty Croes
SSSI	Tyddyn Gyrfer
SSSI	Tyddyn Y Waen
SSSI	*Tywyn Aberffraw

Designation	Site Name
SSSI	Llyn Alaw
SSSI	Llyn Bodgylched
SSSI	Llyn Garreg-Lwyd
SSSI	Llyn Hafodol And Cors Clegyrog
SSSI	Llyn Llygeirian
SSSI	*Waun Eurad
SSSI	*Y Foryd
SSSI	*Ynys Feurig
SSSI	Y Werthyr

Designation	Site Name
NNR	Cors Bodeilio
NNR	Cors Erddreiniog
NNR	Cors Goch
NNR	Newborough Warren / Ynys Llanddwyn
LNR	Cytir Mawr
LNR	Nant Y Pandy (The Dingle)
LNR	Traeth Lafan
LNR	Foryd Bay
LNR	Llanddona Common
LNR	Llangoed Common
LNR	Trwyn Yr Wylfa / Wylfa Head
LNR	Coed Cyrnol

Notes:
* Indicates a SSSI which underpins an internationally designated site

Table 8-B: UK Statutory Designated Sites within the Study Area

Designation	Site Name
RSPB	Malltraeth Marsh
RSPB	South Stack Cliffs
RSPB	Valley Wetlands
NWWT	Caeau Pen y Clip
NWWT	Cemlyn Reserve
NWWT	Coed Porthamel

Designation	Site Name
NWWT	Cors Goch Reserve
NWWT	Mariandyrys
NWWT	Nant Porth
NWWT	Port Diana
NWWT	Spinnies

Table 8-C: Other Sites Managed for Conservation Purposes

8.8 The following sections provide details on ecological designations and summarises the ecological features of designated sites within the Study Area. The appraisal of the sensitivity to overhead transmission lines and pylons if routed through the each site is tabulated in Appendix K.

Ramsar Sites

8.9 Ramsar sites are wetlands of international importance designated under the Convention on Wetlands of International Importance (the Ramsar Convention). The Ramsar Convention was signed in 1971 and aims to halt the worldwide loss of wetlands and to conserve those that remain through wise use and management. Pursuant to TAN 5: Nature Conservation and Planning, they are afforded the same degree of protection as Natura 2000 sites. The procedures for assessing potential impacts on Ramsar sites are the same as those described below for Natura 2000 sites.

Corsydd Môn a Llŷn/ Anglesey and Llyn Fens

8.10 Cors Goch, Cors Erddreiniog, Cors Bodeilio, and Cors y Farl on the eastern section of Anglesey and Cors Edern and Cors Geirch on the Lleyn Peninsula (Gwynedd) comprise an internationally important suite of base-rich fens, a rare wetland habitat type which has undergone large scale decline in the British Isles.

8.11 The composite site qualifies under Ramsar criterion 1d (criteria used for Identifying Wetlands of International Importance) as an example of a type of wetland which is rare and unusual in the biogeographic region and under criterion 2b as it is of special value for maintaining the genetic and ecological diversity of the region because of the quality and peculiarities of its flora and fauna.

8.12 These fens are notable as the best Welsh sites for stoneworts (large freshwater algae which precipitate lime deposits and contribute to the deposition of marl) such as dwarf stonewort.

Natura 2000 Sites

8.13 These comprise SPAs and SACs which are sites of European level of importance afforded protection under the Habitats Regulations.

8.14 SACs are a network of European sites, designated for their biodiversity interests that provide increased protection and management for rare and vulnerable plants, animals and habitats. SPAs are a network of sites of European importance that help to protect and manage areas important for rare and vulnerable birds.

Special Protection Areas

Traeth Lafan/ Lavan Sands, Conwy Bay

8.15 The SPA consists of a large area of intertidal and mud flats which provide suitable habitat for great crested grebes and supports nationally important wintering populations of oystercatchers (1% of the GB wintering population) and curlew (2% of GB population).

Glannau Ynys Gybi / Holy Island Coast

8.16 The SPA and proposed extensions consist of sea cliffs with cliff-top heath and grassland. The cliffs rise to 120 metres and the hinterland to 220 metres on Holyhead Mountain. There are many small offshore stacks and islets. The SPA also includes additional areas of maritime heath, maritime grassland and rocky outcrops, which are known to be important feeding habitat for the chough. Species of interest are breeding chough, raven, kestrel, shag, guillemot, razorbill, kittiwake and fulmar which nest on the cliffs. The islets around the headland support breeding cormorants, herring gull, lesser black-backed gull and great black-backed gull. Breeding linnet, yellowhammer, whitethroat, wheatear and stonechat can be found in the large areas of maritime heath and scrub along the mainland coastal strip.

8.17 The SPA qualifying feature is Chough.

Ynys Feurig, Cemlyn Bay and The Skerries

8.18 The SPA comprises three separate areas and is a site of importance for four species of breeding terns. The three separate areas are treated as a single site as a consequence of regular movement by birds between the component parts.

8.19 Ynys Feurig consists of a series of sparsely vegetated low-lying islands extending about 1 kilometre out to sea from a sandy shore. At Cemlyn Bay, a shingle storm beach forms a bar between a tidal lagoon and the open shore. The shingle habitats, together with saltmarsh developing around the lagoon and brackish pools further inland are an unusual combination of habitats. The Skerries are a group of sparsely vegetated islets, 17 hectares in extent. They are protected by strong currents but are very exposed to strong westerly and northerly winds.

8.20 The SPA qualifying features are:

- Roseate tern, 3 pairs representing 4.7% of the GB breeding population (5 year mean 1992 to 1996);
- Common tern, 189 pairs representing at least 1.5% of the GB breeding population (5 year mean 1992 to 1996);
- Arctic tern, 1,290 pairs representing at least 2.9% of the GB breeding population (5 year mean 1992 to 1996); and
- Sandwich tern, 460 pairs representing 3.3% of the GB breeding population (5 year mean 1993 to 1997).

Special Areas of Conservation

Corsydd Môn / Anglesey Fens

8.21 The composite SAC sites form part of the Ramsar Corsydd Môn a Llŷn / Anglesey and Llŷn Fens.

8.22 The SAC features include:

- Calcareous fens with Saw-sedge and species of the Caricion davallianae;
- Alkaline fens;
- Southern damselfly;
- Marsh fritillary butterfly;
- Hard oligo-mesotrophic waters with benthic vegetation of stonewort;
- Molinia meadows on calcareous, peaty or clayey-silt-laden soils;
- Northern Atlantic wet heaths with cross-leaved heath; and
- Geyer's whorl snail.

Y Fenai a Bae Conwy/ Menai Strait and Conwy Bay

8.23 The northern boundary of the SAC extends from the east coast of Anglesey at Moelte, east to a point above Llandudno and south through the Menai Strait to Abermenai Point, south of Caernarfon.

8.24 The SAC features include:

- Large shallow inlets and bays;
- Mudflats and sandflats not covered by seawater at low tide;

- Reefs;
- Sandbanks which are slightly covered by sea water all the time; and
- Submerged or partially submerged sea caves.

Y Tywyni o Abermenai i Aberffraw/ Abermenai to Aberffraw Dunes

8.25 The SAC is divided into several areas along the south west coast of Anglesey extending from Aberffraw to Abermenai.

8.26 The SAC features include:

- Fixed dunes with herbaceous vegetation “grey dunes”;
- Dunes with creeping willow;
- Embryonic shifting dunes;
- Humid dune slacks;
- Natural eutrophic lakes with Magnopotamion or Hydrocharition-type vegetation;
- Petalwort;
- Shore dock; and
- Shifting dunes along the shoreline with marram grass (‘white dunes’).

Glannau Môn: Cors Heli/ Anglesey Coast: Saltmarsh

8.27 The SAC extends along the south western coast of Anglesey from Abermenai Point to Aberffraw.

8.28 The SAC features include:

- Atlantic salt meadows;
- Estuaries;
- Mudflats and sandflats not covered by seawater at low tide; and
- Salicornia and other annuals colonising mud and sand.

Afon Gwyrfai a Llyn Cwellyn

8.29 This site comprises the Afon Gwyrfai and Llyn Cwellyn. The Gwyrfai flows out of Llyn y Gader near Rhyd Ddu and passes through Llyn Cwellyn on its way to the sea at Y Foryd, Caernarfon Bay. It also includes a tributary of the Gwyrfai, the Afon Treweunydd, and the small lake it flows from on the slopes of Snowdon. Sporadically throughout its course, the SAC is abutted by semi-natural wetland riparian habitat much of which is within the SSSI. Llyn Cwellyn has long been recognised for its conservation importance and is an excellent example of a deep (maximum depth of 37 metres, average depth of 23 metres) oligotrophic (nutrient poor) lake formed during the last Ice Age. Its waters support a range of typical aquatic plants, and one of the best populations of floating water plantain in the UK.

8.30 The whole of the Gwyrfai river system is of outstanding ecological quality. The river is particularly noted for its excellent salmon population, for which it is considered to be one of the best supporting rivers in the United Kingdom. It is also notable for its otter population which occur in good numbers because of the relative naturalness of its riparian habitats and the abundance of undisturbed dense cover. In addition to the lake, the river supports a discrete community of floating water plantain, and water-crowfoot, with other associated vegetation including bryophyte assemblages occurring in various sectors of the river.

8.31 The SAC features include:

- Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and /or of the Isoteo-Nanojuncetea;
- Water courses of plain to montane levels with Water-crowfoot and starwort vegetation;
- Atlantic salmon;
- Floating water-plantain; and
- European otter.

Bae Cemlyn / Cemlyn Bay

8.32 At Cemlyn Bay, a shingle storm beach forms a bar between a tidal lagoon and the open shore. The shingle habitats, together with saltmarsh developing around the lagoon and brackish pools further inland are an unusual combination of habitats.

8.33 The SAC site is of importance for its lagoon and associated species and the shingle ridge and its vegetation. Other areas of importance to are areas of scrub, marshy grassland, coastal grassland, saltmarsh, ditches, intertidal, maritime cliff and associated ledges and crevices.

8.34 The SAC features include:

- Coastal lagoons; and
- Perennial vegetation of stony banks.

Glan-traeth

8.35 The shallow pools at Glan-traeth, which were created by the extraction of sand, supported one of the largest breeding populations of great crested newt. At time of SSSI notification, over 500 animals were counted during a torch survey. The actual total population would have been considerably larger. The pools are also the breeding site for significant numbers of palmate newt, common frog and toad.

8.36 The early sand grass, a rarity in Britain (restricted to a few areas in Anglesey and the Gower Peninsula) occurs in the grazed dune grassland, particularly near the edge of bare or eroded sand patches. Meadow saxifrage, which is uncommon in Gwynedd, occurs in the grassland, whilst variegated horsetail and round-leaved wintergreen occur in the damp depressions.

8.37 The SAC features include:

- Great crested newt.

Glannau Ynys Gybi / Holy Island Coast

8.38 This SAC comprises heathland and maritime grassland communities, coastal cliffs and ledges, assemblages of vascular plants, birds and invertebrates are all of considerable interest.

8.39 The SAC features include:

- Vegetated sea cliffs of the Atlantic and Baltic coasts;
- Northern Atlantic wet heaths with cross-leaved heath;
- European dry heaths;
- Reefs;
- Submerged or partially submerged sea caves; and
- Atlantic grey seal.

Llyn Dinam

8.40 Llyn Dinam is the northernmost lake within the Llynnau y Fali SSSI lake complex and the least impacted by human activity. It supports a clear-water aquatic plant community characterised by a wide variety of pondweeds. The important features of the site include standing water habitats and aquatic plants found therein, reedswamp, marsh fern and breeding and overwintering birds. Other habitats such as unimproved grassland, ditches and rock outcrops contribute to the overall interest.

8.41 SAC features include:

- Naturally nutrient rich lakes or lochs which are often dominated by pondweed.

Sites of Special Scientific Interest

8.42 SSSIs are sites of national importance, designated for their biodiversity or geological interest and are protected under the Wildlife and Countryside Act 1981 (WCA 1981) (as amended by the Countryside and Rights of Way Act 2004). SSSIs are protected from development and operations which are likely to damage their special interests. Consultation with the CCW is required before consent can be granted for any development operations that are likely to damage SSSIs.

8.43 There are 69 SSSIs scattered across the Study Area, primarily in Anglesey. These SSSIs are listed in Table 8-B, detailed more fully in Appendix K and are recorded on Figure 8-1. The SSSIs are located throughout Anglesey and the north of mainland Wales, with a large number situated along the coastline. A number of the coastal SSSIs are designated for their important bird assemblages including Ynys Feurig, Holy Island and Malltraeth Marsh; with inland SSSIs including Lyn Alaw and Valley Lakes. Within Anglesey a number of SSSIs are important wetlands including; Cors Bodeilio, a nationally important

calcareous mire; Cors Bodwrog a mesotrophic mire with areas of fen meadow and Cors Erddreiniog.

8.44 Several SSSIs are found within the Menai Strait including Glannau Porthaethwy which extends along the 4 kilometres of the shore and supports a significant diversity of marine plants and animals; and Coedydd Afon Menai, a woodland comprising narrow strips of broadleaved woodland sections of the southern section of the Menai Strait which supports a number of notable species.

8.45 The nature of the interest varies for each SSSI.

National Nature Reserves (NNR)

8.46 NNRs are designated by CCW under the National Parks and Access to the Countryside Act 1949, or under the Wildlife and Countryside Act 1981 (WCA 1981) (as amended). The Reserves are a selection of the very best parts of Wales' SSSIs. It is this underlying designation which gives NNRs their strong legal protection.

8.47 There are four NNRs within the Study Area as listed in Table 8-B and detailed in Appendix K. A summary is provided below.

8.48 Cors Erddreiniog is the largest of the Anglesey fens and supports orchid rich vegetation, which other than within a few sites on Anglesey, and on the Lleyn Peninsula, is found nowhere else in Britain. Cors Goch comprises lowland fen habitat, areas of open water, heath and grassland. Cors Bodeilio is a nationally important calcareous mire. Newborough Warren / Ynys Llanddwyn exhibits an extensive sand dune system.

Local Nature Reserves (LNR)

8.49 A LNR is a statutory designation made under Section 21 of the National Parks and Access to the Countryside Act 1949, and amended by Schedule 11 of the Natural Environment and Rural Communities Act 2006 (NERC 2006). LNRs are designated by principal local authorities, in this instance Isle of Anglesey or Gwynedd County Council.

8.50 There are eight LNRs as listed in Table 8-B and detailed in Appendix K.

Important Bird Area (IBA)

8.51 The IBAs Programme of Bird Life International aims to identify, monitor and protect a global network of sites for the conservation of the world's birds and other biodiversity. IBAs are not a statutory designation, however are selected as key sites for conservation which are small enough to be conserved in their entirety and are often already part of a protected-area network. A site is recognised as an IBA only if it meets certain criteria, based on the occurrence of key bird species that are vulnerable to global extinction or whose populations are otherwise irreplaceable. These sites do not have statutory protection. Details of these sites are provided in Table 8-A and Appendix K.

8.52 There are three designated Important Bird Areas within the Study Area. These are:

- Traeth Lafan, Conwy Bay;

- Ynys Feurig Cemlyn Bay & the Skerries; and
- Glannau Ynys Gybi (Holy Island Coast).

RSPB Reserves

8.53 Three RSPB reserves are located within the Study Area. These are:

- Valley Wetlands – reed fringed lakes;
- Malltraeth Marsh – reedbeds, marshes, wet grassland, ditches and small pools / lakes; and
- South Stack Cliffs – sea cliffs.

8.54 These reserves are managed with the specific purpose of maintaining and improving habitats for a variety of bird species. All of these sites are also SSSIs.

8.55 More detail on each of these is provided in Appendix K.

Wildlife Trust Reserves

8.56 North Wales Wildlife Trust (NWWT) has eight wildlife reserves within the Study Area. These are:

- Cemlyn Reserve;
- Cors Goch Reserve;
- Coed Porthamel;
- Nant Porth;
- Spinnies;
- Port Diana;
- Mariandyrys; and
- Caeau Pen y Clip.

8.57 More detail on each of these is provided in Appendix K.

Ancient Woodland

8.58 Ancient Woodland is commonly defined to be native broadleaf woodland that has been in existence since before 1600. Unless included as part of a SAC or SSSI, it does not have any statutory protection; however there is a general presumption against development or impact on these sites.

8.59 Ancient woodland areas can be found across the whole of the Study Area, with a higher concentration to the south-east of Anglesey. Ancient Woodland is mapped on Figures 8-1 and 8-1 A to D in Appendix H.

Habitats

8.60 There are a variety of habitats across the Study Area as evidenced by the number and diversity ecologically designated sites. Details of the types of habitats found in the Study Area are shown on Figure 8-2 and 8.2 A to D in Appendix H (Phase 1 Habitats Data).

8.61 Another source of high level information on habitats across the Study Area is provided by CCW LANDMAP tool. LANDMAP (CCW, 2003) 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. The Landscape Habitat layer of LANDMAP appraises the landscape in relation to its likely biodiversity and nature conservation value. Landscapes that provide a mosaic of habitats, with good linkages and those with more extensive areas of habitat types of particular value to biodiversity score more highly.

8.62 LANDMAP is collectively discussed in Section 10 with reference to the appropriate figures. The majority of Anglesey has been assessed as having Low or Moderate value, with High and Outstanding value areas generally located in coastal areas or around larger waterbodies. In Gwynedd, much of the Study Area ranges from Moderate to High value, with the settlement areas considered to have Low value.

8.63 LANDMAP is intended to provide a broad overview of potential ecological value and detailed assessment would be needed to confirm the significance of any effects upon ecological receptors.

Generic Ecology and Biodiversity Impacts of Overhead Electricity Transmission Lines

8.64 Generic biodiversity effects of overhead electricity transmission lines are mentioned in EN-5. It includes reference to large birds such as swans and geese which may collide with overhead electricity transmission lines associated with power infrastructure, particularly in poor visibility.

8.65 While the main impact of overhead electricity transmission lines is related to large birds there are lesser impacts on a wide range of mobile species, including bats.

8.66 The footings of the pylons have the potential to result in habitat loss of rare species of vegetation if inappropriately sited.

8.67 Additionally, there would be short term habitat disturbance during construction, in particularly sensitive locations or areas where the groundwater levels are high.

Sensitivities of Ecological Sites

8.68 The key ecological designated sites have been examined in more detail to consider their sensitivity to new overhead electricity transmission lines and pylons. Details of the key sensitivities of the International and European designations are listed below and sensitivities of non-European sites are provided in Appendix K.

8.69 Table 8-D below sets out the sensitivities of ecological designated sites with International or European Protection.

Site Name	Sensitivity to Overhead Electricity Transmission Lines and Pylons if they were to be routed through them
Ramsar	
Corsydd Môn a Llŷn / Anglesey and Llŷn Fens	Habitats and most species present within the site are not considered to be sensitive to overhead lines. Water fowl and terrestrial bird species present at the site may be initially sensitive to overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site including marsh fritillary, Geyer's whorl snail and Southern Damselfly (SAC qualifying features) are potentially highly sensitive to construction of pylons due to habitat loss.
Special Protection Areas	
Glannau Ynys Gybi / Holy Island Coast	Terrestrial bird species (including chough) along with seabirds which commute and forage over land and rivers e.g. gulls and cormorants are initially sensitive to overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and other species present within the site are not considered to be sensitive to overhead lines. Habitats and certain species present on site including chough (SAC qualifying feature) are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Traeth Lafan / Lavan Sands, Conway Bay	Waterfowl and terrestrial bird species are initially sensitive to overhead lines due to the risk of collision, although this risk should reduce over time. Habitats present within the site are not considered to be sensitive to overhead lines but habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance. However it is highly unlikely that pylons will be constructed on any habitat present within the SPA (intertidal). Intertidal habitat loss would not be applicable.
Ynys Feurig, Cemlyn Bay And The Skerries	Terns and other seabirds that migrate/court overland are potentially initially sensitive to overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and other species present within the site are not considered to be sensitive to overhead lines however habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Special Areas of Conservation	
Afon Gwyrfai a Llyn Cwellyn	Habitats and most species present within the site are not considered to be sensitive to overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from water pollution, and disturbance.
Bae Cemlyn / Cemlyn Bay	Habitats and most species present within the site are not considered to be sensitive to overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Corsydd Môn / Anglesey Fens	Habitats and most species present within the site are not considered to be sensitive to overhead lines. Bird species such as waterfowl present at the site may be initially sensitive to overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site including marsh fritillary, Geyer's whorl snail and Southern Damselfly (SAC qualifying features) are potentially highly sensitive to construction of pylons due to habitat loss.

Site Name	Sensitivity to Overhead Electricity Transmission Lines and Pylons if they were to be routed through them
Glannau Môn: Cors Heli/ Anglesey Coast: Saltmarsh	Habitats and most species present within the site are not considered to be sensitive to overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss.
Glannau Ynys Gybi / Holy Island Coast	Habitats and most species present within the site are not considered to be sensitive to overhead lines. Seabirds and terrestrial birds commuting or foraging overland are potentially initially sensitive to OHLs due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Glan-traeth	Habitats and most species present within the site are not considered to be sensitive to overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from water pollution, and disturbance.
Llyn Dinam	Habitats and most species present within the site are not considered to be sensitive to overhead lines. Waterfowl and terrestrial bird species present on the site are initially sensitive to overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Y Fenai A Bae Conwy/ Menai Strait And Conwy Bay	Habitats and most species present within the site are not considered to be sensitive to overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance. However it is highly unlikely that pylons will be constructed on any habitat present within the SAC (intertidal), in which case habitat loss would not be applicable.
Y Twyni O Abermenai I Aberffraw/ Abermenai To Aberffraw Dunes	Habitats and most species present within the site are not considered to be sensitive to overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.

Table 8-D: Sensitivities of Ecological Designated Sites with International or European Protection

Generic Mitigation Measures

8.70 There are a number of mitigation measures that can be applied to overhead electricity transmission lines in certain locations along a route to minimise or avoid ecological impacts. These are discussed below.

8.71 Features can be avoided at the routeing and alignment stage. For example, careful siting of a line away from, or parallel to, but not across, known flight paths can considerably reduce the numbers of birds colliding with overhead electricity transmission lines. Flight paths can be identified through local consultation and site based observations. The detailed siting of individual pylons can also be carried out so as to avoid any impacts on locally sensitive ecological areas following detailed site surveys.

8.72 Mitigation can also be provided at the detailed design stage. Making lines more visible by methods such as the fitting of bird flappers and diverters to the earth wire, which swivel in the wind, glow in the dark and use fluorescent colours designed specifically for bird vision, can also reduce the number of deaths. The design and colour of the diverters will be specific to local conditions such as the line and pylon specifications and the species at risk.

8.73 Other mitigation measures may include the production of an environmental management plan for the construction phase, timing of works to avoid works during sensitive periods (such as during the breeding bird season), and developing novel ways of working appropriate to features potentially impacted.

8.74 Where features cannot be avoided there may be opportunities for biodiversity offsetting (conservation activities designed to deliver biodiversity benefits in compensation for losses, in a measurable way) or habitat enhancement measures, and species translocation (where a species may be impacted by a development they may be captured and transported to an alternative suitable habitat).

8.75 Whilst the potential use for underground transmission cables may help to reduce some of the ecological effects, it is often the case that the installation of buried cables has greater adverse ecological effects than the construction of the equivalent overhead transmission line. Consideration will be given to these issues at subsequent development stages.

9 Cultural Heritage Considerations

9.1 This section details the cultural heritage features found within the Study Area. The features identified are assessed in terms of their sensitivity to overhead electricity transmission lines and pylons in order to identify those which may be sensitive to overhead line development.

9.2 This appraisal was high level based on paper reference data only, with no new field based surveys undertaken. The appraisal was principally based on the nature of the designated site and includes generic impacts that may occur as a result of the installation of the overhead electricity conductors as well as any ground disturbance resulting from the installation of pylons.

9.3 The sensitivity assessment also took into consideration the grade of designation. Further consideration of any potential impacts and localised sensitivities will be considered at the route alignment stage.

9.4 Cultural heritage sites are shown on Figure 9-1 in Appendix H (Cultural Heritage Features - Overview) with more detailed interpretation of the features in Figures 9-1 A to D, contained within Appendix L.

9.5 The following section defines the Cultural Heritage designations that are present within the Study Area:

World Heritage Sites

9.6 World Heritage Sites (WHS) are non-statutory designations of international importance that are designated as places by the UNESCO as of *"outstanding universal value"* as advised by the International Council on Monuments and Sites (ICOMOS).

9.7 ICOMOS evaluates WHS nominations for aspects related to authenticity, management and conservation as specified in the World Heritage Convention special cultural or physical significance.

9.8 Beaumaris Castle and Caernarfon Castle form part of the Castle and Town Walls of King Edward in Gwynedd WHS. Associated with both sites are their Essential Settings and a number of Significant Viewpoints.

Scheduled Monuments

9.9 Scheduled Monuments (SMs) have statutory protection under the Ancient Monuments and Archaeological Areas Act 1979. National Grid's guidance advises that it will *'seek to minimise effects'* on them and where possible the effects on the settings of SMs should also be minimised.

9.10 There are 171 SMs within the study area and details of these are provided in Appendix L. National Grid seeks to avoid significant concentration of SMs, but many individual SMs are widely dispersed across the Study Area meaning that some SMs will inevitably fall

within the corridors as it is not possible to avoid every SM. A summary of SMs found in the Study Area is as follows.

9.11 Throughout the northern and central areas of Anglesey there are a large number of SMs, with fewer within the interior area, reflecting the attractiveness of the coastal strip for habitation and industry. Many of the SMs are prehistoric in origin and these are geographically relatively well-contained sites, such as prehistoric standings stones and Neolithic chambered tombs. There are also Bronze Age round barrows and some early Christian sites. One major site is the Dinas Gynfor Hill Fort (AN038) SM which is situated on the coast, to the east of Wylfa. There is a particular concentration of scheduled sites around Holyhead, especially prehistoric monuments, such as hut circles and standing stones, as well as later Christian religious sites.

9.12 The area around Llangefni includes a particular concentration of scheduled sites, which include:

- Prehistoric promontory fort of Tywyn-y-Parc on the coast (AN049);
- Prehistoric mound at Mynwent y Llwyn (AN065);
- Medieval Tre-Garnedd moated site (AN047);
- Site of Plas Berw house (GD42 and AN057); and
- Post-medieval colliery at Berw (AN152).

9.13 All of these assets are situated close to the existing overhead electricity transmission line.

9.14 One prominent concentration of SMs within the southern section of Anglesey is found around the Llanidan estate and includes:

- Prehistoric Perthi-Duon chambered tomb (AN059); and
- Prehistoric Brynsiencyn round barrow (AN060).

9.15 A further concentration of scheduled sites is found around the National Trust owned Plas Newydd estate. These scheduled sites include:

- Bryn-yr-Hen-Bobl (AN006);
- Plas Newydd burial chambers (AN005);
- Tyddyn-Bach standing stone (AN084); and
- Prehistoric Bryn-Celli-Ddu burial chamber and standing stone (AN002 & AN085).

9.16 Important scheduled medieval sites within southern Anglesey include:

- Former Penmon Priory (AN027);
- Terraces within Penmon Deer Park (AN044);
- Friary at Llanfaes (AN134);
- Churchyard of St. Nidan's Church (Old Church) within the Llanidan park and garden; and

- Medieval castles of Beaumaris (AN001) and Aberlleiniog (AN020).

9.17 Further east, just inland of Menai Bridge, is the scheduled site of:

- Dinas Cadnant (AN048), a large hillfort.

9.18 Within the Menai Strait, there are seven scheduled sites. Of key note are:

- Gorad Ddu (AN139);
- Medieval Cored Gwyrfai fish weir (CN334) to the west of Caernarfon;
- Ogwen fish weir (CN335);
- Post-medieval/modern fish weirs at Coed Môish (AN138); and
- North Weir and Smoke Tower (AN096).

9.19 The main SMs within the Dinorwig Registered Historic Landscape of Outstanding Historic Interest (HLW Gw 6) in Gwynedd include:

- Rectangular medieval earthwork near Coed Ty Mawr (CN156);
- Enclosed hut group and ancient fields at Gors y Brithdir (CN203);
- Dinas Dinorwic Camp (CN017);
- Cefn Mawr hut group (CN200);
- Cae Meta (CN168); and
- Hut circle and Dinas Camp (CN047) which is a Prehistoric coastal promontory fort on the southern coast of the Menai Strait.

9.20 The main SMs within the Ogwen Valley (HLW Gw 10) Registered Landscape in Gwynedd are:

- Henge and cursus near Penrhyn Castle (CN153); and
- Cegin Viaduct on the Penrhyn Railroad (CN380).

9.21 Outside the registered landscapes are a number of SMs located to the south of the Study Area. These include:

- Pier Camp (CN073) near Bangor;
- Caernarfon Castle (CN079);
- Caernarfon town walls (CN034);
- Caerlan Tibot prehistoric defended enclosure (CN400); and
- Prehistoric hut circle south of Rhyd y Galen (CN229).

9.22 More information on each of these designated sites is provided in Appendix L.

Protected Wrecks

9.23 Sites are designated as Protected Wrecks within three main areas of legislation. Section 1 of the Protection of Wrecks Act 1973 provides protection for wrecks which are deemed

to be important by virtue of their historical, archaeological or artistic value. In addition, in recent years the Ancient Monuments and Archaeological Areas Act 1979 has also been used to provide some level of protection for underwater sites such as the fish weirs within the Menai Strait.

9.24 Wrecks are also covered as Protected Places under the Protection of Military Remains Act 1986. This includes the remains of any aircraft which crashed while in military service or any vessel designated (by name, not location) which sank or stranded in military service after 4th August 1914.

9.25 Each wreck has an exclusion zone around it and any activities within this exclusion zone can only be carried out under a licence granted by the Secretary of State, who receives advice from the Advisory Committee on Historic Wreck Sites (ACHWS) and Cadw (the Welsh Government's historic environment service).

9.26 Located within the Menai Strait is the Protected Wreck site of the Pwll Fanog just west of the Britannia Bridge, which is protected by a 150m exclusion zone. The wreck is the remains of a Tudor slate carrying vessel that would be sensitive to underground cabling as it could lead to its disturbance.

9.27 More information on each of these designated sites is provided in Appendix L.

Listed Buildings

9.28 Listed buildings have statutory protection under the Planning (Listed Buildings and Conservation Areas) Act 1990 and are divided into Grade I, Grade II* and Grade II. National Grid's guidance advises that it will *'seek to minimise effects'* on listed buildings. Physical damage to listed buildings would be avoided in selecting the route alignment and the setting of a listed building can also be sensitive to development.

9.29 Given the long history of human settlement across Anglesey, along the coastal region of Gwynedd and the historic settlement pattern, there are more than 1800 listed buildings within the Study Area, of these there are 54 Grade I listed buildings (the location of which is recorded on Figures 9-1 A to D). They are widely scattered across the Study Area, but significant concentrations occur within existing settlements as discussed below.

9.30 In northern and central Anglesey there are high numbers of listed buildings associated with Amlwch, Llanfechell and Llangefni. There is also a particular concentration of listed buildings located within and around the town of Holyhead.

9.31 In southern Anglesey, the Menai Suspension Bridge is a Grade I listed structure and the Britannia Bridge is a Grade II listed structure. Although, the existing overhead electricity transmission line route crosses the Menai adjacent to Britannia Bridge, both bridges have important historic views east and westward between each structure. There are also numerous listed buildings in Beaumaris. In many cases the views over the Menai Strait form an important part of the setting of these heritage designations. In particular there are recorded Significant Views to the south, towards Bangor, from the Grade II* listed Plas Rhianfa.

9.32 There are concentrations of listed buildings within Bangor, Caernarfon, Vaynol (Y Faenol), Llandegai (near Penrhyn Castle) and Aberpwll (near Y Felinheli and Vaynol) which give extra weight to the necessity of avoiding these areas and which tend to constrain the possible route crossing points on the mainland side of the Menai Strait.

9.33 Within the Penrhyn and the Vaynol parks and gardens the main listed building designations are the Grade I listed Penrhyn Castle and the Grade I Old Vaynol Hall, respectively, amongst numerous other listed buildings.

9.34 A further concentration of listed buildings is found around the harbour of Y Felinheli (Port Dinorwig) which has an associated dock system with walls running from the Garddfon Inn in the south to the lock gates in the north.

9.35 More information on each of these designated sites is provided in Appendix L.

Registered Historic Parks and Gardens

9.36 Cadw maintains the Register of Historic Parks and Gardens of Special Interest interesting Wales. The Register of Historic Parks and Gardens includes parks, gardens, designed ornamental landscapes, and places of recreation which are the product of gardening and/or landscape design. No additional statutory controls follow from the inclusion of a site in Cadw's Register of Parks and Gardens, but local planning authorities are required to protect registered parks and gardens in preparing development plans and in determining planning applications. The effect of proposed development on a Registered Historic Park and Garden or its setting is a material consideration in the determination of a planning application.

9.37 The interest of a historic park or garden may be in a confined area or relate to wider views and vistas and the setting of the park or garden. It is likely to include interest in the wider landscape which is defined by the Essential Setting and a Park Boundary as well as Significant Views. The Registered Historic Parks and Gardens are divided into three levels: sites of exceptional historic interest are assessed as Grade I; those of great historic interest as Grade II*; and those of special historic interest as Grade II.

9.38 If a park or garden has been registered using the designation process under the National Heritage Act 1983, it is a material consideration in the planning process.

9.39 There are eight Registered Historic Park and Gardens on Anglesey. These are:

- Grade I Plas Newydd (GD48);
- Grade II* Carreglwyd gardens (GD43);
- Grade II* Bodorgan (GD44),
- Grade II* Plas Berw (GD42);
- Grade II* Llanidan (GD46);
- Grade II Plas Rhianfa (GD49);
- Grade II Plas Gwyn (GD47); and
- Grade II Cestyll gardens (GD45).

9.40 There are recorded Significant Views from both Plas Newydd and Llanidon across the Menai Strait. Plas Newydd is owned by the National Trust and encompasses three separate garden areas, with a number of associated listed buildings and two scheduled prehistoric burial chambers.

9.41 There are three Registered Historic Parks and Gardens in Gwynedd lying within the Study Area:

- Grade I Vaynol park and garden (GD52);
- Grade II* Penrhyn Castle park and garden (GD40); and
- Grade II Caernarfon: Morfa Common park (GD38).

9.42 In particular Vaynol historic park and garden provides the largest potential constraint to the route corridor crossing the Menai Strait. The Registered Historic Park and Garden encompasses four separate sub-gardens areas and has an extensive park boundary and essential setting. Part of the Vaynol estate was purchased by the National Trust in order to preserve the setting of Plas Newydd which stands on the opposite shore and protect the views looking to the west from the estate, across Anglesey.

9.43 More information on each of these designated sites is provided in Appendix L.

Conservation Areas

9.44 Conservation Areas are designated areas of special architectural or historic interest where it is desirable to preserve or enhance the area's appearance or character. They were first defined by the Civil Amenities Act 1967 (as amended) and are protected under Section 69 of the Planning (Listed Buildings and Conservation Areas) Act 1990. They are often, but not exclusively, associated with settlements and may be in their core or embedded within a larger expanse of built form. The setting of Conservation Areas may be particularly important as the designation refers to the overall character of an area and the juxtaposition of buildings, spaces and other features that contribute to it.

9.45 There are 18 Conservation Areas within the Study Area. The Conservation Areas within the Study Area are listed in Appendix L.

Registered Landscapes of Historic Interest in Wales

9.46 The Register is produced by Cadw, CCW and ICOMOS (UK), and aims to protect surviving historic landscapes. They are generally divided into landscapes of Outstanding Historic interest and landscapes of Special Historic interest.

9.47 The Register of Landscapes of Historic Interest in Wales is a non-statutory designation which is a 'material consideration' in planning decisions, supported by Cadw's Guide to Good Practice (Cadw, 2nd, revised ed., 2007). The Guide sets out the circumstances under which developers should take into account the information on the Register, and whether an Assessment of the Significance of the Impact of Development on Historic Landscape Areas on the Register of Landscapes of Historic Interest in Wales (ASIDOHL) is required.

9.48 There are two Registered Historic Landscapes on Anglesey:

- Amlwch and Parys Mountain (HLW (Gw 1); and
- The Penmon (HLW (Gw) 15).

9.49 Amlwch and Parys Mountain is considered to be of Outstanding Historic Interest. It forms a large, but low, prominent ridge 147m above Ordnance Datum (OD) comprising huge opencast, 18th to 19th centuries copper mines and waste tips. It is associated with an extensive complex of industrial processing features and structures as well as earlier workings in the area dating from the Bronze Age, the Roman era and medieval period.

9.50 The Penmon is considered to be of Outstanding Historic Interest and is located on the eastern peninsula of Anglesey. The area is particularly associated with the medieval sites of the former Penmon Priory and the Penmon Deer Park estate.

9.51 On the mainland side of the Study Area are three Registered Historic Landscape areas, all considered to be of outstanding historic interest:

- Dinorwig (HLW Gw 6) Registered Historic Landscape;
- Ogwen Valley (HLW Gw 10) Registered Historic Landscape; and
- North Arllechwedd (HLW Gw 12) Registered Historic Landscape.

9.52 The existing National Grid overhead electricity transmission line to the Pentir substation passes directly through the Dinorwig Registered Historic Landscape of Outstanding Historic Interest. This landscape is located directly opposite Britannia Bridge and consists of low coastal plateau and adjoining glaciated valley situated on the northwest side of Snowdon. The landscape contains evidence of land use and settlement from the prehistoric period onwards, superimposed by recent extensive and outstanding remains of the 19th and 20th centuries slate industry. The area includes: Iron Age hillforts, settlements and fields; medieval settlements; recent quarries, waste tips, transport systems and a port; park estates; the Dinorwig underground hydro-electric pumped storage scheme; and a prehistoric hut group and fields.

9.53 The Ogwen Valley Landscape of Historic Interest is partly located within the Snowdonia National Park. The area includes: a number of early fields and dwellings east of Llanllechid; prehistoric huts and enclosures in Cwm Caseg; Neolithic and Bronze Age funerary and ritual monuments; Iron Age hillforts and concentrations of relict settlements and field systems; medieval settlements; and the extensive remains of 19th and 20th century slate quarries, attendant settlements and transport systems.

9.54 The greater part of North Arllechwedd Registered Landscape is of Outstanding Historic Interest and is within the Snowdonia National Park. It contains well-preserved relict evidence of recurrent land use and settlement from the prehistoric to medieval and later periods. The area encompasses: a Neolithic axe factory site; dense concentrations of Bronze Age funerary and ritual monuments; Iron Age hillforts, settlements and field systems; prehistoric trackways; a Roman road; medieval settlements, field systems, a motte and commotal centre at Abergwyngregyn; and recent mining and quarrying remains.

Historic Environment Records

9.55 The Historic Environment Record (HER) database provides comprehensive detailed information regarding known archaeological and historical sites, monuments, buildings, artefacts and landscapes. In North West Wales the register is maintained by Gwynedd Archaeological Trust (GAT).

9.56 As of Marsh 2011 there were approximately 3,500 heritage assets recorded on the HER within the Study Area. The majority of these assets have no statutory protection and for the purpose of this assessment have been assessed as having low overall sensitivity.

Summary of Cultural Heritage Designations

Table 9-A contains summaries of the key cultural heritage designations within the Study Area (Refer to Appendix L for further details).

Heritage Designation	Description
World Heritage Sites	Beaumaris Castle and Town Walls on Anglesey and Caernarfon Castle and Town Walls, on the mainland overlooking the Menai Strait both form part of the Castles and Town Walls of King Edward in Gwynedd World Heritage Site.
World Heritage Sites Essential Setting	The Essential Setting of the two WHSs at Beaumaris Castle and Town Walls on Anglesey and Caernarfon Castle and Town Walls, on the mainland are less sensitive to change than the centre of the WHS and contains more non-heritage features.
Grade I Registered Historic Parks and Gardens	There are two Grade I Parks and Gardens in the Study Area: • Plas Newydd Landscaped park (GD48); and • Vaynol Landscape park (GD52).
Grade II* Registered Historic Parks and Gardens	There are five Grade II* Parks and Gardens in the Study Area: • GD40 Penrhyn Castle parkland; • GD42 Plas Berw Deer park; • GD43 Carreglwyd lawns and lake surrounded by woodland; • GD44 Bodorgan terraced garden, deer park and walled kitchen gardens; and • GD46 Llanidan park, pleasure grounds, walled garden and churchyard.
Essential Settings of Grade I and Grade II* Registered Historic Parks and Gardens	The Essential Settings of Grade I and Grade II* Registered Historic Parks and Gardens are, on the whole, less sensitive to change than the centre of the Parks and Gardens.
Grade II Registered Historic Parks and Gardens	There are four Grade II Parks and Gardens in the Study Area: • GD38 Caernarfon: Morfa Common Park public park around an artificial lake; • GD45 Cestyll: small sheltered garden; • GD47 Plas Gwyn Terrace and lawn and parkland with woods; and • GD49 Plas Rhianfa Terraced seaside Victorian garden.
Essential Settings of Grade II Registered Historic Parks and Gardens	The Essential Settings of Grade II Registered Historic Parks and Gardens are, on the whole, less sensitive to change than the centre of the Parks and Gardens.

Heritage Designation	Description
Registered Historic Landscapes	There are five Registered Landscapes of Outstanding Historic Interest in Wales within the study. These are: Amlwch and Parys Mountain (Mynydd Parys), (W (Gw) 1); Penmon HLW (Gw) 15; Dinorwig HLW (Gw) 6 North Arllechwedd HLW (Gw) 12; and Ogwen Valley HLW (Gw) 10. There are no Registered Landscapes of Special Historic Interest within the Study Area.
Conservation Area	There are 18 Conservation Areas within or close to the Study Area. Of these, 12 Conservation Areas are found on Anglesey and 6 are on the mainland within Gwynedd. On Anglesey, the Conservation Areas are: Aberffraw, Amlwch, Amlwch Port, Beaumaris, Bodedern, Cemaes, Holyhead Central, Holyhead Mountain, Holyhead/Newry Beach, Llanfechell, Llangefni and Menai Bridge Conservation Areas. On the mainland, the Conservation Areas are found at: Bangor; Llandegai; Aberpwll; Caernarfon; Y Faenol (Vaynol);and Bontnewydd.
Scheduled Monuments	Within the Study Area there are 171 sites protected as SMs.
Grade I Listed Buildings	Within the Study Area there are 1,834 Listed Buildings, of which 54 are Grade I Listed Buildings.
Grade II* Listed Buildings	There are 129 are Grade II* Listed Buildings within the Study Area.
Grade II Listed Buildings	There are 1,651 Grade II Listed Buildings within the Study Area.

Table 9-A: Main Cultural Heritage Designations within the Study Area

Generic Cultural Heritage Impacts of Overhead Electricity Transmission Lines

9.57 Impacts to a cultural heritage asset from a development will vary depending on the asset and its sensitivity. Whilst the overall development footprint of a transmission line is limited to the footprint of the individual pylons, associated construction works, such as foundation installation and the development of temporary access roads, could damage or permanently destroy recorded or unrecorded heritage assets.

9.58 All cultural heritage features have a setting or context but the above-ground sites, such as World Heritage Sites, Listed Buildings, Conservation Areas, Registered Historic Parks and Gardens and some SMs, are considered to be especially sensitive to visual impacts from an overhead transmission line as these are likely to detract from the character and appearance of these areas. However the significance of the effects on the settings of all cultural heritage features would need to be assessed on a site by site basis to take account of local topography, existing screening and the direction of key views.

Sensitivities of Cultural Heritage Assets

9.59 The key cultural heritage designated sites and features have been examined in more detail to consider their sensitivity to new overhead electricity transmission lines and pylons. Full details are provided in Appendix L, whilst details of the key sensitivities of the WHS designation are presented below.

9.60 Due to the international importance of WHS they would be very sensitive primarily to the temporary and permanent construction impacts of high voltage overhead transmission lines. The location of a new overhead line within a WHS would be wholly exceptional as these would have a significant construction impact on the character and appearance of the unique architectural and historic interest of a WHS. WHS would also be very sensitive to the location of an overhead line outside of the WHS as it would affect the Essential Setting and/or directly interrupt a recorded Significant View and/or Arc of View.

9.61 Beaumaris Castle and Town Walls on Anglesey and Caernarfon Castle and Town Walls, on the mainland overlooking the Menai Strait are UNESCO World Heritage Sites. These sites would be highly sensitive to an overhead line.

Generic Cultural Heritage Mitigation

9.62 The primary means of mitigating the adverse effects of an overhead transmission line is at the routeing and alignment stage. For example careful siting of a line away from, or around scheduled monuments and listed buildings would avoid physical damage to the resource and avoid or reduce adverse effects upon the site's setting.

9.63 Detailed archaeological and historic assessments are normally undertaken in advance of development consisting of an archaeological desk-top assessment which may be followed by a programme of field-walking, remote sensing (such as geophysical survey, resistively survey or ground penetrating radar), and targeted archaeological evaluation trial-trenching. The significance of any new, previously unrecorded, heritage assets discovered through these evaluation techniques can then be assessed and mitigated where necessary.

9.64 During construction an archaeological watching brief is usually undertaken as part of the mitigation strategy. The watching brief carried out by an on-site archaeologist allows any new sites uncovered during excavation to be identified and recorded. In addition it allows mitigation techniques, such as using ground matting to protect sites or directing construction traffic away from known sites, to be used and enforced.

9.65 Mitigation can also be provided at the detailed design stage by identifying the most suitable type and design of pylon to reduce adverse impacts to historic landscapes and settings or by incorporating sympathetic landscaping to reduce the impact on settings of heritage assets. Whilst the use of underground cables would largely avoid adverse visual effects upon the setting of any above ground cultural heritage sites, it would also introduce a far greater risk of damage to unrecorded archaeological features, given the significant construction swathe associated with buried cables.

9.66 Where a direct impact on an archaeological site cannot be avoided and the site cannot be preserved *in situ*, preservation by archaeological record may be considered an acceptable mitigation method. This allows archaeologists to record the information which would have been lost as a consequence of during development activities for future generations.

10 Landscape and Visual Considerations

10.1 This section details the landscape and visual characteristics found within the Study Area. The landscape is assessed in terms of its sensitivity to overhead electricity transmission lines and pylons in order to provide a high level appreciation of the local landscape and visual sensitivity and the ability of the landscape of the Study Area to accommodate a new overhead electricity transmission line. This also includes consideration of the potential 'opportunity corridors' within the Study Area that may guide certain route corridor options.

Landscape

Landscape Designations

10.2 The landscape designations across the Study Area are shown on Figures 10-1 and 10-1 A to D in Appendix H.

Areas of Outstanding Natural Beauty (AONB)

10.3 AONBs are designated under the National Parks and Countryside Act 1949 (as amended) for the purpose of conserving and enhancing the natural beauty of the landscape, with two secondary aims of meeting the need for quiet enjoyment of the countryside and having regard to the interests of the people who live and work in the area. The CCW is responsible for the designation of AONBs in Wales.

10.4 Unlike National Parks, which have separate planning authorities, AONBs rely on planning controls of the LPAs (in this instance Anglesey and Gwynedd). Further regulation and protection of AONBs was added by the Countryside and Rights of Way Act 2004 (CRoW Act 2004), and the UK Government has recently stated that AONBs and National Parks have equal status when it comes to planning consent and other sensitive issues.

10.5 The majority of the Anglesey coastline is designated as an AONB, protecting the coastal hills, beaches and coves of the island, and extends further inland around Mynydd Bodafon. The AONB extends along the majority of the Anglesey side of the Menai Strait, with the only undesignated section occupied by the Menai Bridge settlement.

Heritage Coast

10.6 Heritage Coasts represent stretches of beautiful, undeveloped coastline, which are managed to conserve their natural beauty and, where appropriate, to improve accessibility for visitors. They are 'defined' rather than designated, as there is no statutory designation process like that associated with National Parks and AONBs.

10.7 The national purposes of Heritage Coasts are to: conserve, protect and enhance the natural beauty of the coasts, their marine flora and fauna, and their heritage features; facilitate and enhance their enjoyment, understanding and appreciation by the public; maintain and improve the health of inshore waters affecting Heritage Coasts and their beaches through appropriate environmental management measures; take account of the needs of agriculture, forestry and fishing, and of the economic and social needs of the small communities on these coasts.

10.8 Three sections of the Anglesey coastline are also defined as Heritage Coast areas (the North Anglesey Heritage Coast between Church Bay/Porth Swtan and Dulas Bay; the Holyhead Mountain Heritage Coast from North Stack to Trearddur Bay; and the Aberffraw Bay Heritage Coast).

Registered Historic Parks and Gardens

10.9 As discussed in Section 9 there are eight Registered Historic Parks and Gardens associated with former country houses across Anglesey, with a further three within the Study Area in Gwynedd. Many situated of these are within or at the edge of the coastal AONB, as well as several along the length of the Menai Strait. The largest sites, Plas Newydd in Anglesey and Vaynol in Gwynedd, are situated on either side of the Strait near Llanfairpwll and Bangor respectively.

10.10 Smaller estates and parks such as Llanidan and Plas Rhianfa would have a lower ability to accommodate changes to their settings, although most of the gardens are already adversely affected by surrounding development.

National Park

10.11 The Environment Act 1995 revised the original legislation that created National Parks on the basis of their national importance. There are two statutory purposes for National Parks in England and Wales:

- Conserve and enhance the natural beauty, wildlife and cultural heritage; and
- Promote opportunities for the understanding and enjoyment of the special qualities of National Parks by the Public.

10.12 The Snowdonia National Park is located south and east of the Study Area in Gwynedd. While the National Park is outside the Study Area, the potential effects on views and the setting of the National Park will require to be considered.

Landscape Character

10.13 A Landscape Character Area (LCA) is a geographical area, identified by the Local Authority, which exhibits a distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape, reflecting particular combinations of geology, landform, soils, vegetation, land use and human settlement.

10.14 The landscape character areas are shown on Figure 10-2 in Appendix H (Landscape Character Areas).

10.15 At the time of writing, the Landscape Character mapping for Anglesey was in the process of being updated by the Isle of Anglesey Council (Cygnor Sir Ynys Môn). The study of the LCAs identified by Gwynedd Council highlighted the importance of considering the tourist value and historic context of the area in the identification of potential route corridors. There are a number of historic estates across Gwynedd and near the Menai Strait in particular, such as Vaynol Park and Penrhyn Estate, which are considered to be important to the local tourism trade and are sensitive to change. The area also has a strong history

of slate quarrying that has left many disturbed sites across several of the LCAs that have a strong influence on the historical and cultural landscape identity. While redevelopment of these areas would not be considered inappropriate, it will be important to respect the historic significance of such sites.

LANDMAP

10.16 LANDMAP (CCW, 2003) 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 the Geological Landscape, Landscape Habitats, Visual & Sensory, the Historic Landscape and the Cultural landscape. LANDMAP covers all landscapes, designated and non-designated.

10.17 LANDMAP is the formally adopted methodology for landscape assessment and is advocated by Planning Policy Wales. It is a partnership programme between CCW and all of the local planning and national park authorities of Wales.

10.18 The LANDMAP assessment carried out by CCW has been utilised to identify areas of high value. These values were taken into account when identifying how sensitive the landscape would be to an overhead transmission line.

10.19 In the Visual Sensory layer (Figure 10-3 and 10-3 A to D in Appendix H) the majority of Anglesey is assessed as being of Moderate value. Settlements are generally considered to have Low value, while the majority of High and Outstanding value are situated on coastal areas located within the AONB, with the exception of Mynydd Mechell and The Dingle LNR at Llangefni which are assessed as having High value. The majority of the Study Area in Gwynedd has Moderate value, with some of the coastal sections, such as Vaynol Park, assessed as having High value.

10.20 As discussed in Chapter 8 (Ecology and Biodiversity), the Landscape Habitat layer (Figures 10-4 and 10-4 A to D in Appendix H), the majority of Anglesey has been assessed as having Low or Moderate value, with High and Outstanding value areas generally located in coastal areas or around larger waterbodies. In Gwynedd, much of the Study Area ranges from Moderate to High value, with the settlement areas considered to have Low value.

10.21 The Cultural Landscape layer (Figures 10-5 and 10-5 A to D in Appendix H) identifies Anglesey to be of High or Outstanding value, with the exception of Llyn Alaw reservoir which is assessed as Moderate value. Gwynedd is generally assessed as having Outstanding value, with a few small areas of High or Moderate value in developed areas.

10.22 The Geological Landscape layer (Figures 10-6 and 10-6 A to D in Appendix H) identifies the majority of Anglesey as having Moderate value. The prominent ridges and much of northern Anglesey are considered to be of High value, with areas of Outstanding value around Newborough and to the north of Menai Bridge in eastern Anglesey. Within the Study Area, Gwynedd is assessed as having Moderate or High value, with the coast of the Menai Strait assessed as High. The Historic Landscape assessment (Figure 10-7 and 10-7 A to D in Appendix H) has not assigned values to the identified areas.

10.23 The Historic Landscape layer (Figures 10-7 and 10-7 A to D in Appendix H) identified the majority of Anglesey as having High or Outstanding value, with a few areas of Moderate value on the northern coast and to the south of Gaerwen. Gwynedd is generally assessed as having High or Outstanding value, with areas of Moderate value to the west of Caernarfon and south of Bangor.

Topography

10.24 The topography of Anglesey is typified by low rolling hills and rocky outcrops. The majority of the undulating landform would be too small to impact on the selection of any potential route corridors.

10.25 There are several larger hills along the northern and north-western coast of Anglesey, such as Mynydd Llwydiarth, Mynydd Elian, Mynydd Bodafon and Mynydd y Garn. There are also several areas where clusters of rocky outcrops, such as Mynydd Mechell and to the west of Llandona, form distinctive features within the landscape.

10.26 One of the most significant topographical features is a high ridgeline to the east of Llangefni. The ridgeline extends across the whole of Anglesey from the Pentraeth Forest to the Newborough Forest.

10.27 On the Menai Strait to the east of the Britannia Bridge there is steep topography on either side of the Strait. To the west of the Britannia Bridge, the slopes of the surrounding hills generally have more gentle gradients, although the Strait begins to widen.

10.28 To the east of the Menai Strait, the landscape of Gwynedd generally rises gently from the coast, before reaching a steep ridgeline running east from Y Felinheli to Bangor. At the top of the ridgeline, the landform is generally gently rolling, but rises to the southwest towards Snowdonia.

10.29 The topography of the Study Area is shown on Figures 10-8 and 10-8 A to D in Appendix H (Topography).

Visual Receptors & Views

10.30 The primary settlements within the Study Area (Department of Communities and Local Government, 2001) are shown on Figures 10-9 and 10-9 A to D in Appendix H. Residential densities are shown in Figures 10-10 and 10-10 A to D and the settlement pattern is shown in more detail on Figures 10-11 A to D. This figure also indicates topography including key ridge lines and woodland which have the potential to assist in screening or providing a backdrop to views of overhead electricity transmission lines, but can also constrain alignment. An indication of the main direction of views from settlements, based upon review of landform, web-based photography and knowledge gained from fieldwork is also included.

10.31 The widely dispersed settlement pattern of Anglesey will need to be considered during the selection of route corridors for further assessment. While views from many of the settlements across Anglesey are affected by the supporting infrastructure, including roads and existing overhead electricity transmission lines, several of the larger settlements are situated within or at the edge of the AONB that covers the majority of the Anglesey coast.

Given that AONB designation aims to conserve and enhance the natural beauty of the landscape, the potential visual effect of overhead electricity transmission line development on receptors within or in close proximity to the designated area may be greater than in other areas. Most of the settlements across Anglesey are relatively small communities with no significant industrial zones through which a power line could be routed if it was necessary to take the route near an urban area (as recommended by the Holford Rules (Appendix G)). The settlements would generally be considered to be a constraint to be avoided to minimise visual impacts. Some of the larger settlements, such as Llangefni, have industrial zones at the edges that would be less sensitive to an overhead electricity transmission line in close proximity.

10.32 The most significant area of settlement is around the Menai Strait, with the large settlements of Bangor and Caernarfon and the smaller settlements of Menai Bridge, Beaumaris, Llanfairpwll and Y Felinheli situated along the Strait. Properties on the fringes of and within elevated areas of these settlements typically enjoy views across the surrounding landscape and a number of houses in the area have been constructed to take advantage of the scenic views across the water. As a result of the scenic quality of the available views, some of these properties have the potential to be significantly affected by overhead electricity transmission line development. However, the potential for overhead electricity transmission lines to have visual effects upon the majority of dwellings within the interior of the larger settlements is generally limited due to the density of the surrounding urban development. Any potential route would need to consider the visual impacts on residential areas that may be caused by the loss of mature woodland or changes to notable landscape features, such as the dramatic rock faces on the western side of the Menai Strait.

10.33 Beyond the towns and villages, the majority of dwellings consist of scattered houses and farms or small clusters of houses, many of which would have the potential to have their visual amenity adversely affected by views to overhead electricity transmission line development due to their rural settings. To the south of Llanfechell, there are a number of dwellings scattered across the rocky outcrops of Mynydd Mechell. Most of the dwellings in this relatively remote, dispersed community gain attractive views across the local area, and would generally have greater potential to be adversely affected than those within urban areas, whose views to the surrounding landscape tend to be interrupted by other buildings. The visual amenity of the area would be likely to limit the capacity of the area to accept an overhead electricity transmission line and would narrow the potential route corridor of a line leaving Wylfa.

10.34 The Menai Strait is one of the main tourist attractions in the Study Area, with people coming to the area to enjoy the attractive views available across the water. The section of the Menai Strait between the Britannia and Menai Suspension Bridges, known as The Skerries, is considered to have particularly high scenic value, with a designated viewpoint situated outside Llanfairpwll on the A5 to provide visitors with the opportunity to experience the 'picture postcard' views of the historic Menai Suspension Bridge. A second viewpoint in Beaumaris provides visitors with views from the waterfront towards the Lavan Sands and the Gwynedd coast. These scenic viewpoints are of high sensitivity to overhead electricity transmission line development.

10.35 There are numerous established infrastructure corridors across the Study Area. The main transport route through the Study Area is the A55 (T), which runs across North Wales and over the Britannia Bridge into Anglesey, continuing west to Holyhead. While the road provides a high speed dual carriageway across Anglesey, the road affords travellers with scenic views across the island and towards Snowdonia in many areas. It can be considered as having relatively high sensitivity for a high speed route, given that it could be regarded as a 'gateway' to Anglesey and North Wales. The only crossing points over the Menai Strait are the Britannia Bridge and the Menai Suspension Bridge, with both bridges providing scenic views along the Strait for travellers. The existing transport corridors adversely affect the landscape character and views associated with them.

10.36 Two existing overhead electricity transmission lines run south and southeast from Wylfa. One line, operated at 400kV, runs across Anglesey and crosses the Menai Strait immediately to the southwest of the Britannia Bridge before connecting to the substation at Pentir. A second line operated at 132kV turns west at Bodedern and runs to Holyhead. Other smaller lattice pylon and wood pole lines run across Study Area. Several wind farms have been constructed on Anglesey, including the Llyn Alaw and Rhyd-y-groes Wind Farms, which have introduced significant visual features into the landscape.

Landscape and Visual Sensitivity

10.37 Figures 10-12 A to D and 10-13 A to D and the tables in Appendix M set out preliminary landscape and visual sensitivity evaluations for the Study Area.

10.38 A preliminary evaluation of the landscape and visual sensitivity of the study area to accept 400kV overhead lines has been undertaken using LANDMAP information combined with site knowledge, review of maps and photographs together with a degree of interpretation and professional judgement.

10.39 The criteria used for evaluation of landscape sensitivity (developed with reference to the Holford Rules) included:

- Scale;
- Enclosure;
- Landform;
- Landscape pattern; and
- Presence of detractors.

10.40 The criteria used for evaluation of visual sensitivity included:

- Presence of visual receptors;
- Screening elements, backdrops, skylines;
- Mitigation potential; and
- Scenic quality and presence of visual detractors.

10.41 Further details of the landscape and visual sensitivity criteria are provided in Appendix M.

10.42 At this stage reference to LANDMAP has been based primarily on the Visual and Sensory Layer, which is considered to be the most relevant of the 5 layers to overhead line development. The Landscape Habitats and Historic Landscape layers were not included in order to avoid 'double counting' since it was considered that the Ecological and Cultural Heritage constraints mapping would address these subject areas adequately. The Geological Landscape layer was not included in the evaluation because it was considered that the visible physical attributes associated with geology would be adequately captured in the Visual and Sensory layer. The Cultural Landscape layer was not considered at this stage as it was assumed that this would generally be reflected by landscape designations.

10.43 The LANDMAP Visual and Sensory Aspect Area boundaries were used to subdivide the study area as these most closely reflect changes in landscape character and physical features relevant to overhead line routeing and were found to be of an appropriate scale to assist in route corridor identification in combination with other constraints data.

10.44 On Figure10-13 the LANDMAP Visual and Sensory Aspect Areas evaluated as being of high landscape and visual sensitivity are indicated in red and the areas of medium to high sensitivity are indicated in amber.

10.45 The areas with the lowest landscape sensitivity are mainly associated with existing and former infrastructure or industry and include:

- The A55 corridor;
- Caer Glaw Quarry;
- Valley and Mona airfields;
- The site of Anglesey Aluminium at Holyhead; and
- Ty Croes Racing Circuit and the sewage works etc at Plas Menai.

10.46 In general the LANDMAP areas with the highest landscape sensitivity for overhead electricity transmission line development include:

- The majority of coastal and coastal hinterland areas, which lie mainly within areas designated as AONB, including the Menai Strait coastline and the Holy Island Strait. These areas include the designed landscapes of Vaynol Estate, Plas Newydd and Penrhyn Castle;
- Areas of steep or prominent topography including the distinctive landforms of Mynydd Mechell, Mynydd y Garn, Holyhead Mountain, Mynydd Bodafon, Parys Mountain, Mynydd Llwydiarth, Mynydd Elian, Penraeth Forest and high ground at the north west edges of the Snowdon mountain range, including areas in the National Park;
- Large inland waterbodies including Llyn Alaw and Cefni Reservoir; and
- Small scale wooded valleys including those of Cwm Cadnant and Llangefni Dingle and steep wooded slopes including those to the north of Beaumaris and along the Menai Strait.

10.47 The majority of the Study Area including much of Anglesey away from the coast and much of the area on the mainland between the mountains and the coast is considered to have medium landscape sensitivity.

10.48 The areas with the lowest visual sensitivity are mainly associated with existing and former infrastructure and include:

- The A55 corridor;
- Llanfihangel lakes and dunes;
- Valley and Mona airfields;
- Caer Glaw Quarry; and
- Ty Croes Racing Circuit.

10.49 In general the LANDMAP areas with the highest visual sensitivity for overhead electricity transmission line development include:

- The majority of coastal and coastal hinterland areas, which lie mainly within areas designated as AONB, including the Menai Strait coastline and the Holy Island Strait;
- Areas of steep or prominent topography including the distinctive landforms of Mynydd Mechell, Mynydd Bodafon, and high ground at the north west edges of the Snowdon mountain range, including areas in the National Park; and
- Small scale wooded valleys including those of Cwm Cadnant and Llangefni Dingle and steep wooded slopes including those to the north of Beaumaris and along the Menai Strait.

10.50 The majority of the Study Area including much of Anglesey away from the coast and much of the area on the mainland between the mountains and the coast is considered to have medium to high visual sensitivity.

Generic Landscape and Visual Impacts

10.51 New overhead electricity power lines, can give rise to adverse landscape and visual impacts, dependent upon their scale, siting, degree of screening and the nature of the landscape and local environment through which they are routed.

10.52 In order to achieve their engineering and electrical functions, pylons carrying overhead electricity transmission circuits are necessarily large structures which are visually prominent. Inevitably therefore much of the concern around the environmental effects of overhead transmission lines focuses on their visual effects and related impacts on the character of the landscape through which they're routed. The magnitude and significance of the landscape and visual impacts will be heavily dependent upon the route chosen for the line.

10.53 In rural locations with few other manmade features, transmission lines may be incongruous features, resulting in significant changes to the character of the landscape. In addition the construction of new lines can result in changes to established landscape features, such as woodlands or established hedgerow trees, where felling would be necessary if a line were to be routed through such areas. Routeing close to existing infrastructure, whilst limiting the overall extent of the area impacted, may increase the visual clutter associated with multiple overhead lines, creating confusing and discordant views and further impacting landscape character.

10.54 The degree of permanent visual impact arising from an overhead line is dependent upon a number of factors, including the distance from the viewer, the time for which the line would be seen (for those moving through the landscape), the sensitivity of the viewer, the amount of intervening screening and the background against which the line is viewed. For those who experienced a view before the installation of a new line, the degree of visual change can increase the initial magnitude and significance of any visual effects arising.

10.55 Similarly the construction and any subsequent maintenance activities associated with the overhead line would result in further temporary visual effects.

10.56 Landscape and Visual effects can be substantially reduced or avoided by careful routeing of the line from the outset e.g. by avoiding landscape of the highest sensitivity and avoiding near views from sensitive viewpoints and visual receptors.

Generic Landscape and Visual Mitigation

10.57 EN-5 identifies some different types of landscape mitigation for overhead electricity transmission lines. In additional to the guidelines set out in the Holford Rules the main opportunities for mitigation for overhead electricity transmission lines are:

- Selection of the most suitable type and design of support structure (i.e. different pylon types);
- Landscape schemes for example, off-site tree and hedgerow planting. These could soften the effect of a new overhead electricity transmission lines or provide some screening from important visual receptors;
- Screening, comprising localised planting in the immediate vicinity of residential properties and principal viewpoints can also help to screen or soften the effect of the line, reducing the visual impact from a particular receptor; or
- Reconfigure or rationalise existing electricity network infrastructure.

10.58 As described above the principal means for reducing the key landscape and visual effects associated with new overhead lines is through the careful routeing of such lines. Guidance on the appropriate routeing of overhead lines is set out in the 'Holford Rules'; a set of industry guidelines first set out in 1959 by Lord Holford (Appendix G). The 'rules' have now become an important part of the National Policy Guidance set out in EN-5 dealing with overhead electricity lines.

10.59 In addition to the avoidance of adverse effects through routeing, other forms of mitigation are often employed. A range of pylon types might be employed, including low height towers and potentially the new 'T-Pylon' which is under development. These alternative tower types might be better screened in some landscapes but may be more incongruous in others. Figure 1-2 in Appendix A illustrates a range of pylon designs.

10.60 The line might be screened by the use of tree and shrub, either close to the viewpoint or receptor, or more widely in the landscape so as to better integrate the line. Where landscape features have to be removed to allow the construction of a new line, such as sections of hedgerow or hedgerow trees, these can be replaced, and any damage to the soil surface restored.

10.61 Cluttered wirescapes can also be improved through the possible undergrounding of lower voltage lines. Alternatively, opportunity corridors might be identified where the construction of a new line might facilitate the removal of an existing one, thereby reducing the degree of landscape change.

10.62 Finally, where other forms of mitigation cannot adequately mitigate the adverse landscape or visual effects of a new line, in very sensitive locations, detailed consideration would be given to the alternative use of underground cables. This judgement needs to be assessed taking into account the additional effects that arise from the installation of buried cables (including the construction of the secure compounds necessary to connects sections of underground cable to overhead lines) and the very significant additional costs that result.

11 Socio-Economic and Land Use Considerations

11.1 This section details the socio-economic features and land use within the Study Area, and provides a high level appreciation of the capacity of the Study Area to accommodate a new overhead electricity transmission line. This also includes consideration of the potential 'opportunity corridors' within the Study Area that may guide certain route corridor options.

Settlements

11.2 The Study area has approximately 45,096 residential properties, approximately 51.35 residential properties per square milometer (population density). The most significant areas of settlement are around the Menai Strait, with the large settlements of Bangor and Caernarfon and the smaller settlements of Menai Bridge, Beaumaris, Llangefni, Llanfairpwllgwyngyllgogerychwyrndrobwllllantysiliogogogoch (Llanfairpwll) and Y Felinheli situated along the coastline. In addition, to the west of Anglesey is the town of Holyhead. Details of settlement locations within the search area are shown on Figure 10-9 and residential densities are shown on Figure 10-10. Settlements are considered sensitive to overhead transmission line and are normally avoided when routing them.

11.3 There are numerous small settlements scattered across the island, such as Tregele, Llanfechell and Cemaes in the vicinity of Wylfa and Llanerchymedd and Gwalchmai across central Anglesey.

11.4 Table 11-A details the settlements within the Study Area.

	Anglesey			Gwynedd
Towns / City	Cemaes Amlwch Holyhead	Benllech Llangefni Beaumaris	Rhosneiger Llanfairpwll	Penmaenmawr Caernarfon Bangor
Villages	Llanfairynghornwy Rhydwyn Mynydd Mechell Carreglefn Llanfaethlu Llanddeusant Tregele Penysarn Rhosgoch Rhosybol Moelfre Penygraigwen Gadfa Valley	Caergeliliog Llanfachraeth Rhoscolyn Trearddur Bodedern Llanerchmedd Gwalchmai Bryngwran Llanfihangel yn Nhowyn Rhostrehwfa Llanddona Pentraeth Brynteg	Marian-glas Tynygon Rhosmeirch Talwrn Red Wharf Bay Llangoed Aberffraw Bryn Du Gaerwen Bethel Malltraeth Dwyran Brynsiencyn Llanfaes	Y Felinheli Bethel Llanrug Deiniolen Rachub Bontnewydd

Table 11-A: Settlements within the Study Area
Note: Villages = between 100-2500 residents and Towns (including the City of Bangor) = >2500

11.5 The location of all residential properties located within the study area has also been identified and mapped using OS AddressBase data, an online definitive spatial address base. The potential effects of any overhead line on individual residential properties will be largely dependent upon the local alignment of the route relative to the property. As such the location of individual properties at this initial stage has not influenced the identification of route corridors.

11.6 However, the AdressBase data has also been used to calculate the density of residential properties located within 500 metres or points located at 100 metre intervals across the study area. This data was subsequently mapped and is illustrated on Figure 10-10. This has aided understanding and allows consideration of settlement patter when identifying route corridors.

Community Facilities

11.7 Within the Study Area there are 87 schools and one university. The principal settlement areas (more than 1,000 inhabitants) such as Bangor, Caernarfon, Holyhead, Beaumaris, Llangefni, Amlwch, Tregele, Llanddeusant, Bodedern, Bryngwran, Llanfechell, Llanerchymedd, Bodffordd, Llanfairpwll, LlanddanielFab and Bethel are supported by numerous community halls, playgrounds, libraries, churches, sports grounds and leisure centres.

Local Economic Activity

Agriculture

11.8 The majority of Anglesey and the north west of Gwynedd is covered by a mixture of arable and pasture farmland. Field boundaries are designated with a mixture of hedgerows and fences, with occasional stone walls.

11.9 Agricultural land is divided into 5 Grades depending on the quality of the soils and the types of agriculture it can support, Grade 1 being the highest. According to data obtained from the Welsh Government the majority of the Study Area is grade 4 or 5. However, there are areas of Grade 3 and Grade 2 agricultural land.

11.10 Details of the Agricultural Land Classification (ALC) data provided by the Welsh Government are shown on Figure 11-1 in Appendix H.

11.11 Agriculture, forestry and fishing together account for 22.1% of the Anglesey economy (Office for National Statistics, 2001).

Energy

11.12 In April 2012 the Welsh Government designated Anglesey as one of seven enterprise zones in Wales. Each zone focuses on a key target sector, with Enterprise Island focusing on the energy sector in Anglesey. A key driver to delivering opportunities for the energy sector is the Energy Island Programme (EIP) which forms part of the Enterprise Island Framework. It aims to develop Anglesey as a leading location for low carbon energy innovation and

demonstration, and invest in new low carbon energy production to help secure a stable energy future for Wales and the UK.

11.13 There are numerous existing wind farms across Anglesey principally between Llyn Alaw and the coast at Wylfa. A further wind farm is located between Rhosybol and Penysarn shown on Figures 10-9 and 10-9a in Appendix H. National Grid would not seek to route 400kV overhead electricity transmission lines within close proximity to a wind turbine and they are therefore considered to be a significant constraint.

11.14 There are also numerous planning applications for new wind turbines that have been submitted to Anglesey Council. In addition, potential developers have also indicated an intention to submit applications by requesting screening opinions for such proposals. Any extant planning consents or sites under development will be considered as part of the further detailed appraisal. The Isle of Anglesey County Council is currently producing supplementary guidance for onshore wind farm development, and this emerging policy will be taken into account.

11.15 Plate 11-A shows the location of constructed wind farms within the Study Area.

11.16 National Grid Policy PS(T)087, Issue 2, dated October 2009 sets out the policy that National Grid follows with regard to clearances for wind farms and electricity pylons. These guidelines require a minimum clearance of 3 times the diameter of the wind turbine rotors.

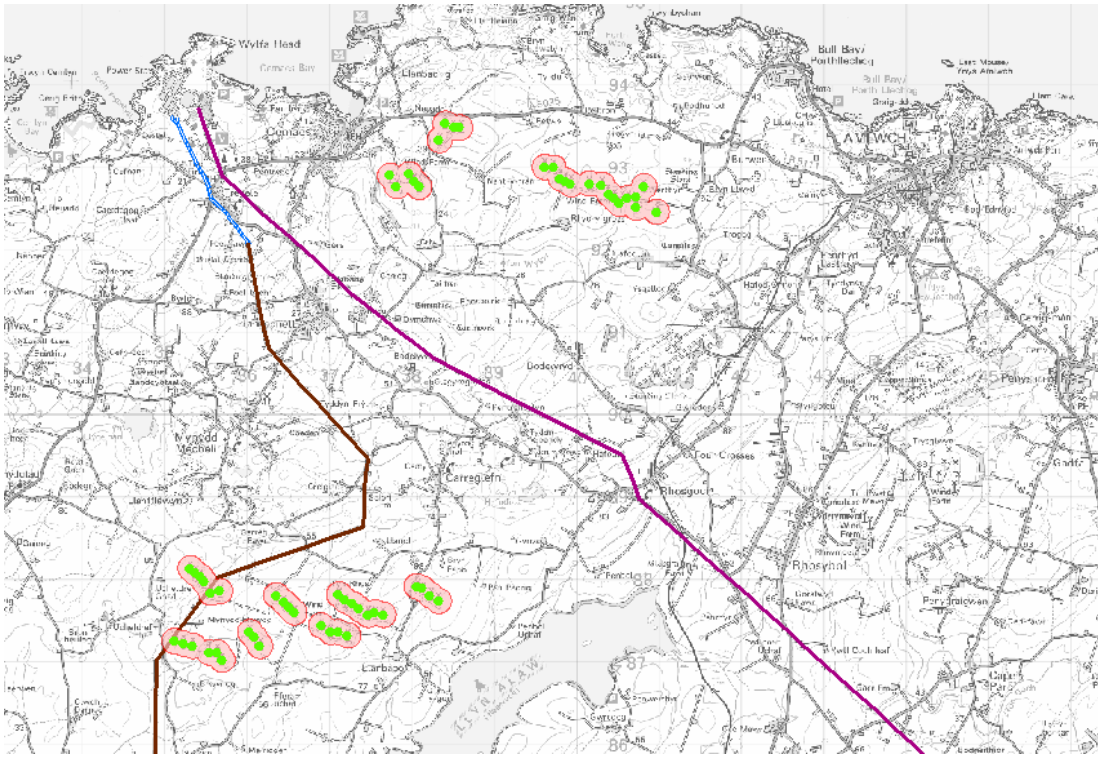

Plate 11-A: Llyn Alaw and Fferm Wynt Rhyd-y-Groes Wind Farms

Shell Fisheries

11.17 There are shell fisheries within the Menai Strait. As shellfish are filter feeders they are particularly sensitive to sediment disturbance. However as long as the footings of the pylons are not situated within the Menai Strait, these fisheries are not considered to be sensitive to the siting of the overhead electricity transmission lines.

Bangor University

11.18 Bangor University is in the top 15 of UK universities for teaching excellence according to the Sunday Times University Guide 2012 and has over 10,000 students. The university is the second largest employer in Gwynedd and is located within the centre of Bangor. In addition to the main university buildings, Bangor University has botanical gardens and sports facilities along the coastline of the Menai Strait.

Woodland

11.19 Woodland across Anglesey is generally limited to shelterbelts and small woodland clusters, some of which are designated as Ancient or Semi-natural woodlands. The two largest areas of woodland, Newborough and Pentraeth Forests, are situated in eastern Anglesey at either end of the prominent ridgeline that runs across the island to the east of Llangefni. Much of this woodland is owned by the Forestry Commission with other parcels of land lying within National Trust Estates or Woodland Trust Sites.

11.20 Woodland has been considered further in both the Landscape and Ecological sections of this report and is illustrated on Figures 10-9, 10-9 A to D and 10-11 A to D in Appendix H.

Tourism

11.21 Anglesey and the Menai Strait coastline are key tourist destinations and tourism is of significant importance to the local economy. According to the unadopted Unitary Development Plan tourism is one of the most important industries on Anglesey. A survey in 1997 / 1998 found that the industry generated 1.8 million visits every year. In addition to their attraction to tourists the recreational features within the search area are enjoyed by local residents. The main tourism features are shown on Figure 11-2 A to D in Appendix H and listed below.

11.22 Holyhead port is an important ferryport linking Wales and Ireland. Tourists and other passengers arriving or departing at Holyhead are likely to access the port along the main A55 which runs from Holyhead to the mainland.

Main Attractions

11.23 According to www.visitanglesey.co.uk and www.tripadvisor.co.uk, some of the main tourist attractions within the Study Area are:

- Caernarfon Castle;
- Penrhyn Castle;
- Anglesey Sea Zoo;

- Foel Farm Park;
- RibRide – Adventure Boat Tours;
- Plas Newydd Country House and Gardens;
- Anglesey Model Village and Gardens;
- Anglesey Riding Centre;
- Amlwch Copper Kingdom;
- Beaumaris Castle;
- Pili Palas Nature World;
- South Stack lighthouse;
- Holyhead Maritime Museum; and
- Anglesey Circuit.

11.24 The Anglesey Tourism Survey 1997/98 showed that the predominant reasons why people visited Anglesey include its beaches, coast and countryside, the variety of things to do on the island, and the ease of travel from the main visitor markets. Accessibility to Anglesey is vastly increased by the presence of Holyhead ferry port providing a gateway between North Wales and Ireland. Cruise ships also dock at Holyhead.

11.25 The tourism Gross Value Added (GVA) to the economy from the tourism sector in Anglesey was £57.1m in 2007 i.e. 6.4% of the county's total (Isle of Anglesey County Council Destination Management Plan 2012 – 2016, draft June 2012).

11.26 Tourism is important to the local economy in Gwynedd as well as in Anglesey. However, Gwynedd covers a large geographical area, including large areas of Snowdonia National Park. The majority of the key tourist destinations within Gwynedd fall outside the Study Area. This includes most of the Welsh Highland Railway, is a tourist railways which attracts a significant numbers of tourists to the area. The railway is considered to be slightly sensitive to a new overhead line as it may impact on tourism.

11.27 In Gwynedd, large numbers of tourists are attracted to the Lleyn Peninsula and Snowdonia National Park.

11.28 According to www.tripadvisor.co.uk the following attractions in Gwynedd are within the top ten tourist destinations in the area:

- Caernarfon Castle (2);
- Greenwood Forest Park, Y Felinheli (3);
- Penrhyn Castle, Bangor (9);and
- Bangor University (10).

Beaches

11.29 Anglesey has 125 miles of coastline with 27 sandy beaches and coves. In 2011, the following beaches won the Blue Flag:

- Benllech;

- Church Bay;
- Llanddona;
- Llanddwyn;
- Port Dafrach; and
- Trearddur Bay.

11.30 In addition to this, 16 beaches won the Green Coast Award for unspoiled rural beaches, and The Times newspaper voted Porth Dafarch one of 'The 40 Best British Beaches'

Camping and Caravan Sites

11.31 There are numerous camping and caravan sites scattered across Anglesey and North West Wales primarily focussed in the coastal areas. The majority of these sites are close to Moelfre and Benllech on the north – east coast and Holyhead and Rhosneiger on the south coast.

National Trust

11.32 The National Trust was founded in 1895 with the aim of *'saving our nation's heritage and open spaces'*. The Trust owns many heritage properties, including historic buildings and gardens. It is also owns of the UK's largest landowners owning many beauty spots, including large stretches of coastline.

11.33 The National Trust has 17 landholdings within the Study Area. These are: Bryn Llewelyn & Dinas Gynfor; Caeau Gla-y-Mor; Carreglwyd Estate; Cemaes; Cemlyn Estate; Clegir Mawr; Fedw Fawr; Ffynnon Oer & Bryn Offa; Mynachdy; Mynydd y Garn; Penrhyn Castle; Plas Newydd; Porth Dafarch; Penrhyn Castle; Segontium; Swtan; and the Vaynol Estate. Of these, 3 large landholdings are located on the coast line of the Menai Strait. These are as follows.

- Parc Faenol / Vaynol Estate

  The National Trust owns much of the western section of Parc Faenol. The public are allowed limited access to the park, mainly the use of the roadways and paths. Access is via Parc Menai and Gelli Morgan lane. The area around the Faenol hall and its associated buildings is private.

- Plas Newydd

  This National Trust property is set on the shores of the Menai Strait. This 'elegant house' was redesigned by James Wyatt in the 18th century. According to the National Trust website "*there is a fine spring garden and Australasian arboretum, with an under storey of shrubs and wild flowers, a summer terrace, and massed hydrangeas which give autumn colour.*" Within the grounds there is a woodland walk that gives access to the Menai Strait, and therefore provides a tourism feature along the shore.

- Penrhyn Castle

  Penrhyn Castle is a 19th century neo-Norman castle on the Menai Strait. The 24.3 hectares of grounds include parkland, an exotic tree and shrub collection as well as a Victorian walled garden.

Forestry Commission, Country Parks and Access Land

11.34 There are large areas of the Study Area that are designated Open Access Land under the Countryside and Rights of Way Act 2000 (CRoW) and include a number of Forestry Commission woodlands. Amongst these is Newborough Forest which is a key site for the preservation of red squirrel. As a result in addition to its use by the local population, it attracts many visitors to the Island. The Newborough Forest Management Plan 2010 – 2015 (Forestry Commission Wales) suggests there are over 170,000 visits per annum to the forest.

RSPB Reserves

11.35 There are 3 RSPB reserves within the Study Area which in combination had approximately 38,000 visitors between 1998 and 2001.

11.36 South Stack Cliffs is located on the coastline while Malltraeth Marsh and Valley Lakes are located inland.

11.37 Malltraeth Marsh is around 30ha of rough pastures that are slowly being converted to reedbed by direct planting of reed and by natural regeneration / expansion of existing reedbeds. The reserve supports breeding curlew, lapwing and a good assemblage of reedbed birds such as water rail, reed warbler and sedge warbler. It has a small car park, interpretation boards and a number of public footpaths that allow access across the site.

11.38 Valley Wetlands is mainly managed for winter wildfowl interest and the reedbed areas are also being expanded. It is open throughout the year and has car parking facilities and a nature trail.

11.39 The ecological value of these sites was considered in Section 8 above.

Anglesey Showground

11.40 Anglesey Showground is used for two annual agricultural shows, one in the summer and one in the winter. The shows attract approximately 65,000 visitors and are considered to be a key tourism / recreational attraction.

11.41 The Anglesey Showground is considered sensitive to overhead electricity transmission lines as a Landscape receptor.

Rights of Way

11.42 The Isle of Anglesey Coastal Path (Llwybr Arfordirol Ynys Môn) is a designated long distance recreational route that runs around the island's coastline. There are many other Rights of Way and designated footpaths identified across Anglesey, providing access to the countryside and rolling farmland. There is an extensive network of Rights of Way and

footpaths in Gwynedd around Bangor and across the surrounding hills to the south of the Menai Strait, although the majority provide local access between the scattered communities and dwellings in the area.

11.43 National Cycle Routes 5 and 8 both run through Gwynedd and onto Anglesey, with both routes terminating in Holyhead. Several Local Cycle Routes branch off the main routes in Anglesey to provide access to the wider countryside.

11.44 The sensitivity of visual impacts of overhead electricity transmission lines from Rights of Way have been considered further in the Landscape section of this Report.

Golf Courses

11.45 There are 11 golf courses and driving ranges within the Study Area which are attractive to both visitors and local residents alike.

11.46 The golf courses are considered sensitive to overhead electricity transmission lines as a recreation and visual receptor.

Geopark

11.47 Anglesey is designated as GeoMôn Geopark. A European Geopark is a territory, which includes a particular geological heritage and a sustainable territorial development strategy supported by a European program to promote development. A European Geopark must comprise a certain number of geological sites of particular importance in terms of their scientific quality, rarity, aesthetic appeal or educational value. The majority of sites present on the territory of a European Geopark must be part of the geological heritage, but their interest may also be archaeological, ecological, historical or cultural.

11.48 The Geopark is not considered sensitive to overhead electricity transmission lines.

Waste Management

11.49 There are 7 active landfill sites within the Study Area, two in Menai Bridge, two in Caernarfon, one in Y Felinheli, one in Rhosneigr and one in Brynteg. Active landfill sites are considered sensitive to overhead lines over their operational phases. Figure 10-9 shows the location of these sites.

Traffic and Transport

11.50 The main road network and transmission lines are shown on Figure 11-3 A to D in Appendix H (Existing Principal Infrastructure). There are two bridges connecting Anglesey with mainland North Wales. Both of these are near Bangor. The first to be constructed was the Menai Bridge between Bangor and Menai Bridge over which the A5 is routed. Further south along the Menai Strait is the Britannia Bridge that links Bangor with Llanfairpwll over which is routed the A55 (T) and the railway line. The A55 trunk road runs along the coast of North Wales from Buckley, near Chester, across the Britannia Bridge to Holyhead.

11.51 In addition to the A55 (T) there are seven other A roads within the Study Area:

- A5025 – Valley north to Wylfa then along the north coast of Anglesey to Menai Bridge;
- A5 – Holyhead to Bangor, similar route to the A55 but crossing on the old Menai Bridge;
- A545 – Menai Bridge to Beaumaris;
- A5114 from the A55 to Llangefni;
- A4080 from Menai Bridge along south of Anglesey to Rhosneiger then north to connect to the A55;
- A4086 – Caernarfon travelling east to join the A5(T) to the west of Betws-y-Coed; and
- A4085 – Caernarfon to Beddgelert and then joining the A487 (T) near Porthmadog.

11.52 There are ten 'B' roads (B4419, B5111, B5116, B5108, B5109, B5420, B4545 and B4422, B4366 and B4545). In addition to the numbered roads listed above, there are numerous minor roads that criss-cross the Study Area.

11.53 The Britannia Bridge is owned by Network Rail despite carrying both the railway and the A55 trunk road. Earlier in 2011, Network Rail undertook strengthening works to the bridge.

11.54 The mainline railway runs through the search area. This line runs along the north coast of mainland Wales from Chester to Holyhead, crossing the Menai Strait at Bangor. Within the Study Area lie the stations of Bangor, Llanfairpwll, Bodorgan, Ty Croes, Rhosneigr, Valley and Holyhead.

11.55 There is a disused railway line that runs from a junction with the mainline railway to the west of Llanfairpwll to Amlwch. It is understood that there are proposals to bring this section of line back into use, at least as far as Llangefni.

Aviation and Defence

11.56 There are two RAF airfields on Anglesey. The flight paths and exclusion zones around airfields place restrictions on the heights of structures that can be constructed within defined radii of the runways, which would require the proposed high voltage line to be routed outside the exclusion zone. RAF Valley on the west coast of Anglesey is the larger of the two airfields. In addition to its use as an RAF base, it is also used for civilian flights. There are currently two flights from Cardiff to Anglesey and two flights from Anglesey to Cardiff from Monday to Friday.

11.57 The two residential Hawk squadrons at RAF Valley contribute to most of the airfield activity but Griffin and Sea King helicopters also arrive and depart throughout the day.

11.58 RAF Mona to the west of Llangefni is a smaller airfield utilised primarily by light aircraft, but its more central location may be more influential when determining route corridors.

11.59 Airfields are surrounded by safeguarding zones within which it is necessary to consult with the Civil Aviation Authority or the Defence Infrastructure Organisation (Defence Estate) prior to the submission of a planning application for development.

11.60 While safeguarding zones do not prohibit development, the extent of these zones will be a key factor in the routeing of any overhead electricity transmission lines.

11.61 The two airfields on Anglesey and the associated safeguarding zones are highly sensitive to the development of overhead electricity transmission lines. Figure 11-4 A to D in Appendix H shows the safeguarding zones for RAF Mona and RAF Valley prepared by Defence Estate. It is understood that these plans are in the process of being updated. Any updates to this data published prior to eventual route alignment would have to be taken into consideration.

11.62 Discussions have taken place with Defence Estate regarding the extent to which the construction of a new overhead electricity transmission line would be incompatible with the safe operation of the airfields. We consider this to be an issue that is likely to have a significant bearing upon the detailed design of the overhead electricity transmission line in each of the Route Corridors at certain critical areas in the corridors.

11.63 In order to better understand the potential restrictions on overhead line development likely to be imposed by safeguarding constraints, flight line modelling has been undertaken for this report using industry standard assessments of take off zones. This is based on the current data available from Defence Estate along with topography data supplied by the Ordnance Survey. This modelling identifies numerous locations where there is a potential conflict with the siting of overhead electricity transmission lines and safeguarding zones. The flight line modelling is included in Figure 11-5 A to D in Appendix H, which shows safeguarding zones that are likely to restrict the height of pylons that could be used, based upon the standard heights of different pylon types.

11.64 Aviation is considered sensitive to overhead electricity transmission lines.

Planning Allocations

11.65 A review of allocations within the Local Plan was undertaken to ensure that any proposed development within the Study Area would not conflict with the identification of route corridor options.

11.66 The following key allocations on Anglesey were identified:

- S1 Ty Mawr , Holyhead – General Employment Use, Road Service Area (83.25ha);
- S2 Land adjoining Penrhos Industrial Estate , Holyhead – General Employment Use (16.4ha);
- S6 Former Shell Site – General Employment Use/Tourism (7ha);
- S8 Mona Showground – Rural Diversification including Leisure (65.3ha);
- S9 Land adjoining Mona Airfield – General Employment Use (14.1ha);
- S10 Extension to Bryn Cefni, Llangefni – Employment Use (22.8ha);
- S11 Employment land, Llangefni (5.3ha);
- S19 Extension to industrial estate, Gaerwen (25.2ha);
- S20 Former Lairds Site – General Employment uses/Tourism (14.6ha);
- S23 Land North of Lledwigan Farm, Llangefni – Prestige Employment site (20ha);
- T4 Land adjoining Gwylfa Estate, Amlwch - Housing (0.7ha);

- T5 Land adjoining Telephone Exchange, Benllech - Housing (1.1ha);
- T9 Land at Llys Engan, Bodedern - Housing (0.85ha);
- T19 Tyddyn Bach, South, Holyhead - Housing (3.6ha);
- T20 Land at Cae Rhos Estate, Holyhead - Housing (0.9ha);
- T62 Former Wells Kelo Site, Holyhead - Housing (0.94ha);
- T63 Land At Yr Ogof, Kingsland - Housing (2.37ha);
- T24 Former Little Chef and Land to the rear , Gaerwen - Housing (1.3ha);
- T26 Land adjoining the Rectory, Llanddaneil - Housing (0.51ha);
- T28 Land adj. Mill Lodge, Llandegfan - Housing (0.99ha);
- T35 Land at Caeau Penrallt, Llanfairpwll - Housing (0.85ha);
- T36 Land adjoining Primary School, Llanfechell - Housing (0.9ha); and
- T38 Land at Corn Hir, Llangefni - Housing (1.07ha).

11.67 The following key employment and housing site allocations in Gwynedd were identified:

- Parc Menai High Quality Employment Site (14.15ha);
- Llandygái Industrial Estate - Employment (24.45ha);
- Bryn Cegin Estate, Llandygái - Employment (35.97ha);
- Blythe Farm, Caernarfon - Employment (4.63ha);
- Cibyn, Caernarfon - Employment (32.52ha);
- Peblig, Caernarfon - Employment (5.72ha);
- Eithinog Fields, Bangor - Housing (1.3ha);
- Pen y Ffridd, Bangor - Housing (11.0ha);
- Rear of Ffordd Cynan, Bangor - Housing (9.0ha);
- Bryn Adda, Bangor - Housing (1.93ha);
- Near Maes Coetmor, Bethesda - Housing (2.0ha);
- Near Pentwmpath, Llandegai - Housing (0.65ha);
- Near Llwyn Bleddyn, Rachub - Housing (0.55ha);
- Near Drws y Coed, Y Felinheli - Housing (1.74ha);
- Near Tyddyn Perthi, Y Felinheli - Housing (0.52ha);
- Rear Bro Eglwys, Bethel - Housing (0.8ha);
- Near Cefn Werthyd, Bontnewydd - Housing (0.9ha);
- Near Caeathro Bach, Caeathro - Housing (0.75ha);
- Near Glan Peris, Caernarfon - Housing (3.8ha);
- Near Fron Deg, Maesincla, Caernarfon - Housing (0.98ha);
- Near Llanbeblig Cemetery, Caernarfon - Housing (4.1ha);
- Doc Fictoria (redevelopment site mixed use), Caernarfon - Housing (1.3ha);
- Near school, Deiniolen - Housing (0.99ha); and

- Near Pennant, Llanrug - Housing (0.6ha).

11.68 These allocations have been considered on the basis that they have been built out for the purposes of this appraisal and are considered sensitive to the proposed development.

Generic Socio-Economic and Land Use Impacts

11.69 The routeing of the overhead transmission line could significantly alter the nature of the socio economic impacts realised. Residential properties are sensitive receptors and could be significantly impacted by both the construction and operation of overhead electricity transmission lines locally. In addition local community facilities, including schools, hospitals and sports grounds are considered sensitive to the siting of these lines.

11.70 Local economic receptors would be sensitive to construction operations (mainly traffic delays and visual effects) which may impact on tourism-related businesses in particular. Alignments that intersect rail lines, encroach on important tourism attractions or restrict access to certain communities could result in significant socio-economic impacts on the local economy. Construction will result in direct and indirect employment, some of which will be local in nature.

11.71 Impacts to agricultural land use will vary depending on the nature of the land. Whilst the large-scale loss of the best and most versatile agricultural land i.e. Grade 1 to Grade 3a should be avoided where possible, overhead electricity transmission lines result in the loss of only small areas of land to agricultural production, normally restricted to the base of the pylons themselves. Land beneath the overhead wires can continue to be used for normal agricultural operations, although the use of certain equipment such as irrigation cannons may be restricted. Therefore agricultural land is not considered sensitive to the routeing of overhead electricity transmission lines as with careful siting of pylons most agricultural activities can continue on the land.

11.72 Tourist camping and caravan sites are sensitive to overhead electricity transmission lines due to their impact on the landscape. Residential caravan sites are considered under the 'Settlement' section of this report.

11.73 Overhead electricity transmission lines can potentially impact on views from certain locations, depending on where they are sited. Any impact on tourism is likely to result as a consequence of landscape impacts of the overhead electricity transmission line, and thus the sensitivity of receptors to visual changes is considered within the landscape and visual assessment.

Generic Socio-Economic and Land Use Mitigation

11.74 Mitigation measures include avoidance of residential properties and communities wherever possible, siting of the line away for key community and tourism facilities, and avoiding crossing major access routes (e.g. roads and rails) will also serve to mitigate impacts.

11.75 Measures to minimise construction disturbance include notification of the construction works, signage and traffic management, including limiting construction times to normal business hours, avoid construction works in areas of high tourism activity during peak

tourist/ operating seasons, avoid construction on agricultural lands during sensitive times in the year, such as harvest or lambing, restore agricultural land to its previous state post-construction and potential undergrounding in highly sensitive tourism locations.

11.76 Employment will be sourced locally as far as possible to maximise the local economic gains realised by the construction activities.

12 Other Considerations

Menai Strait

12.1 Some sections of Menai Strait pose a considerable technical challenge to the construction of an overhead line due to the crossing distances involved. Figure 12-1 in Appendix H shows the crossing distances at various locations along its length. Whilst it is technically feasible to cross at any part of the Strait, there are benefits in selecting locations that are of shorter length because as a general rule they would require lower pylon heights in order to achieve the same navigational clearances between the sea surface and the overhead wires. For particularly long crossing lengths, the use of special duty wires would be necessary and bulky 'anchor' pylons would be required immediately before the crossing pylons themselves. Figure B-1 in Appendix B show the existing crossing over the Menai Strait and the tower heights associated with various other crossing distances.

Local Air Quality

12.2 Generic local air quality impacts as a result of constructing a new overhead electricity line will be temporary and specific to the construction phase. These will arise from operating construction plant and equipment, and are considered to be insignificant. Generic mitigation measures to minimise local air quality impacts are careful siting and applying an appropriate environmental management plan during construction.

12.3 Any air quality impacts associated with the construction of an overhead electricity transmission line equally apply whichever route option is taken forward. On this basis, we do not consider it appropriate to assess it further at this stage.

Noise and Vibration

12.4 Vibration impacts associated with the construction of any new line would be temporary and dependent upon the type of installation techniques employed. This is largely determined by the underlying geology and will be considered at detailed design stage. Overhead lines are designed to operate silently under most operating conditions, however under certain climatic conditions, there may be some noise generated. Noise can be mitigated through the adoption of best practice construction methods, for example ensure wires are clean prior to installation and undertaking construction activities at certain times of the day. Undertaking noise assessments and routing away from sensitive receptors will also minimise noise impacts.

12.5 At this stage in the design process any construction and operational noise impacts can be assumed to be the same for all corridor options, as it would not prove possible to distinguish between corridors on this basis noise effects will be appraised at the detailed design stage, following localised line routeing.

Soils & Geology

12.6 Anglesey is designated as GeoMôn Geopark. As discussed in paragraphs 11.47 – 11.48, a European Geopark is a territory, which includes a particular geological heritage and a sustainable territorial development strategy supported by a European program to promote development.

12.7 The geology of Anglesey is complex with younger strata overlying very old Precambrian rocks that surface in a number of areas. Formations on the island generally run north-east to south-west.

12.8 During construction generic impacts could include damage to soil structure, physical loss and erosion / surface run-off. Generic mitigation such as careful routing, implementation of construction environmental management plans, appropriate soil handling and storage techniques can be applied to minimise impacts.

12.9 Geology will be considered at the route alignment stage and during the environmental impact assessment. At this stage in the assessment there are not considered to be any geological constraints to the routeing of overhead electricity transmission lines within the study area.

Water

Flooding

12.10 The flood zones identified by the Welsh Government and Environment Agency Wales are shown on Figure 12-2 (Hydrology and Flood Risk) with further detail provided in Figures 12-3 A to D and 12-4 A to D in Appendix H. The most significant area of flood risk is Malltraeth Marsh as it extends inland towards Llangefni. This area benefits from flood protection and areas of streams have been canalised so that the flood risk is contained within the marshland area.

12.11 There are also significant areas of coastal areas at flood risk, including the shoreline along the Menai Strait both on the Anglesey and Gwynedd side. There are small areas of localised flood risk falling within Technical Advice Note Flood Zone B. These are scattered across the search area. There are areas of high flood risk to the east of Valley and to the north of Rhoscolyn.

12.12 Overhead electricity transmission lines and their associated pylons are not considered sensitive to flood risk areas as pylon heights and ground clearances will take flood levels into account. However the presence of pylons has the potential to restrict flows during flood events in certain locations as there is potential for debris to build up against the legs of the pylon. This will be considered at the next stage of appraisal.

12.13 Environment Agency Wales has advised that generally the groundwater levels of Anglesey are high and that this may impact on construction.

Water Features

12.14 There are a number of waterbodies within the Study Area; these include Cefn reservoir, Llyn Llygeirian, Llyn Lechthdy, Llyn Penrhyn, Llyn Trafffwll reservoir, Llyn Padrig, Llyn Maelog, Llyn Cor, Cefni reservoir, Llyn Llywenan, Llyn Bodgylched, Llyn Alaw, Llyn Hafodol, Llyn Dirlam, Llyn Frogwy, Llyn yr Wyth-Eiddion, Llyn Cadarn, and Llyn Coron.

12.15 Depending on the size of these water features, the wildfowl and other water birds that make use of them, these water bodies may be sensitive to overhead electricity transmission lines. Large waterbodies will be considered as part of the route corridor study, smaller waterbodies are likely only to be a consideration at route alignment stage.

12.16 There are a number of rivers and streams that flow within the Study Area. These include the Afon Wig, Afon Gosh, Afon Logy, Cors y Bol, Cors Budworm, Afon Corndog, Afon Cargill, Afon Alaw, Afon Cent, Afon Brain, Afon Newydd, Cors Erddreiniog, Afon Cefni, Afon Cadnant, Afon Ffraw, Afon Seiont, Afon Cegin, Afon Foryd, Afon Llifon, Afon Rhyd, Afon Carrog, Afon Gwyrfai, Afon Llyfni, Afon Rhythollt, Afon Ffrydias, Afon-y-Lan, Afon Rhaeadr Fawr, Afon Ogwen and Afon Seiont. These features are not considered sensitive to overhead electricity transmission lines.

12.17 Generic water impacts from constructing an overhead line include water course contamination from surface runoff, suspended solids or pollution through spillages from construction equipment, and damage to or loss of existing drainage systems. Generic mitigation measures such as drip trays, environmental management plan, careful routeing, refuelling offsite and reinstatement of any drainage systems can be applied to minimise and avoid water impacts.

13 Identification of Route Corridors and Menai Crossings

13.1 Route corridors and Menai crossings were identified through a systematic process. This considered the identified sites and features and their likely sensitivity to an overhead transmission line as discussed in previous chapters. The objective was as far as possible; to reduce the overall effects upon sensitive sites and features from the proposed overhead transmission line by identifying corridors that avoided them.

13.2 This process involved a progressive series of refinements from the initial study area through broad areas of lesser constraints, to the identification of discrete corridors and the eventual refinement of the boundaries of these corridors. Designated sites of the same type have not been treated equally in this process as individual sites may have more or less influence upon the corridor definition, for example it may be relatively easy to avoid a particular SSSI without compromising the viability of the corridor, but a larger SSSI may be unavoidable. In a similar manner some locally designated sites towards the edge of the corridors may influence corridor definition, whilst some nationally designated sites that lie between Wylfa and Pentir cannot be avoided and therefore cannot influence corridor definition. Consideration was also given to the sensitivity of the sites such that those sites and features considered less sensitive to the development of a transmission line or where mitigation was likely to be effective were less material in defining the corridors and may lie within the corridors. For example it may be possible to avoid or minimise adverse effects on sites and features within a corridor simply by routing a line some distance from them at the alignment stage.

13.3 Figure 1-4 in Appendix A illustrates the key features that helped to define the corridors.

13.4 Four discrete corridors across Anglesey were identified, which divide into five corridors across Menai Strait and in the approach to Pentir.

13.5 The following sub-sections detail the identified opportunity corridors, and sites and features avoided when establishing route corridors. Section 14 and 15 details the corridors and the remaining sites and features within each corridor. With four corridors across Anglesey and five Menai / Pentir corridors, twenty corridor permutations exist between Wylfa and Pentir. To avoid undue repetition as a result of these permutations and to assist understanding and simplify consultation, the corridors have been broken into the four Anglesey corridors and five 'Menai Crossing Options', linked with areas common to all corridors on the approach to Wylfa and the Menai crossing ('Common Areas').

Opportunity Corridors

13.6 Opportunity corridors have been identified within which the development of a new transmission line may give rise to less significant effects as a consequence of established major infrastructure. This infrastructure may already detract from the landscape character of the area and adversely affect views. As a consequence the marginal change to landscape character or impact upon views may be lower than if routed across an area that has no such detractors.

13.7 In the case of existing overhead electricity transmission lines, these will have already been through a routeing process that follows the principals of the Holford Rules. It is likely

therefore that they are routed through an area less sensitive to this type of development. Within the Study Area, the existing transmission lines appear to have been designed in accordance with the principles set out in the Holford Rules, generally avoiding major environmental constraints that existed at the time, following the grain of the landform and taking advantage of screening and backdrops provided by woodland and topography. Broadly following the same route offers the potential for the new overhead electricity transmission line to achieve similar benefits.

13.8 Within the Study Area the following Opportunity Corridors were identified:

- Existing National Grid 400kV overhead electricity transmission line between Wylfa and Pentir;
- Existing National Grid 132kV overhead electricity transmission line between Wylfa and Holyhead; and
- A55 between Holyhead and Bangor.

Existing National Grid 400 kV Overhead Electricity Transmission Line – Wylfa to Pentir

13.9 An overhead electricity transmission line operated at 400kV runs south east from Wylfa to the substation at Pentir. This line crosses the Menai Strait as overhead electricity transmission lines to the south west of Britannia Bridge. As identified in the Need Case this single line does not provide a sufficient level of redundancy to connect the large power station proposal at Wylfa. The existing line must therefore be retained in order to achieve the required standard of security.

13.10 However, this line continues to be an opportunity corridor as the option of running parallel to the existing line has certain advantages; as identified in the Holford Rules and discussed previously in Section 4.

Existing National Grid 132kV Overhead Transmission Line - Wylfa to Holyhead

13.11 An overhead electricity transmission line operating at 132kV runs south from Wylfa to National Grid's 132kV Penrhos substation at the former Anglesey Aluminium plant in Holyhead. The primary purpose of this line was to feed electricity to the plant that had a high electricity demand when it was in full operation. The current demand is significantly reduced but the contract remains in place for the full capacity of the line. The line is supported on lattice steel pylons with a typical height of approximately 26m

13.12 This line is an opportunity corridor as a new 400kV overhead electricity transmission line could run parallel to the existing line.

13.13 Alternatively, National Grid will investigate whether it may be possible to remove the existing 132kV overhead line should this significantly mitigate the effects of the new 400kV overhead line. This opportunity would only exist if the new line were sited within this opportunity corridor. If removal of the line does prove possible, it is likely to require the construction of a new substation adjacent to the new 400kV line, and a connection from that site to the remainder of the 132kV line. Any appraisal would take account of the

adverse and beneficial commercial, technical, environmental and socio-economic effects associated with the removal of the 132kV line.

A55 Holyhead to Bangor

13.14 Existing transport infrastructure corridors may also offer opportunities for overhead electricity transmission line routeing since the landscape and visual amenity is often already affected by infrastructure and traffic and such routes generally follow valleys and avoid higher, more prominent ground. However, major roads and rail routes may also offer opportunities for travellers to enjoy views to the surrounding landscape which require to be taken into account in routeing decisions.

Key Features Avoided

13.15 National Grid's policies seek to avoid significant ecological, cultural heritage and landscape designated sites where possible. This approach was used as a starting point to this appraisal following the identification of the opportunity corridors. It was acknowledged that in routeing corridors along the opportunity corridors it was necessary to include areas with International, European and National ecological designations. However, it was considered appropriate to keep such corridors within the appraisal at this stage.

Ramsar Sites

13.16 It is not possible to avoid the Corsydd Môn a Llŷn / Anglesey and Llŷn Fens Ramsar Site if an option that runs parallel to the existing 400kV overhead electricity transmission line route is considered. It is acknowledged that the Ramsar site is a significant constraint within this corridor option. However, following early consultation with a number of statutory bodies, an option following the existing alignment is considered to have sufficient merit to be taken forward at this stage. The area of the Ramsar site within the Study Area has been kept to a minimum by proposing a corridor option that is tight to the existing overhead electricity transmission line at this location.

SPAs

13.17 The following SPAs were identified within the Study Area and have been excluded from the route corridors:

- Traeth Lafan/ Lavan Sands, Conwy Bay;
- Glannau Ynys Gybi / Holy Island Coast; and
- Ynys Feurig, Cemlyn Bay and The Skerries.

SACs

13.18 Of the 9 SACs identified within the Study area, 7 of them have been excluded from the route corridors:

- Bae Cemlyn / Cemlyn Bay;
- Glannau Ynys Gybi / Holy Island Coast;
- Glan-traeth;

- Llyn Dinam;
- Glannau Mon: Cors Heli – Anglesey Coast: Saltmarsh;
- Y Twyni o Abermenai I Abberffraw / Abermenai to Aberffraw Dunes; and
- Afon Gwyrfai a Llyn Cwellyn.

13.19 In crossing the Menai Strait it is not possible to avoid Y Fenai a Bae Conwy / Menai Strait and Conwy Bay SAC.

13.20 In following the opportunity corridor that exists running parallel to the existing 400kV overhead electricity transmission line it is not possible to avoid Corsydd Môn / Anglesey Fens SAC. As with the Ramsar site described above, this SAC is considered sensitive to the construction and maintenance of an overhead electricity transmission line and therefore the area included within the corridor has been minimised by drawing the boundary of the corridor option tight to the existing overhead electricity transmission line.

SSSIs

13.21 Of the 69 SSSIs within the Study Area, 57 have been excluded from the corridors. These were all considered sensitive in the initial appraisal of the Study Area. Areas avoided include Traeth Lafan and Newborough Warren / Ynys Llanddwyn.

13.22 Some small SSSIs are included within route corridor options at this stage where it has been considered more appropriate that mitigation to minimise impacts can be feasibly developed at a route alignment stage, most easily by avoidance.

13.23 However, as with the Corsydd Môn a Llŷn / Anglesey and Llŷn Fens Ramsar Site and Corsydd Môn SAC, Cors Erddreiniod lies on the existing 400kV over head line; on this basis part of this SSSI is located within a route corridor option.

13.24 Malltraeth Marsh / Cors Ddyga SSSI covers an extensive area from the south coast of Anglesey as far as the A55 near Llangefni, so would be difficult to avoid completely. It was considered appropriate to include route corridor options that cross this SSSI in order to provide a range of route corridor options for review.

Nature Reserves

13.25 The 3 RSPB reserves within the Study Area have other ecological designations including SSSI protection.

13.26 Of the 9 reserves owned by the North Wales Wildlife Trust 4 are also designated as SSSIs and in two instances as SACs.

13.27 All of these reserves are actively managed for conservation and have been excluded from the route corridor options.

13.28 Of the 4 NNRs within the study area, 3 have been avoided by the corridors with only Cors Erddreiniog falling within the orange corridor.

World Heritage Sites

13.29 The Caernarfon and Beaumaris Castles which form part of the Castle and Town Walls of King Edward in Gwynedd World Heritage Site have been avoided.

Scheduled Monuments

13.30 Of the 171 SMs within the Study Area, 137 are excluded from the route corridors. Many SMs are located close to but beyond the boundary of the corridors and were material to the boundary alignment. The following are some SMs that informed the corridor alignment:

- Castellor Hut Group;
- Y Werthyr Hill Fort;
- Dinas Dinorwic Camp;
- Caerlan Tibot Defended Enclosure;
- Din Dryfol Burial Chamber;
- Tre-Garnedd Moated Site;;
- Bryn Eryr Rectangular Earthwork;
- Bryn-Celli-Ddu Burial Chamber;
- Glascoed Round Cairn;
- Glascoed Ancient Village;
- Old Parish Church;
- Pont Sarn-Las Hut Group;
- Caer Leb;
- Trefwri Standing Stone; and
- Bodowyr Burial Chamber.

13.31 There are 34 SMs within route corridor options, of these 11 are standing stones, which encompass discrete areas which it should be possible to avoid at the route alignment stage. SMs would be considered further at the route alignment stage.

Registered Historic Parks and Gardens

13.32 The following Registered Historic Parks and Gardens were identified and avoided:

- Bodorgan;
- Caernaforn:
- Morfa Common Park;
- Carreglwyd;
- Cestyll;
- Llanidan;
- Penrhyn Castle;
- Plas Berw;

- Plas Gwyn; and
- Plas Rhianfa.

13.33 Given their location on the shore of the Menai Strait, parts of Plas Newydd and the Vaynol Estate, also Registered Historic Parks and Gardens, are included within some route corridor options. Where this is the case, consideration has been given to the most sensitive areas of the site in order that these areas are excluded from the route corridors.

Conservation Areas

13.34 The following Conservation Areas lie within the Study Area. All of these relate to settlement areas and have been excluded from the Route Corridor Options.

- Cemaes;
- Llanfechell;
- Amlwch;
- Amlwch Port;
- Llangefni;
- Beaumaris;
- Menai Bridge;
- Aberffraw;
- Bodedern;
- Holyhead Central;
- Holyhead Mountain;
- Holyhead/Newry Beach;
- Bangor;
- Llandegai;
- Y Faenol;
- Aberpwll;
- Caernarfon; and
- Bont Newydd.

Landscapes of Outstanding Historic Interest

13.35 5 Landscapes of Outstanding Historic Interest were identified in the Study Area and all but one has been avoided. It is not possible to avoid Dinorwig Landscape of Outstanding Historic Interest as Pentir substation is located within it.

Areas of Outstanding Natural Beauty

13.36 The Anglesey AONB covers much of the Anglesey coastline. Generally the route of the line does not need to approach close to the coast and so much of the AONB can be avoided relatively easily. The AONB has therefore been largely avoided. However the route does need to cross the Menai Strait and on this basis it is necessary in routeing a new overhead electricity transmission line from Wylfa to Pentir, to cross the AONB at some point. This area would be kept to a minimum; of the 221sq km of AONB only 3.5sq km lies within any of the route corridor options.

Heritage Coast

13.37 The Anglesey Heritage Coast has been avoided in each corridor.

High Ground and Ridgelines

13.38 In terms of landscape and visual impacts, routeing overhead electricity transmission lines over high ground and along ridgelines can have a significant impact as identified in the Holford Rules (Appendix G). In identifying route corridor options areas of high ground have been avoided. Given the topography of Anglesey it is not possible to avoid all ridgelines. In addition, certain opportunity corridors are routed along some areas of higher ground.

13.39 The following landforms are considered to be the principal areas of high ground within the Study Area and have been avoided in the preparation of route corridors:

- Mynydd y Garn;
- High ground to the west of Llyn Alaw;
- Highest area of Mynydd Mechell;
- Parys Mountain;
- Mynydd Bodafon; and
- Mynydd Llwdiarth.

Water Bodies

13.40 While it would be technically feasible to cross large water bodies, the wildfowl and other water birds that may use them, may be sensitive to overhead electricity transmission lines. Water bodies are often associated with leisure activities such as watersports and fishing. In addition, there are picnic areas on the banks of some of the lakes and their sensitivity is based largely on their visual impacts associated with recreational users. The following water bodies were therefore excluded from the route corridors:

- Llyn Llygeirian;
- Llyn Llywenan;
- Llyn Dirlam;
- Llyn Penrhyn;
- Llyn Traffwll Reservoir;
- Llyn Coron;

- Llyn Alaw Reservoir; and
- Cefni Reservoir.

13.41 A number of smaller water bodies are located within the corridors and potential effects on these will be considered at the detailed alignment stage.

Settlements

13.42 All larger settlements (with populations greater than 1,000 inhabitants) identified by DCLG data records were excluded from the route corridor options. The large settlements of Holyhead, Llangefni and Beaumaris are outside the corridors. While part of Bangor lies within some crossing options, the main residential areas of the city have been excluded. Of the smaller settlements identified by DCLG the following lie within a route corridor but a minimum of the 'settlement boundary' has been excluded as an 'island' within the corridor:

- Tregele;
- Llanddeusant;
- Bodedern;
- Bryngwran;
- Llanfechell;
- Llanerchymedd;
- Bodffordd;
- Llanfairpwll;
- Llanddaniel Fab; and
- Bethel.

13.43 Smaller settlements and areas of isolated and scattered residential properties are located throughout the corridors and effects on these properties will be considered at the detailed alignment stage. The general density of residential properties across the Study Area and within each of the corridors is shown in Figure 10-10 A to D in Appendix H.

Community Facilities

13.44 There are 87 schools within the Study Area. The majority of these have been ruled out of the corridors. However, 4 schools fall within or partly within the corridors (Ysgol Uwchradd Bodedern, Ysgopl Henblas, Ysgol Cylch Y Garn, and Ysgol Pencarnisiog). These, along with other facilities that fall within the corridor, such as sports and playing fields, will be considered further at the detailed route alignment stage.

Wind Farms

13.45 A stand off distance from operational wind farms has been applied and has been excluded from all route corridors to ensure the safe construction and reliable operation of any new overhead electricity transmission line.

Tourism

Main Attractions

13.46 The corridors avoid all of the main tourist attractions listed in Section 11 (paragraphs 11.23 and 11.28).

Beaches

13.47 The corridors avoid all of the main beaches within the Study Area, including all Blue Flag and Green Coast Award beaches.

Camping and Caravan Sites

13.48 The majority of camping and caravan sites have been avoided, however a small number remain in the corridors and will be considered at the alignment stage.

National Trust Properties

13.49 The area of National Trust property within route corridors has been kept to a minimum. As acknowledged previously, the Registered Historic Parks and Gardens of Plas Newydd and the Vaynol Estate lie on the coast of the Menai Strait. Both of these properties are owned by the National Trust. Given their location, where the Menai Strait is at its narrowest, sections of both of these properties are included in some route corridor options.

13.50 Plas Newydd covers an area of almost 2 square kilometres and the route corridor options cover an area of 0.16 square kilometres, 8 % of the total area of the estate.

13.51 The Vaynol Estate covers an area of approximately 3.2 square kilometres and the route corridor options include an area of approximately 0.3 square kilometres, approximately 9% of the total area of the estate.

13.52 Where possible, the route corridors take advantage of mature woodlands so as to potentially reduce the extent of wider visual impacts to the estates.

Conclusion

13.53 The detailed mapping of sites and features across the study area, and subsequent assessment of sensitivities to overhead line development has allowed route corridors to be identified that avoid a significant number of these sites and features. In so doing, the potential effects of any overhead line constructed within the Study Area between Wylfa and Pentir, if constructed within one of the identified corridors has already been significantly reduced. Further appraisal and the results of consultation feedback will allow the identification of a preferred corridor which is likely to give rise to the lowest overall environmental and socio-economic effects, further reducing the potential effects of the project.

14 Route Corridor Options

Corridor Options

14.1 Following an initial assessment of the constraints and Opportunity Corridors within the Study Area as set out in Section 13, four route corridors were identified across Anglesey from Wylfa to the Menai Strait and five Menai crossing corridors were identified to complete the connection to Pentir. As explained in Section 13, these have been divided into four Anglesey corridor options and five Menai crossing options linked by Common Areas. This section describes the common area at Wylfa (North Common Area) and the four Anglesey corridors, whilst Section 15 describes the common area linking these corridors to the Menai crossing options (South Common Area) and the crossing options themselves.

14.2 On Anglesey the four corridors are referred to in this report by means of colours:

- Orange Corridor;
- Blue Corridor;
- Yellow Corridor; and
- Purple Corridor.

14.3 Plate 14-A illustrates the four corridors, common areas and crossing points. Figure 14-1 in Appendix I illustrates the geographic extent of the four corridors ion more detail.

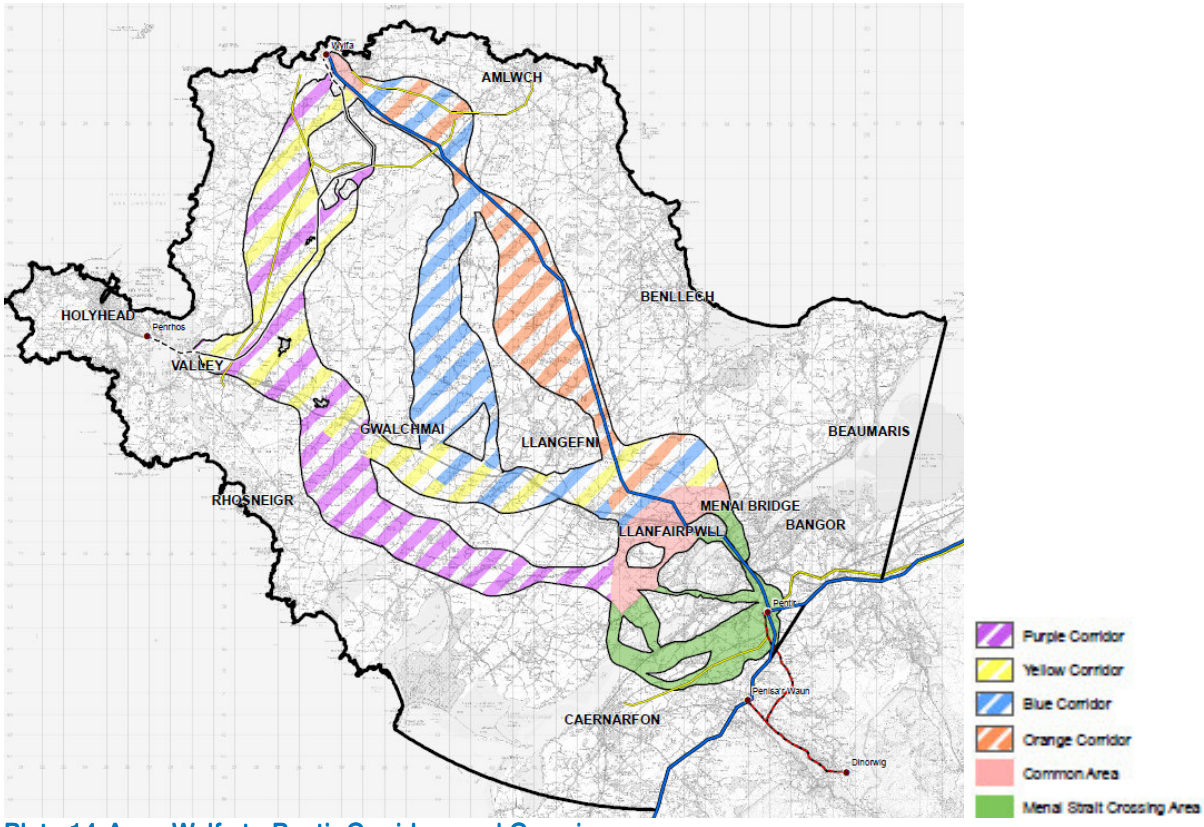

Plate 14-A: Wylfa to Pentir Corridors and Crossings

14.4 To illustrate the sites and features in each corridor, the area covered by the corridors, common areas and crossing points has been split into seven View Ports (sections of the Study Area). View Ports 1 to 6 illustrate the North Common Area and four Corridors, and View Port 7 illustrates the South Common Area and Crossing Points. Each View Port has a series of Figures illustrating ecology (14-4 to 14-9), cultural heritage (14-10 to 14-15), landscape and visual (14-16 to 14-27), population density (14-28 tot 14-33), aviation and safeguarding (14-34 to 14-39), flood areas (14-40 to 14-45) and other features (14-46 to 14-51). All Figures are in Appendix I.

Area surrounding Wylfa Power Station (The North Common Area)

14.5 Plate 14-B illustrates the location of the northern common area (pink) connecting Wylfa Power Station to the four corridor options.

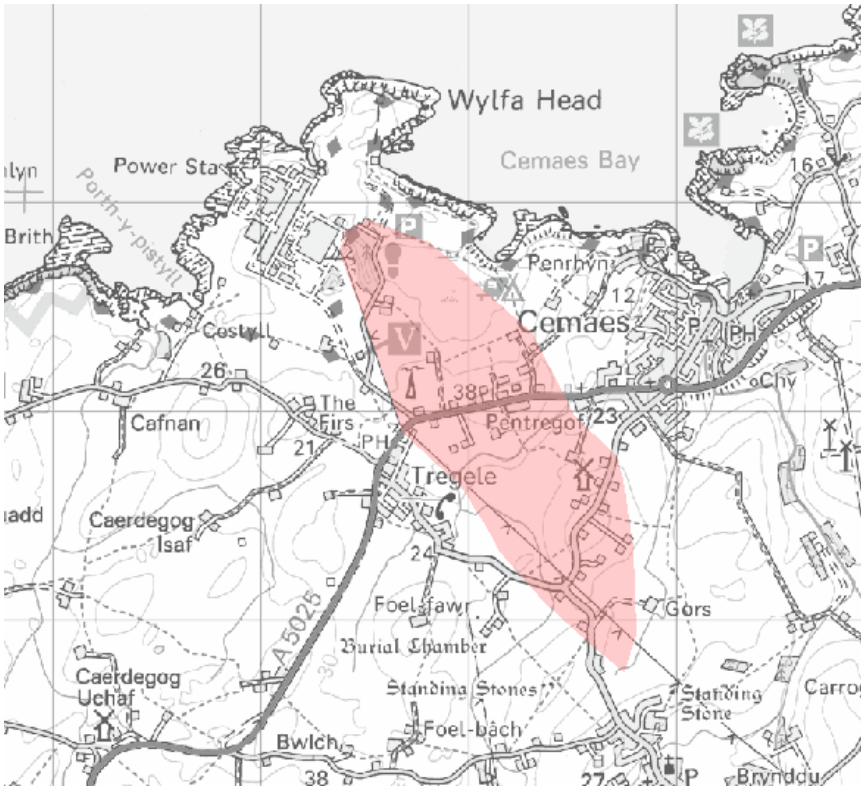

Plate 14-B: Wylfa Combined Corridor Options – Northern Common Area

14.6 This area extends south east from the existing substation at Wylfa power station along the 400kV overhead electricity transmission line. For approximately the first 1 kilometre the area lies within the nuclear power station boundary.

14.7 Tre'r Gof SSSI lies within this area and is designated due to the presence of a wide range of wetland plant species.

14.8 The existing Wylfa power station has a strong visual influence on the landscape at this location.

14.9 The area extends south east from the Horizon boundary crossing the A5025 between the settlements of Cemaes and Tregele following a shallow valley. The existing 400kV

overhead electricity transmission line forms the main feature on the southern boundary of this area with Cemaes being the main feature to the north.

14.10 The area's settlement character comprises of Cemaes, Tregele and Llanfechell, all of which are excluded from, but close to, the corridor area. In addition, there are a number of scattered rural dwellings served by a network of minor roads.

14.11 Table 14-A below provides a summary of constraints within the North Common Area.

North Common Area	Constraints	
Length of Corridor	Approximately 2.5 kilometres Approximately 8 pylons (based on standard spacing)	
Ecology	SSSI	Tre'r Gof SSSI
Cultural Heritage	Listed Building	1 Grade II
Landscape Sensitivity	Proportion of corridor located in high, medium to high and medium landscape sensitive areas	H – 0% M-H – 0% M – 94.9%
Socio-Economics and Land Use	Tourism and Recreation	Isle of Anglesey Coastal Path (National Trail)
	Average number of residential properties per square km	32.3
Detractors providing Opportunity Corridors	Existing Infrastructure	NA

Table 14-A: North Common Area Constraints: Summary

14.12 Consideration will be given to the full range of mitigation measures that might be applied to the development of the new line through this Common Area. Appropriate measures will be identified at the appropriate stage of project development. At this outline appraisal stage of route corridor options, consideration will be given to mitigation strategies and their likely effectiveness in those locations where the potential environmental and socio-economic effects of a new line would be so significant as to materially affect whether the corridor should be preferred. In the simplest form this would identify how likely it is that the most significant effects could be avoided or minimised through careful route alignment at the next stage of project design. The appraisal and responses to consultation will also help inform a process of back-checking to consider whether the preliminary preference for an overhead line is appropriate throughout the area, or whether potential effects are so significant as to make the use of alternative technologies, such as underground cables, more appropriate.

Route Corridors

Orange Corridor

14.13 The Orange Corridor is broadly based on the route of the existing 400kV overhead electricity transmission line as it runs from Wylfa power station to Pentir substation. Plate 14-C illustrates the Orange Corridor.

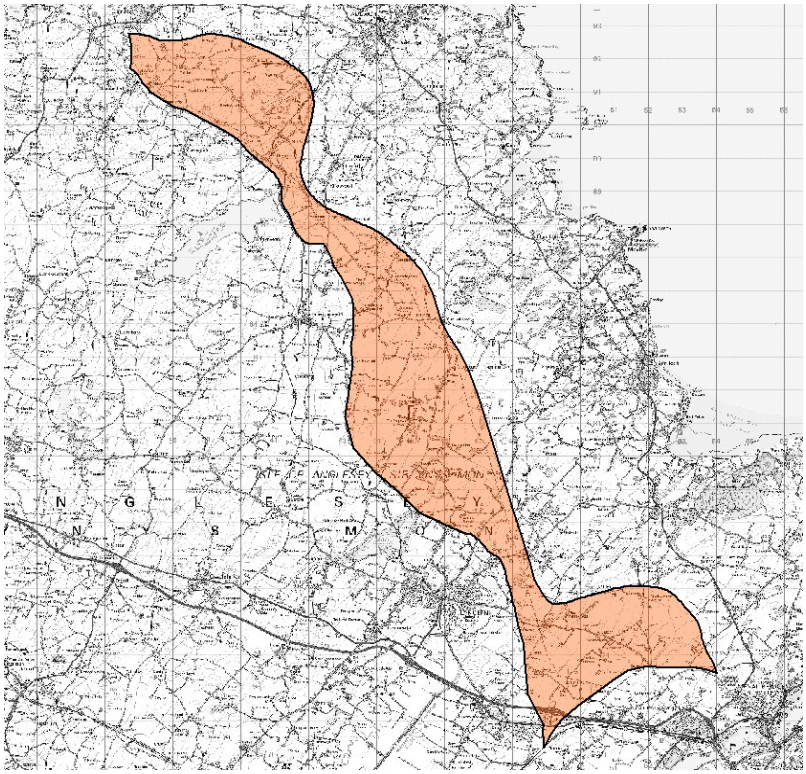

Plate 14-C: Orange Corridor Option

14.14 The existing 400kV overhead electricity transmission line in this corridor is approximately 24 kilometres in length and supported on 59 pylons. The corridor leaves the North Common Area at Wylfa in a south-easterly direction initially with the existing overhead electricity transmission line at its southern boundary and the Rhyd-y-Groes wind farm to the north. At this point the corridor is approximately 2.7 kilometres in width. The corridor runs to the east of the settlement of Llanfechell and includes Scheduled Monuments: the prehistoric enclosure of Llifad, near Carreglefn; and the Pen-y-Morwyd Round Barrow. It then crosses the disused oil storage site at Rhosgoch before continuing in a southerly direction and narrowing to approximately 700 metres in width as it passes between the settlement of Rhosybol and Llyn Alaw reservoir and SSSI.

14.15 The boundary curves round to the south, following the low lying land below the hills at Trogog-uchaf, Bodelffra and to the west of Parys Farm avoiding the distinctive 'lunar' landscape of Parys Mountain with its spoil tips and quarry pits and which forms its own separate LCA.

14.16 The north western part of the corridor lies within the North West Anglesey LCA, which is described in Section 10 and in Appendix M. Wylfa power station has a strong visual

influence on the landscape, particularly in the north of the area and the existing 400kV overhead electricity transmission lines have strong influence on the south eastern part of the corridor, despite generally following the lower ground of the valleys.

14.17 The local settlement pattern comprises scattered rural dwellings and farms served by a network of minor roads. The area is generally fairly open in character with long distance views across the Island and to the coast from higher ground. The Drumlin landforms provide some localised enclosure within the valleys. There is limited woodland cover in the area.

14.18 The corridor extends across the eastern (inland) part of the Amlwch and Environs LCA. It lies within a broad, shallow valley extending down to the coastline. The main historic part of the town or Amlwch is inland, on the A5025. Closer to the coast is an extensive area of disused chemical works. The port at Amlwch developed around the extensive mineral extraction in the 18th and 19th centuries at Parys Mountain inland. Wind farm development has a strong influence in this part of the island. The landform of the corridor where it crosses this LCA and the northern part of the North West Anglesey LCA is characterised by distinct low rounded drumlin hills in a 'basket of eggs' formation. The area is generally fairly open in character with long distance views across the Island and to the coast from higher ground.

14.19 As it passes Llyn Alaw the corridor changes direction and broadens out as it travels south east towards Llangefni. The corridor skirts the edge of the Anglesey AONB which extends inland to include Mynydd Bodafon.

14.20 To the east of Llyn Alaw the corridor crosses the eastern edge of the North West Anglesey LCA, before entering the south-western (inland) part of the Dulas Bay Hinterland LCA. This LCA is focused upon the sandy, shelving coastal landscape of Dulas Bay, where low tide exposes the extensive sandy beach of Traeth Dulas. As with much of this part of Anglesey, the landscape is gently undulating. The most prominent outcrop is Mynydd Bodafon which lies just to the east of the corridor.

14.21 There are a number of woodland blocks and tree belts in the area that are closely associated with parkland developments such as Plas Lligwy, Llys Dulas and Parciau to the east of the corridor. Further inland are areas of relict landscape archaeology associated with the 19th century encroachment on common land, with a resultant clustered settlement pattern.

14.22 Inland, the landscape is one of improved grassland and in places arable land. Within this hedgerows and hedgebanks are common while other semi-natural vegetation, including woodlands, scrub and marshy grasslands, are mostly scattered and isolated. The landscape is fairly open in character and there are long open views in all directions across the island from the craggy top of Mynydd Bodafon.

14.23 As it runs parallel to the existing 400kV overhead electricity transmission line, the eastern part of the corridor passes through the Cors Erddreiniog NNR and SSSI, the Anglesey Fens SAC and Anglesey and Llŷn Fens Ramsar site. While the corridor could have been defined so as to avoid these sites this would have precluded the opportunity of a close parallel alignment to the existing 400kV route. For this reason these sites are within the corridor.

14.24 At this point the eastern edge of the corridor is close to the existing 400kV line so as to avoid the large numbers of caravan and camping sites that are focused in the area around Moelfre and Benllech.

14.25 To the west it is bounded by the B5111. At this point the corridor is approximately 3½ kilometres wide.

14.26 Southeast of Llanerchymedd the corridor passes into the eastern part of the West Central Anglesey LCA. The topography of this LCA forms a gently undulating pattern which largely reflects the influences of the underlying geology. Coedana granite is exposed in a number of areas forming scattered small rocky outcrops that are typical around this part of the island. These, together with small areas of semi-natural habitats, including hedges, trees, and mires are scattered throughout the area within a matrix of improved agricultural grassland. The existing 400kV overhead electricity transmission line runs within and roughly parallel with the corridor boundary and has a strong visual influence across the eastern part of the corridor and the surrounding landscape.

14.27 Continuing south, the corridor narrows to approximately 800 metres in width to avoid Cefni Reservoir and the communities of Rhosmeirch, Talwrn and Llangefni. To the east of Llangefni, the corridor crosses a series of distinct linear ridges separated by narrow valleys, which extend northeast from the Afon Cefni valley to Pentraeth.

14.28 Caeau Talwrn SSSI is located to the south of Talwrn and extends south west into the corridor for a small section of its area. At this point the corridor broadens out again extending north to Rhoscefnhir while staying parallel to the existing 400kV line to the south as it heads towards Llanfairpwll.

14.29 To the east of the corridor lies Penhesgyn Gors Landfill Site which is closed but remains a waste management facility.

14.30 The boundary of the corridor runs around the shallow valley of the Afon Braint, staying below the summit of the small hill beside Marchynys, and reaching the B5420 at the property Glasfryn. The western boundary runs south from Ceint Fawr to the angle pylon of the existing 400kV line north of the village of Star. To the south of the 400kV line is the Capel Eithin (site of) and Cemetery Scheduled Monument (AN120). The southernmost extent of the corridor crosses the A55 and A5 roads east of the settlement of Gaerwen.

14.31 Table 14-B sets out a summary of the main environmental features within the Orange Corridor.

Orange Corridor	Constraints	
Length of Corridor	Approximately 24 kilometres (Existing line is approximately 24km) Approximately 69 pylons (Existing no. of pylons is 59) (based on standard spacing)	
Ecology	Ramsar	Corsydd Môn a Llŷn / Anglesey and Llŷn Fens
	SAC	Anglesey Fens / Corsydd Môn
	SSSI	Cors Erddreiniog SSSI Caeau Talwrn SSSI
	NNR	Cors Erddreiniog
Cultural Heritage	Scheduled Monuments	Pen-y-Morwyd Round Barrow (AN110) Capel Eithin (site of) and Cemetery (AN120) Llifad, Carreglefn (AN079) Bodewryd Standing Stone (AN078) Llys Einion Standing Stone (AN077) Maen Chwyf (AN076) Careg Leidr (AN067) Llech Golman (AN070) Maen Addwyn (AN069) Hirdre-Faig Standing Stone (AN155) Standing Stone 410m North of Church (AN080)
	Listed Buildings	14 Grade II* 33 Grade II
Landscape Sensitivity	Proportion of corridor located in high, medium to high and medium landscape sensitive areas	H – 0% M-H – 1.20% M – 51.87%
Socio-economic and Land use	Average number of residential properties per square km	5.32
Detractors providing Opportunity Corridors	Existing Infrastructure	400kV overhead electricity transmission line

Table 14-B: Orange Corridor Constraints: Summary

14.32 Whilst there are issues with this corridor it has sufficient merit to be taken forward for further investigation. If taken forward as the preferred Corridor, consideration will be given to the full range of mitigation measures that might be applied to the development of the new line through this Corridor area. Suitable measures will be identified at the appropriate stage of project development.

14.33 At this outline appraisal stage of route corridor options, consideration will be given to mitigation strategies and their likely effectiveness in those locations where the potential environmental and socio-economic effects of a new line would be so significant as to materially affect whether the Corridor should be preferred. In the simplest form this would identify how likely it is that the most significant effects could be avoided or minimised through careful route alignment at the next stage of project design. The appraisal and responses to consultation will also help inform a process of back-checking to consider

whether the preliminary preference for an overhead line is appropriate throughout the Corridor, or whether potential effects are so significant as to make the use of alternative technologies, such as underground cables, more appropriate.

Blue Corridor

14.34 The Blue Corridor is approximately 28 kilometres in length and presents an option to avoid paralleling the majority of the existing 400 kV and 132 kV overhead electricity transmission lines. It runs generally through open countryside in the centre of the island before turning east to follow the A55 corridor to the South Common Area. Plate 14-D illustrates the Blue Corridor.

14.35 The Blue Corridor leaves the North Common Area in an easterly direction initially with the existing overhead electricity transmission line at its southern boundary and the Rhyd-y-groes wind farm to the north. The corridor replicates the orange corridor until it passes east of Llyn Alaw Reservoir. As it passes Llyn Alaw the corridor then changes direction to run south towards RAF Mona. South of the airfield the corridor continues east along the A55 towards Llanfairpwll. It therefore differs from the Orange Corridor in that the central section crosses largely open countryside where there are no existing high voltage electricity lines, but follows in part the A55 corridor.

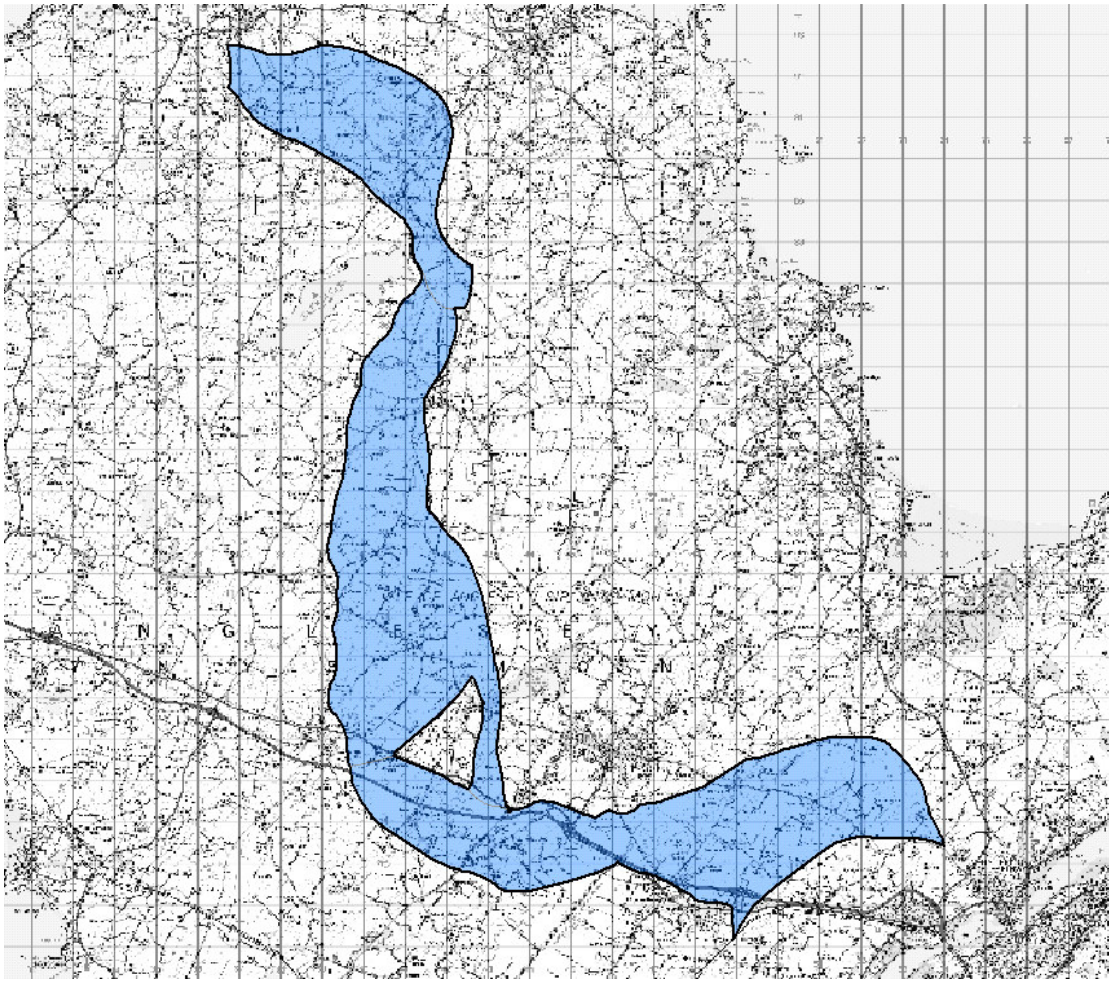

Plate 14-D: Blue Corridor Option

14.36 Initially the corridor is approximately 2.7 kilometres in width. The corridor runs to the east of the settlement of Llanfechell and includes two Scheduled Monuments: the prehistoric enclosure of Llifad, near Carreglefn; and the Pen-y-Morwyd Round Barrow. It crosses the disused chemical site before continuing in a southerly direction and narrowing to approximately 700m in width as it passes between Rhosybol and Llyn Alaw.

14.37 The boundary curves around to the south, following the low lying land below the hills at Trogog-uchaf, Bodelffra and to the west of Parys Farm. The corridor avoids the distinctive 'lunar' landscape of Parys Mountain with its spoil tips and quarry pits and which forms its own separate LCA. The north western part of the corridor lies within the North West Anglesey LCA, as described in Section 10.

14.38 The local settlement pattern comprises scattered rural dwellings and farms served by a network of minor roads. The area is generally fairly open in character with long distance views across the Island and to the coast from higher ground. The Drumlin landforms provide some localised enclosure within the valleys. There is limited woodland cover in the area.

14.39 The corridor then passes to the west of Llanerchymedd at which point it is approximately 1.8 kilometres in width before broadening out to a maximum width of 3.7 kilometres as it approaches RAF Mona airfield crossing Cors Bodwrog SSSI.

14.40 To the east of Llyn Alaw the corridor crosses the eastern edge of the North West Anglesey LCA, before entering the more rugged, landscape of the West Central LCA. Llanerchymedd lies at a crossroads in the north of the LCA, just to the east of the corridor and is on the route of the disused railway that formerly linked Amwlch to the Chester to Holyhead line, via Llangefni.

14.41 The topography of this LCA forms a gently undulating pattern, which largely reflects the influences of the underlying geology and the Coedana granite is exposed in a number of areas forming scattered small rocky outcrops that are typical around this part of the island. These, together with small areas of semi-natural habitats including hedges, trees, and mires are scattered throughout the area within a matrix of improved agricultural grassland, breaking up areas of uniformity within the wider landscape. This area is also fairly open in character with long distance views across the Island.

14.42 The corridor splits to avoid the airfield and the community of Bodffordd and Cefni Reservoir on its eastern leg, where it narrows to a width of 450m. To the west of the airfield the corridor narrows to avoid the community of Gwalchmai. It is likely that airfield safeguarding considerations will dictate the maximum height of pylons within this area.

14.43 To the south of the airfield the corridor changes to an easterly direction following a broad route along the A5 and A55 past the Anglesey Show Ground. To the south east of Anglesey Show Ground is Tre'r Gof Campsite. Travelling east, Tyddyn Sadler Hut Group, a Scheduled Monument, lies within the corridor. It avoids Rhostrehwfa and Llangefni to the north and Malltraeth Marsh RSPB reserve and the community of Gaerwen to the south. The corridor does however cross the northern corner of Malltraeth Marsh/Cors Ddyga SSSI. Approximately seven percent of the SSSI is within the corridor.

14.44 South of Llangefni the corridor crosses the Afon Cefni LCA which is a broad, flat, open valley, the majority of which is on or below the 10m AOD contour. Originally an area of intertidal marsh, subject to inundation by the sea, its current distinctive character is a result of the control of flooding and development of a network of drains and ditches. For the majority of the LCA the Afon Cefni runs in a canalised channel.

14.45 The A5 and new A55 trunk roads cross the valley floor on an embankment and to their northeast the valley exhibits a marshier, low lying character.

14.46 The lower end of the LCA (south east of the route corridor) is crossed by the Chester to Holyhead railway and on its coastal margins is the broad inter-tidal zone of Malltraeth Sands. Long distance open views are available along the valley towards Malltraeth Sands and the coast, and across the area from the surrounding high ground.

14.47 East of the Afon Cefni LCA the corridor ascends the valley slopes following the A55 corridor into the East Central Anglesey LCA. The undulating landform comprises a series of northeast to southwest trending ridges forming an inland buffer zone between the Menai Strait and the interior of the Island.

14.48 The majority of the LCA consists of improved grassland interspersed with scattered areas of semi-natural habitat. In places, hedgerows and hedgebanks form field boundaries and where rock outcrops exist stone walls are more typical field boundaries.

14.49 As the corridor routes along the A55 it excludes the RSPB reserve at Malltraeth Marsh.

14.50 Table 14-C sets out a summary of the main environmental features within the Blue Corridor.

Blue Corridor	Constraints	
Length of Corridor	Approximately 27 kilometres Approximately 77 pylons (based on standard spacing	
Ecology	SSSI	Llyn Alaw SSSI (edge of marshy shoreline) Cors Bodwrog SSSI Malltraeth Marsh/ Cors Ddyga SSSI
Cultural Heritage	Scheduled Monuments	Pen-y-Morwyd Round Barrow (AN110) Llifad, Carreglefn (AN079) Bodewryd Standing Stone (AN078) Graiglas Barrow (AN112) Tyddyn Sadler Hut Group (AN122) Mynwent y Llwyn (AN065) Capel Eithin (site of) and Cemetery (AN120) Standing Stone 410m North of Church (AN080) Old Parish Church and Church Yard (AN052) Hirdre-Faig Standing Stone (AN155)
	Listed Buildings	10 Grade II* 26 Grade II
Landscape Sensitivity	Proportion of corridor located in high, medium to high and medium landscape sensitive areas	H – 0.76% M-H – 0% M – 45.18%
Socio-Economics and Land Use	Average number of residential properties per square km	7.66
	Tourism and Recreation	Anglesey Show Ground Tre Gof Caravan Park
Detractors providing Opportunity Corridors	Existing Infrastructure	A5 and A55 Trunk Road

Table 14-C: Blue Corridor Constraints: Summary

14.51 Whilst there are issues with this corridor it has sufficient merit to be taken forward for further investigation. If taken forward as the preferred Corridor, consideration will be given to the full range of mitigation measures that might be applied to the development of the new line through this Corridor area. Suitable measures will be identified at the appropriate stage of project development.

14.52 At this outline appraisal stage of route corridor options, consideration will be given to mitigation strategies and their likely effectiveness in those locations where the potential environmental and socio-economic effects of a new line would be so significant as to materially affect whether the Corridor should be preferred. In the simplest form this would identify how likely it is that the most significant effects could be avoided or minimised through careful route alignment at the next stage of project design. The appraisal and responses to consultation will also help inform a process of back-checking to consider whether the preliminary preference for an overhead line is appropriate throughout the Corridor, or whether potential effects are so significant as to make the use of alternative technologies, such as underground cables, more appropriate.

Yellow Corridor

14.53 The Yellow Corridor is approximately 29 kilometres in length and presents an option to route a line to the west of the island. Plate 14-E illustrates the Yellow Corridor. It leaves Wylfa in a southerly direction, largely mirroring the direction of the existing 132 kV overhead electricity transmission line and A5025 that runs along the West of the island down to the area near Valley and the A55. At that point the corridor turns eastwards and follows the line of the A55 and A5 to the Menai.

14.54 The Yellow Corridor leaves Wylfa in a southerly direction heading towards Holyhead before turning east along the A5 / A55 corridor towards Llanfairpwll. It follows the same course as the purple corridor from Wylfa to south of Bryngwran from which point it heads in an easterly direction continuing along the A55 corridor. Up until the point where the two corridors diverge, they represent Opportunity Corridors broadly following the same alignment as the existing National Grid 132kV overhead line from Wylfa to Valley (where it connects via underground cables to supply the Anglesey Aluminium works). As discussed in 13.13, National Grid will consider whether the removal of this existing line would be possible and whether it would offer significant benefits were this corridor to be preferred.

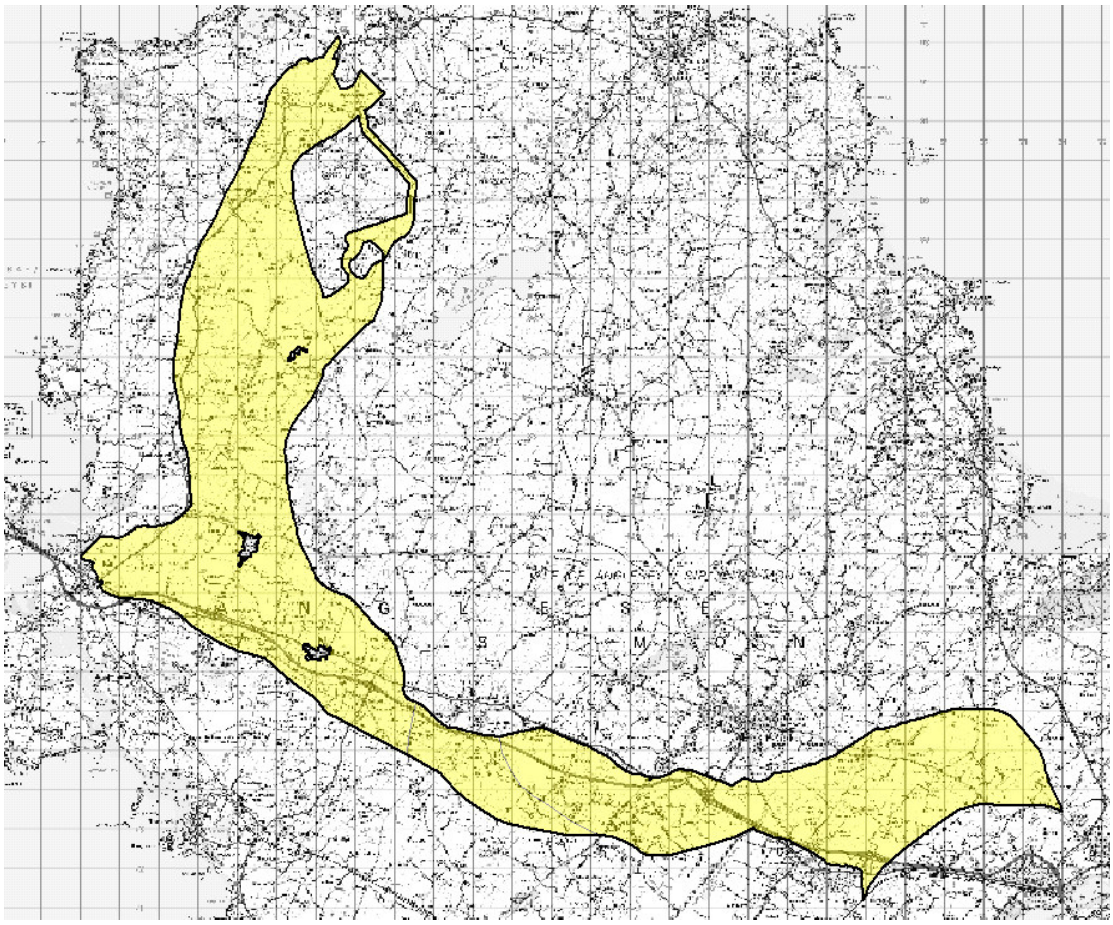

Plate 14-E: Yellow Corridor Option

14.55 As the corridor leaves the common area at Wylfa, it is split to avoid Tregele before joining together to the south of the settlement. The corridor travels south broadly bounded by the

Anglesey AONB which lies outside the corridor to the west. Within the corridor is Cae Gwyn SSSI.

14.56 The corridor splits to avoid the extensive drumlin field and hard rocky features of the higher ground at Mynydd Mechell. Mynydd Mechell is considered to be of high sensitivity in the LANDMAP Visual and Sensory evaluation. Were it not for the presence of the existing 132kV overhead line, it is likely that the corridor would have been restricted to the west of Mynydd Mechell only. Llyn Llygeirian lies to the west of Mynydd Mechell and has also been excluded from the corridor. However approximately eight percent of the Llyn Llygeirian SSSI is within the corridor, comprising as it does a marshy area on the banks of the lake. Where the corridor curves to the east of Mynydd Mechell, it crosses Salbri SSSI and Fferam Uchaf SSSI, and passes through the wind farm. There is a 154m stand off between the corridor and the wind turbines in accordance with National Grid Policy PS(T)087 (see section 11).

14.57 South of Mynydd Mechell the corridor runs south along the general route of the A5025, which is the main road route serving the north west of the island. The A5025 runs down the western side of the corridor with the existing 132kV overhead electricity transmission line route running down the eastern side of the corridor. At this point the corridor is approximately 2.8 kilometres wide.

14.58 The corridor narrows slightly (2.4 kilometres) between Llanfachraeth and Llywenan to avoid the village and the lake, before broadening out towards Valley, where the existing 132kV overhead electricity transmission line converts to underground cable to approach Holyhead. The settlement of Bodedern lies within the corridor but has been excluded for the purposes of any route alignment work that may follow, should this corridor be selected as a preferred option. To the east of Bodedern is Bodedern Early Christian Cemetery Scheduled Monument.

14.59 The majority of the landscape within this section of the corridor is characterised by improved grassland, and there are a number of marshy grasslands in the flatter hollows amongst the drumlins as well as small scattered areas of scrub. Woodland cover is generally limited to small pockets around settlements. Settlement is scattered throughout the rural landscape, with farmsteads typically situated on or close to the drumlin tops.

14.60 At this point the corridor changes direction eastwards along the A55 skirting to the north of Llyn Traffwll SSSI and the Valley Wetlands RSPB reserve. To the south also lie the Valley airfields and the settlement of Rhosneigr. In this area there are two camping sites that are located within the corridor but the majority of these sites have been excluded.

14.61 From just east of Caergeiliog to the edge of Malltraeth Marsh the corridor passes through the West Central Anglesey LCA. This LCA covers a large area of the rural heartland of the island, and includes the settlements of Bryngwyn (which sits on a small ridge along the A5 surrounded by the corridor), Gwalchmai and Llangefni, the largest settlements in the area, which lie to the north of the corridor. The topography of this LCA forms a gently undulating pattern which largely reflects the influences of the underlying geology and the Coedana granite is exposed in a number of areas forming scattered small rocky outcrops that are typical around this part of the island. These, together with small areas of semi-natural habitats including hedges, trees, and mires are scattered throughout the area within a

matrix of improved agricultural grassland, breaking up areas of uniformity within the wider landscape.

14.62 Moving further east the corridor narrows to approximately 1.4 kilometres wide to avoid the settlement of Gwalchmai on the approach to RAF Mona airfield but includes the campsite at Tre Gôf and the Graiglas Barrow and Tyddyn Sadler Hut Group Scheduled Monuments, as well as part of the Anglesey Show Ground. At this point the corridor is bounded to the north by the A5. It is likely that airfield safe guarding considerations will dictate the maximum height of pylons in this area.

14.63 The corridor narrows further to a width of approximately 600m as it passes south of the community of Rhostrehwfa.

14.64 South of Llangenfi the corridor crosses the Afon Cefni LCA which is a broad, flat, open valley, the majority of which is on or below the 10m AOD contour. Originally an area of intertidal marsh, subject to inundation by the sea, its current distinctive character is a result of the control of flooding and development of a network of drains and ditches. For the majority of the LCA the Afon Cefni runs in a canalised channel. The A5 and new A55 trunk roads cross the valley floor on an embankment and to their northeast the valley exhibits a marshier, low lying character.

14.65 The corridor avoids the RSPB Reserve as well as the Mynwent y Llwyn, Tre-Garnedd Moated Site and Old Parish Church and Churchyard SMs as it passes to the south of Llangenfi. The corridor passes to the north of Pentre Berw and Gaerwen as well as the Registered Park and Garden of Plas Berw.

14.66 East of the Afon Cefni LCA the corridor ascends the valley slopes following the A55 corridor into the East Central Anglesey LCA. The undulating landform comprises a series of northeast to southwest trending ridges forming an inland buffer zone between the Menai Strait and the interior of the Island. The majority of the LCA consists of improved grassland interspersed with scattered areas of semi-natural habitat. In places hedgerows and hedgebanks form field boundaries and where rock outcrops exist stone walls are more typically field boundaries. The underlying geology is varied with glacial deposits in the east to more mixed intrusive and sedimentary features in the west. Settlements vary from nucleated to dispersed patterns.

14.67 Table 14-D sets out a summary of the main environmental features within the Yellow Corridor.

Yellow Corridor	Constraints	
Length of Corridor	Approximately 30 kilometres Approximately 86 pylons (based on standard spacing)	
Ecology	SSSI	Cae Gwyn SSSI Fferam Uchaf SSSI Llyn Llygeirian SSSI Salbri SSSI Malltraeth Marsh/Cors Ddyga SSSI
Landscape Sensitivity	Proportion of corridor located in high, medium to high and medium landscape sensitive areas	H – 0% M-H – 0.45% M – 69.56%
Cultural Heritage	Scheduled Monuments	Pen-y-Morwyd Round Barrow (AN110) Capel Soar Standing Stone (AN083) Tregwehelydd Standing Stone (AN018) Bodedern Early Christian Cemetery (AN099) Graiglas Barrow (AN112) Tyddyn Sadler Hut Group (AN122) Standing Stones (AN030) Mynwent Y Llwyn (AN065) Hirdre-Faig Standing Stone (AN155) Old Parish Church and Churchyard (AN052) Capel Eithin (Site of) and Cemetery (AN120)
	Listed Buildings	12 Grade II* 59 Grade II
Socio-Economics and Land Use	Average number of residential properties per square km	8.32
	Tourism and Recreation	Llynnon Mill Anglesey Show Ground Tre Gof Caravan Park Bodowyr Caravan and Camping Park
Detractors providing Opportunity Corridors	Existing Infrastructure	Existing 132kV overhead electricity transmission line A5 and A55 Trunk Road

Table 14-D: Yellow Corridor Constraints: Summary

14.68 Whilst there are issues with this corridor it has sufficient merit to be taken forward for further investigation. If taken forward as the preferred Corridor, consideration will be given to the full range of mitigation measures that might be applied to the development of the new line through this Corridor area. Suitable measures will be identified at the appropriate stage of project development.

14.69 At this outline appraisal stage of route corridor options, consideration will be given to mitigation strategies and their likely effectiveness in those locations where the potential environmental and socio-economic effects of a new line would be so significant as to materially affect whether the Corridor should be preferred. In the simplest form this would identify how likely it is that the most significant effects could be avoided or minimised through careful route alignment at the next stage of project design. The appraisal and responses to consultation will also help inform a process of back-checking to consider whether the preliminary preference for an overhead line is appropriate throughout the

Corridor, or whether potential effects are so significant as to make the use of alternative technologies, such as underground cables, more appropriate.

Purple Corridor

14.70 The Purple Corridor is approximately 33 kilometres in length and like the Yellow Corridor presents an option to route the line to the west of the island. Plate 14-F illustrates the Purple Corridor. It leaves the North Common Area in a southerly direction, largely following the direction of the existing 132 kV overhead electricity transmission line and A5025 that runs along the West of the island down to the area near Valley and the A55.

14.71 It then turns east and crosses the A5 / A55 corridor heading south, before turning east towards Llanddaniel Fab, running parallel and north of the route of the mainline railway, towards the South Common Area. The Purple Corridor therefore differs from the Yellow Corridor in that it does not follow the A55 corridor for any significant length and runs closer to the south coast of Anglesey.

14.72 Up until the point where the two corridors diverge, they represent Opportunity Corridors broadly following the same alignment as the existing National Grid 132kV overhead line from Wylfa to Valley (where it connects via underground cables to supply the Anglesey Aluminium works). As discussed in 13.13, National Grid will consider whether the removal of this existing line would be possible and whether it would offer significant benefits were this corridor to be preferred.

14.73 The Purple corridor leaves the North Common Area and splits to avoid Tregele before joining together to the south of the settlement. The corridor travels south broadly bounded by the Anglesey AONB which lies outside the corridor to the west. Within the corridor is Cae Gwyn SSSI.

14.74 The corridor splits to avoid the extensive drumlin field and hard rocky features of Mynydd Mechell. Mynydd Mechell is considered to be of high sensitivity in the LANDMAP Visual and Sensory evaluation. Llyn Llygeirian lies to the west of Mynydd Mechell and has also been excluded from the corridor. However, a small area of the Llyn Llygeirian SSSI is within the corridor. Where the corridor curves to the east of Mynydd Mechell, it crosses Salbri SSSI and Fferam Uchaf SSSI, and passes through the wind farm. There is a 154m stand off between the corridor and the wind turbines in accordance with National Grid Policy PS(T)087 (see section 11).

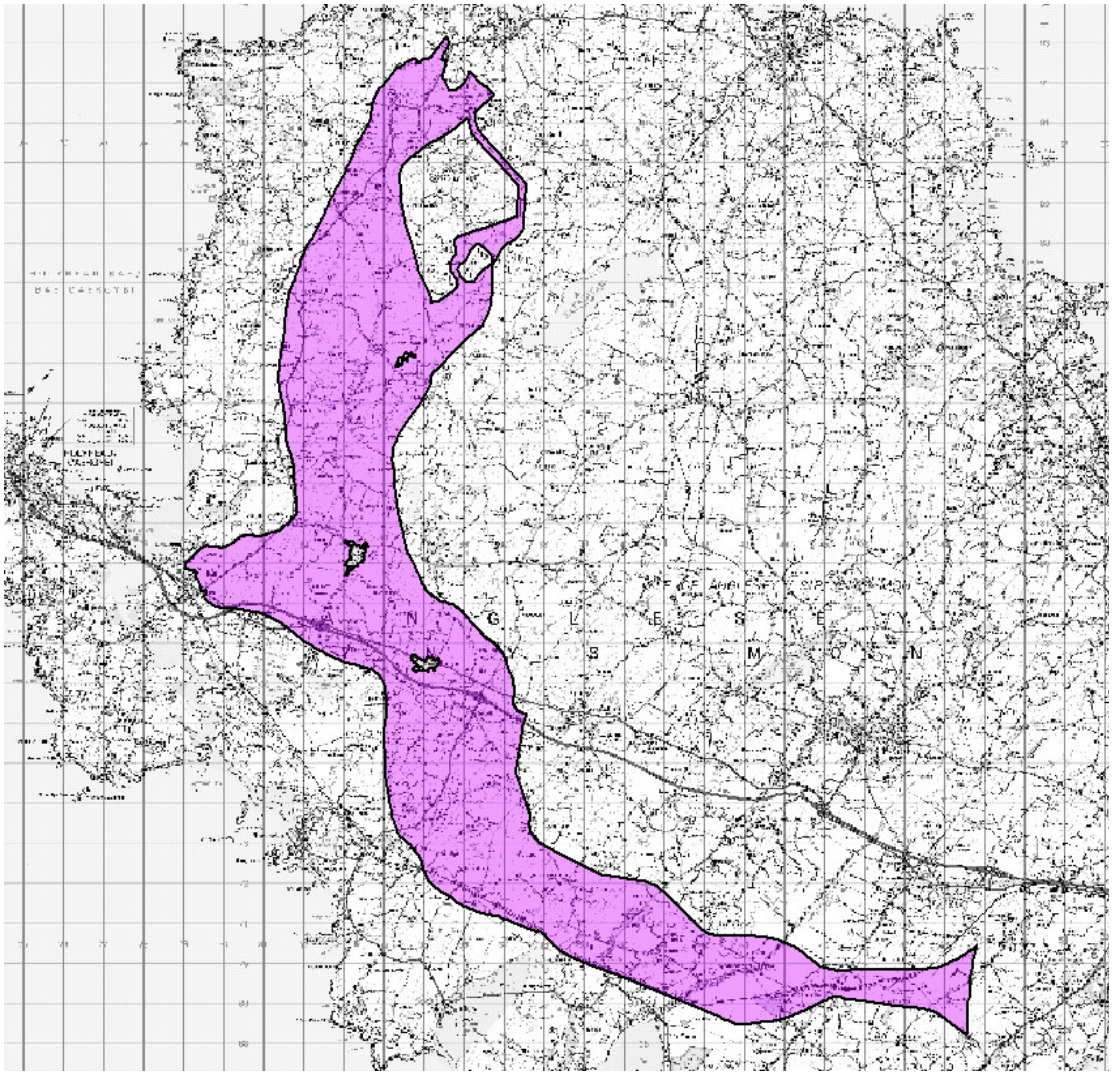

Plate 14-F: Purple Corridor Option

14.75 South of Mynydd Mechell the corridor runs south along the general route of the A5025, which is the main route serving the north west of the island. The A5025 runs down the western side of the corridor with the existing 132kV overhead electricity transmission line route running down the eastern side of the corridor. At this point the corridor is approximately 2.8 kilometres wide.

14.76 The corridor narrows slightly (2.4 kilometres) between Llanfachraeth and Llywenan to avoid the village and the lake, before broadening out towards Valley, where the existing 132kV overhead electricity transmission line converts to underground cable to approach Holyhead. The settlement of Bodedern lies within the corridor but has been excluded for the purposes of any route alignment work that may follow, should this corridor be selected as a preferred option. To the east of Bodedern is Bodedern Early Christian Cemetery Scheduled Monument.

14.77 The majority of the landscape within this section of the corridor is characterised by improved grassland, and there are a number of marshy grasslands in the flatter hollows amongst the drumlins as well as small scattered areas of scrub. Woodland cover is

generally limited to small pockets around settlements. Settlement is scattered throughout the rural landscape, with farmsteads typically situated on or close to the drumlin tops.

14.78 Between Bodedern and the A55 to the south, the corridor crosses Bodowyr Caravan and Camping Park. At this point the corridor changes direction eastwards along the A55 skirting to the north of Llyn Traffwll SSSI and the Valley Wetlands RSPB reserve. To the south also lie the Valley airfields and the settlement of Rhosneigr. In this area there are two camping sites that are located within the corridor but the majority of these sites have been excluded.

14.79 The corridor narrows as it approaches Bodorgan Station avoiding the Din Cryfol Burial Chamber and Bethel. The corridor crosses the ridge and passes Trefdraeth before crossing Malltraeth Marsh SSSI past Glanrafon Farm.

14.80 East of Malltraeth Marsh SSSI the corridor ascends the valley slopes following the railway corridor into the East Central Anglesey LCA. The undulating landform comprises a series of northeast to southwest trending ridges forming an inland buffer zone between the Menai Strait and the interior of the Island. The majority of the LCA consists of improved grassland interspersed with scattered areas of semi-natural habitat. In places hedgerows and hedgebanks form field boundaries and where rock outcrops exist stone walls are more typically field boundaries.

14.81 The landform in this section of the corridor is gently undulating with flatter marshy hollows. West of the small hamlet of Soar the corridor crosses back into the West Central Anglesey LCA and the landscape becomes more rugged and rocky. Here the corridor crosses a northeast to southwest trending ridge before descending to cross the Afon Cefni LCA, which is a broad, flat, open valley, the majority of which is on or below the 10m AOD contour. Originally an area of intertidal marsh, subject to inundation by the sea, its current distinctive character is a result of the control of flooding and development of drains and ditches.

14.82 For the majority of the LCA the Afon Cefni runs in a canalised channel. The LCA is crossed by the Chester to Holyhead railway and on its coastal margins is the broad inter-tidal zone of Malltraeth Sands. Long distance open views are available along the valley towards Malltraeth Sands and the coast, and across the area from the surrounding high ground.

14.83 Table 14-E sets out a summary of the main environmental features within the Purple Corridor.

Purple Corridor	Constraints	
Length of Corridor	Approximately 33 kilometres Approximately 94 pylons (based on standard spacing)	
Ecology	SSSI	Cae Gwyn SSSI Llyn Llygeirian SSSI Salbri SSSI Fferam Uchaf SSSI Llyn Padrig SSSI Malltraeth Marsh SSSI
Landscape Sensitivity	Proportion of corridor located in high, medium to high and medium landscape sensitive areas	H – 0% M-H – 0.46% M – 54.47%
Cultural Heritage	Scheduled Monuments	Pen-y-Morwyd Round Barrow (AN110) Capel Soar Standing Stone (AN083) Tregwehelydd Standing Stone (AN018) Bededern Early Christian Cemetery (AN099) Bodfeddan Inscribed Stone (AN021) Ty-Newydd Burial Chamber (AN013) Standing Stones (AN030)
	Listed Buildings	1 Grade I 5 Grade II* 61 Grade II
Socio-Economics and Land Use	Average number of residential properties per square km	8.09
	Tourism and Recreation	Penrhyn Golf Course Llynnon Mill Bodowyr Caravan and Camping Park
Detractors providing Opportunity Corridors	Existing Infrastructure	Existing 132kV overhead electricity transmission line A5 and A55 Trunk Road (however avoids a large proportion of the A55 compared to the yellow corridor)

Table 14-E: Purple Corridor Constraints: Summary

14.84 Whilst there are issues with this corridor it has sufficient merit to be taken forward for further investigation. If taken forward as the preferred Corridor, consideration will be given to the full range of mitigation measures that might be applied to the development of the new line through this Corridor area. Suitable measures will be identified at the appropriate stage of project development.

14.85 At this outline appraisal stage of route corridor options, consideration will be given to mitigation strategies and their likely effectiveness in those locations where the potential environmental and socio-economic effects of a new line would be so significant as to materially affect whether the Corridor should be preferred. In the simplest form this would identify how likely it is that the most significant effects could be avoided or minimised through careful route alignment at the next stage of project design. The appraisal and responses to consultation will also help inform a process of back-checking to consider whether the preliminary preference for an overhead line is appropriate throughout the Corridor, or whether potential effects are so significant as to make the use of alternative technologies, such as underground cables, more appropriate.

Summary of Route Corridor Options

14.86 A brief summary of the four route corridor options is provided in Table 14-F

Orange Corridor	Blue Corridor	Yellow Corridor	Purple Corridor
Follows the route of the existing 400kV overhead electricity transmission line.	Follows part of the existing 400kV overhead electricity transmission line	Follows the route of the National Grid 132kV overhead electricity transmission line to Valley and follows the route of the A55 from Valley to Llanfairpwll.	Follows the route of the National Grid 132kV overhead electricity transmission line to Valley.
Approximately 24km in length.	Approximately 27 km in length.	Approximately 30km in length.	Approximately 33km in length
	Surrounds RAF Mona.	Includes route through Mynydd Mechell.	Includes route through Mynydd Mechell.
Average number of residential properties per square km: 5.32	Average number of residential properties per square km: 7.66	Average number of residential properties per square km: 8.32	Average number of residential properties per square km: 8.09
Includes the following designated sites:	Includes the following designated sites:	Includes the following designated sites:	Includes the following designated sites:
1 SAC,	3 SSSI	5 SSSI	6 SSSI
1 Ramsar site,			
2 SSSI,			
1 NNR,			
11 SMs	10 SMs	11 SMs	7 SMs

Table 14-F: Summary of Route Corridor Options

15 South Common Area and Menai Crossing Options

15.1 In identifying crossing options between the end of the corridors at the common area east of Llangefni and Pentir the same process was used as for the identification of the corridors. Areas of highest constraint were avoided, or where they could not be avoided options were identified to minimise any potential impacts.

Overall Description of Crossing Points

15.2 Five corridors were identified to cross the Menai Strait and connect to Pentir substation. Each of the crossing options connects to a common area which in turn links to the four route corridor options. Whilst all four corridors can connect to any one of the five identified crossing points through the South Commons area, an inspection of the map illustrates that each of the corridors could link more easily to certain crossing points. For example linking the Purple Corridor to Crossing Point A, or the Orange Corridor to Crossing Points D or E could significantly the increase of overhead line within the South Common Area. Dependent upon the combination of corridor and crossing option, the overall route length between Wylfa and Pentir could vary between approximately 35 and 55 km.

15.3 The pink area on Plate 15-A, which is more detailed on Figure 15-1 in Appendix I is common to all corridors with the green areas relating to specific crossing options. Figure 15-2 illustrates ecological features, 15-3 cultural heritage, 15-4 and 15-5 landscape and visual, 15-6 residential population density, 15-7 aviation and defence, 15-8 flood zones and 15-9 other sites and features. All Figures can be found in Appendix I.

15.4 Each of the five crossing options are described individually below.

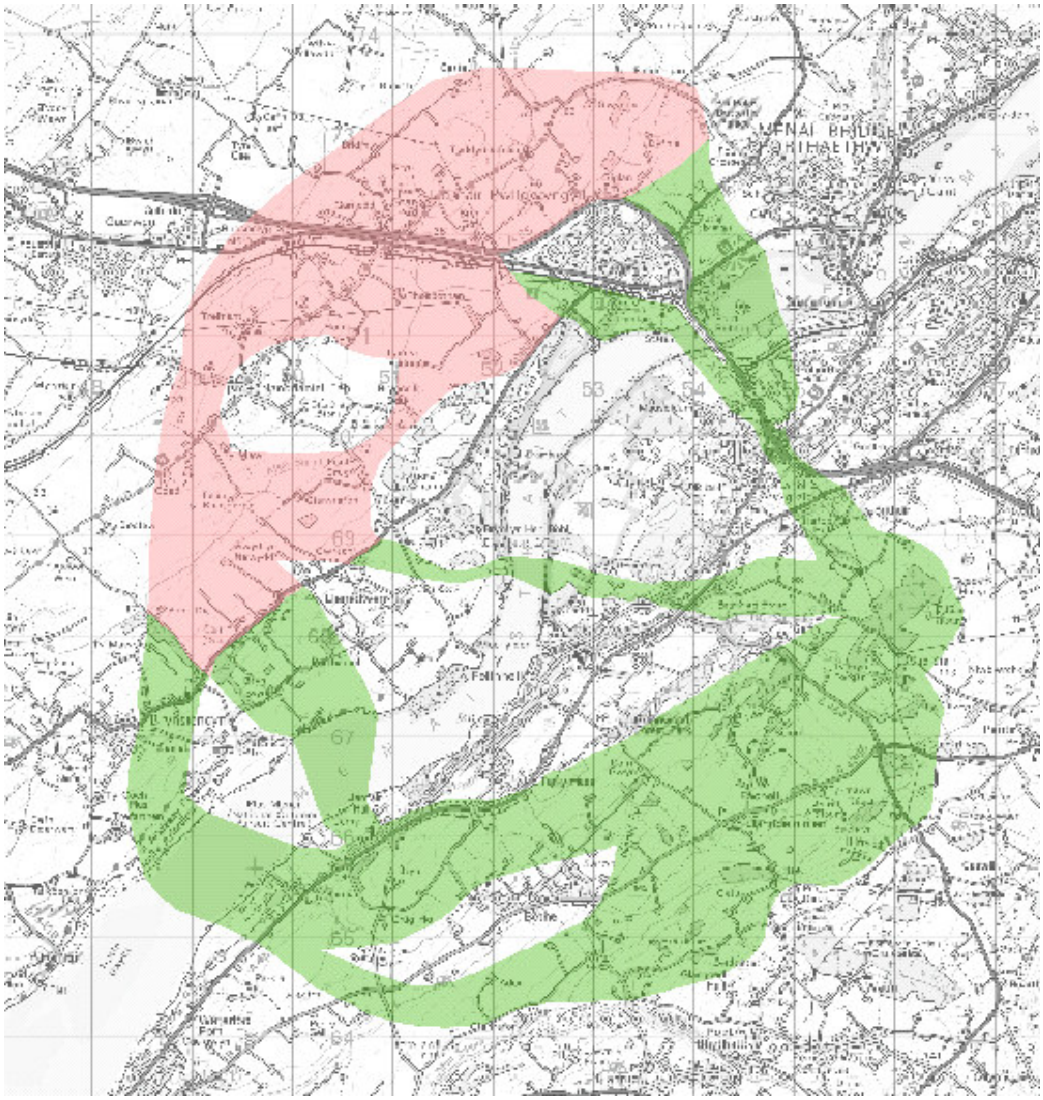

Plate 15-A: Crossing Corridor Options

South Common Area

15.5 A common area connects the four corridor options to the five Menai Strait crossing options. This area allows flexibility for any of the route corridor options to cross the Menai Strait at any of the five crossing points.

15.6 The northern boundary of the common area extends to the existing 400kV overhead electricity transmission line south of Penmynydd, before crossing the line and heading north-eastwards encompassing farmland to the north of Llanfairpwll.

15.7 The western boundary runs close to the eastern edge of Gaerwen and runs along the bottom of the shallow valley to the south-east of the village, and skirts the edge of the woodland near Pont-Dic. The eastern and southern boundaries extend to the edge of the town of Llanfairpwll and the mature woodland of the Plas Newydd Estate. The corridor excludes the settlement of Llanddaniel Fab which sits on top of a ridge.

15.8 This area lies within the East Central Anglesey LCA. The undulating landform comprises a series of northeast to southwest trending ridges forming an inland buffer zone between the Menai Strait and the interior of the Island. The majority of the LCA consists of improved grassland interspersed with scattered areas of semi-natural habitat. In places hedgerows and hedgebanks form field boundaries and where rock outcrops exist stone walls are more typically field boundaries. Settlements vary from nucleated to dispersed patterns.

15.9 Consideration will be given to the full range of mitigation measures that might be applied to the development of the new line through this Common Area. Appropriate measures will be identified at the appropriate stage of project development. At this outline appraisal stage of route corridor options, consideration will be given to mitigation strategies and their likely effectiveness in those locations where the potential environmental and socio-economic effects of a new line would be so significant as to materially affect whether the corridor should be preferred. In the simplest form this would identify how likely it is that the most significant effects could be avoided or minimised through careful route alignment at the next stage of project design. The appraisal and responses to consultation will also help inform a process of back-checking to consider whether the preliminary preference for an overhead line is appropriate throughout the area, or whether potential effects are so significant as to make the use of alternative technologies, such as underground cables, more appropriate.

Menai Strait Crossing Options

Crossing Option A

15.10 Crossing A runs between the settlements of Menai Bridge and Llanfairpwll, crosses the Menai Strait east of Britannia Bridge and travels south east to the existing Pentir substation. Approximately 1.3km of this corridor runs through Anglesey and approximately 3.4km runs through Gwynedd. The width of the Menai Strait at this crossing point is approximately 0.5km.

15.11 On the Anglesey side of the Strait the corridor follows the A55 to the south at a width of approximately 600 metres as it approaches the Menai Strait. This crossing approaches the Menai Strait between Llanfairpwll and Menai Bridge avoiding mature woodland at Coed Mor and extending to the Menai Strait across open fields between the two settlements. It then crosses the Strait between the Menai Bridge and Britannia Bridge before joining the mainland across the sports pitches of Bangor University and heading south across the A55 / A487 interchange and continuing south east to reach Pentir substation.

15.12 This part of the route corridor crosses the Eastern Menai Strait LCA which extends from Menai Bridge to Beaumaris. Its inland boundary is formed by the break of slope, before the main plateau area of Anglesey is reached. The area is typified by wooded flanks along the Menai Strait which form a significant landscape resource and nature conservation resource. Further inland, the area is characterised by areas of improved agricultural land interspersed with areas of scattered semi-natural vegetation.

15.13 This crossing option crosses through approximately 0.85km of the AONB on the Anglesey bank of the Menai, as well as the Glannau Porthaethwy SSSI and Y Fenai a Bae Conwy / Menai Strait and Conwy Bay SAC. In addition the SMs of Gorad Ddu Fish Weir, North Weir

and Smoke Tower and Coed M'r Fish Weir are within the corridor. On the Anglesey side of the Strait the corridor also crosses the National Trust property of Caeau Glan-y-Mor.

15.14 The Britannia Bridge provides some screening of views from the west and the steep wooded slopes either side of the Menai Strait offer a degree of enclosure. The majority of sensitive visual receptors are on Anglesey. Visibility from the mainland side is more limited by woodland in and around Bangor University Sports Ground.

15.15 Sensitive visual receptors include: the Menai and Britannia Bridges; the A5(T) along the north bank of the Strait and the layby which has a viewpoint across the 'Swellies' to the Menai Bridge; the Anglesey coastal path; and the settlement of Menai Bridge.

15.16 On the Gwynedd bank of the Menai the corridor crosses the Coedydd Afon Menai SSSI which runs along the bank of the Strait. The corridor narrows as it approaches the A55/A487 interchange to avoid the residential properties at the southern extent of Bangor.

15.17 To the south east of Menai Strait, the corridor crosses the Bangor University sports ground and farmland between the A55 and Treborth Hall. The coastline to the east of the Britannia Bridge is covered by mature woodland, with open areas of mature parkland at the western edge of Bangor, associated with the Sports.

15.18 The western boundary runs parallel to the existing 400kV line, extending into the woodland around the eastern edge of the Parc Menai Business Park, before passing along the eastern side of the small settlement of Capel-y-graig. The boundary extends to the edge of the woodland around the cluster of dwellings at Hafod-yr-Haf, before passing around the eastern edge of the narrow valley of Coed Nant-y-garth and curving around the woodland plantations that sreen the Pentir substation.

15.19 The landform rises gently from the coastline with small undulations, with a cutting for the Chester to Holyhead railway line running roughly parallel to the coastline through the area. The A55 crosses the Britannia Bridge and then runs through a wooded corridor in a shallow cutting, with a junction for the A487 next to the Parc Menai Business Park.

15.20 Once to the south of the A55 / A487 interchange the corridor broadens out to a width of approximately 500 metres and crosses the Gors y Brithdir Enclosed Hut Circle and Ancient Fields Scheduled Monument on its approach to Pentir substation.

15.21 Table 15-A provides a summary of the key constraints within Crossing Option A.

Crossing Option A	Constraints		
Distance	Approximate length of shore to shore crossing:	0.5km	
	Approximate length of corridor within Anglesey:	1.3km	
	Length of corridor within Gwynedd:	3.4km	
		Approximate distance from Wylfa to this crossing option:	Approximate distance from Wylfa to Pentir
	Orange corridor	30km	35km
	Blue corridor	35km	40km
	Yellow corridor	38km	43km
	Purple corridor	42km	47km
Ecology	SAC	Y Fenai a Bae Conwy / Menai Strait and Conwy Bay	
	SSSI	Glannau Porthaethwy Coedydd Afon Menai	
	Ancient Woodland	Coed Mor (on Anglesey coast) Woodland north of sports ground (mainland)	
Landscape	AONB	Approximately 0.85km of this corridor crosses Anglesey AONB	
	View points at the Menai Strait crossing	Menai and Britannia Bridges The A5(T) layby Anglesey coastal path Settlement at Menai Bridge	
Landscape Character Area Sensitivity	Proportion of corridor located in moderately and highly sensitive LCAs	H = 2.21% M-H = 13.82% M = 73.26%	
Cultural Heritage	Scheduled Monuments	Gors y Brithdir Enclosed Hut Group & Ancient Fields (CN203) North Weir and Smoke Tower , Ynys Gorad (AN096) Burial Chamber 180m NE of Pen-y-Berth (AN037) Coed M'r Fish Weir (AN138) Gorad Ddu Fish Weir (AN139) Gorad Ddu Fish Weir (wreck) Coed M'r Fish Weir (wreck)	
	Listed Buildings	5 Grade II Listed Buildings	
Socio-Economics and Land Use	Tourism and Recreation	Caeau Glan y Mor - National Trust Bangor University Sports Fields	
	Residential population density	5.70	
Detractors providing Opportunity Corridors	Existing Infrastructure	A55 Trunk road. Existing 400kV overhead electricity transmission line.	

Table 15-A: Summary of Crossing Option A

15.22 If taken forward as the preferred Crossing Option, consideration will be given to the full range of mitigation measures that might be applied to the development of the new line through this area. Suitable measures will be identified at the appropriate stage of project development.

15.23 At this outline appraisal stage of route corridor options, consideration will be given to mitigation strategies and their likely effectiveness in those locations where the potential environmental and socio-economic effects of a new line would be so significant as to materially affect whether the Crossing Option should be preferred. In the simplest form this would identify how likely it is that the most significant effects could be avoided or minimised through careful route alignment at the next stage of project design. The appraisal and responses to consultation will also help inform a process of back-checking to consider whether the preliminary preference for an overhead line is appropriate throughout the Crossing Option, or whether potential effects are so significant as to make the use of alternative technologies, such as underground cables, more appropriate.

Crossing Option B

15.24 Crossing B runs from the south west of Llanfairpwll, crosses the Menai Strait west of Britannia Bridge and travels south east to the existing Pentir substation. This is the shortest corridor with approximately 1.5km of this corridor runs through Anglesey and approximately 3.5km runs through Gwynedd. The width of the Menai Strait at the crossing point is approximately 0.2km, the shortest of the crossing options.

15.25 Crossing Option B passes between the southern edge of Llanfairpwll and the mature woodland at the northern end of the Plas Newydd Estate and crosses the Menai Strait near the statue of Nelson, running parallel to the Britannia Bridge. The existing 400kV overhead electricity transmission line crossing of the Menai Strait, which runs alongside the Britannia Bridge is within this corridor. These existing infrastructure features already effect views and landscape character in the vicinity.

15.26 On the Anglesey side of the Menai Strait, the corridor crosses approximately 0.9km of the Anglesey AONB and also Plas Llanfair. Within the corridor is St Mary's Church but the statue of Nelson is slightly to the south of the corridor. As the corridor approaches the Menai Strait from the Anglesey side it is approximately 400 metres in width before reducing to a width of 200 metres as it crosses the Menai Strait and Y Fenai a Bae Conwy / Menai Strait and Conwy Bay SAC.

15.27 The most important views in this area are to the southwest along the Menai Strait from the Church of Saint Mary churchyard and Nelson's Statue located on the rocky shore. The grand house at Plas Newydd forms a focal point in the iconic 'picture postcard' views along the strait, framed by the steep wooded slopes of the designed landscapes at Plas Newydd and Vaynol Estate on opposite sides of the water. The tall column mounted statue of the Marquis of Anglesey is visually prominent on the skyline to the northwest. The Anglesey coastal path also runs through the corridor.

15.28 On the Gwynedd bank of the Menai the corridor crosses the Coedydd Afon Menai SSSI before following the A55 south east to the A55/A487 interchange and continuing in a south easterly direction running to the north east of the Parc Menai Industrial Estate to Pentir substation, broadening out as it approaches Pentir substation. Further inland between the A487 and Pentir the corridor crosses the Gors y Brithdir Enclosed Hut Circle and Ancient Fields SM.

15.29 On the southern side of the Menai Strait the western boundary of the corridor runs parallel to the existing 400kV line, extending into the woodland around the eastern edge of the

Parc Menai Business Park, before passing along the eastern side of the small settlement of Capel-y-graig. The boundary extends to the edge of the woodland around the cluster of dwellings at Hafod-yr-Haf, before passing around the eastern edge of the narrow valley of Coed Nant-y-garth and curving around the woodland plantations that screen the Pentir substation.

15.30 The coastline to the south-west of the Britannia Bridge is covered by mature woodland, with open areas of mature parkland adjacent to the A55 road corridor, outwith the Vaynol Estate which is designated as a Landscape of Outstanding Historic Interest. The field boundaries and parkland areas are defined by a mixture of stone walls and mature tree lines, with stands of woodland around the boundary of the Parc Menai Business Park and a sewage works.

15.31 Development of the business park and sewage works at the edge of the Vaynol Estate in recent years has put development pressure on the historic estate landscape, which is protected by the buffer of the mature woodland boundary. The landform rises gently from the coastline with small undulations, with a steep ridge to the south.

15.32 In addition to the historic and cultural value of Plas Newydd, formerly the seat of the Marquis of Anglesey and now owned by the National Trust, the area around Brynsiencyn has a number of important late prehistoric archaeological sites.

15.33 Table 15-B provides a summary of the key constraints within Crossing Point B.

Crossing Option B	Constraints		
Distance	Approximate length of shore to shore crossing:	0.2km	
	Length of corridor within Anglesey:	1.5km	
	Length of corridor within Gwynedd:	3.5km	
		Approximate distance from Wylfa to this crossing option:	Approximate distance from Wylfa to Pentir
	Orange corridor	30km	35km
	Blue corridor	36km	41km
	Yellow corridor	38km	43km
	Purple corridor	41km	46km
Ecology	SAC	Y Fenai a Bae Conwy / Menai Strait and Conwy Bay	
	SSSI	Coedydd Afon Menai	
	Ancient Woodland	Southern edge of Menai Strait	
Landscape	AONB	Approximately 0.9km of the corridor crosses Anglesey AONB	
	View points at the Menai Strait crossing	The Anglesey Coastal Path St Mary's Churchyard Nelson's Statue Plas Newydd Vaynol Hall Britannia Bridge	
Landscape Character Area Sensitivity	Proportion of corridor located in moderately and highly sensitive LCAs	H = 0.23% M- H = 4.40% M = 82.52%	
Cultural Heritage	Scheduled Monuments	Gors y Brithdir Enclosed Hut Group & Ancient Fields	
	Registered Historic Parks and Gardens	Plas Newydd	
	Listed Buildings	1 Grade II* Listed Building 3 Grade II Listed Buildings	
Socio-Economics and Land Use	Tourism and Recreation	Caeau Glan y Mor - National Trust	
	Residential population density	11.19	
Detractors providing Opportunity Corridors	Existing Infrastructure	Existing 400kV overhead electricity transmission line. A55 Trunk road.	

Table 15-B: Summary of Crossing Option B

15.34 If taken forward as the preferred Crossing Option, consideration will be given to the full range of mitigation measures that might be applied to the development of the new line through this area. Suitable measures will be identified at the appropriate stage of project development.

15.35 At this outline appraisal stage of route corridor options, consideration will be given to mitigation strategies and their likely effectiveness in those locations where the potential environmental and socio-economic effects of a new line would be so significant as to materially affect whether the Crossing Option should be preferred. In the simplest form

this would identify how likely it is that the most significant effects could be avoided or minimised through careful route alignment at the next stage of project design. The appraisal and responses to consultation will also help inform a process of back-checking to consider whether the preliminary preference for an overhead line is appropriate throughout the Crossing Option, or whether potential effects are so significant as to make the use of alternative technologies, such as underground cables, more appropriate.

Crossing Option C

15.36 Crossing C runs east from Llanedwen crossing the Menai Strait north of Y Felinheli. It continues east across the A487 before turning south to reach Pentir substation. Approximately 1.5km of this corridor runs through Anglesey and approximately 3.5km runs through Gwynedd. The width of the Menai Strait at this crossing point is approximately 0.35km.

15.37 Crossing Option C crosses the A4080 to the south of Llanddaniel Fab between the properties, and then runs across the northern corner of the wooded farmland around the Plas Coch estate and into the designed landscape of Plas Newydd estate (a Registered Park and Garden). The corridor runs across the estate parkland and fields between Plas Llanedwen and the mature woodland around Plas Coch reaching the Menai Strait at a gap in the mature woodland along the coast.

15.38 Crossing Option C is routed to the north of Llanedwen crossing the Menai Strait in an easterly direction. At this point the corridor is narrow (approximately 200 metres wide).

15.39 As with all of the crossings, the route crosses approximately 1.5km of the Anglesey AONB and also the Y Fenai a Bae Conwy/Menai Strait SAC. In addition to this, it crosses Plas Newydd Registered Park and Garden, though it remains to the south of the National Trust boundary of the site.

15.40 On the Gwynedd side of the Strait the route crosses the Vaynol Estate which is a Registered Park and Garden as well as National Trust land.

15.41 On the mainland, the corridor is defined within the Vaynol Hall estate by the mature woodland around the open parkland to the south of the Bryntirion listed building. At the B4547, the southern boundary of the corridor crosses the road to the south of its junction with Bangor Street, before following the edge of the mature mixed woodland along the Coed Nant-y-garth. At Garth Farm, the corridor turns to the south to create an approach to the Pentir substation.

15.42 Although passing through the sensitive designed landscapes of Plas Newydd and Vaynol Estate, the visibility of an overhead electricity transmission line within the corridor would be limited to some extent by the existing blocks of mature estate woodlands on either side of the Menai Strait. In addition, the location of the crossing between two bends in the strait would help to limit longer distance visibility from the northeast and southwest. Nevertheless an overhead electricity transmission line crossing in this corridor would be visible from sensitive locations along the strait including locations within the designed landscapes themselves and parts of Y Felinheli.

15.43 The corridor runs through the mature parkland of the Vaynol Estate, which is designated as a Landscape of Outstanding Historic Interest, although the parkland/estate character is described as declining in the LANDMAP assessment due to the influence of development around it and changes in the management regime. The parkland areas and estate fields are defined by a mixture of stone walls and mature tree lines, with the corridor defined by larger blocks of mature woodland around the Grade II listed building of Bryntirion to the north and Bryntirion Lodge Wood and the Limekiln Covert to the south. Development of the estate boundary in recent years, such as the Parc Menai Business Park and sewage works to the north and the settlement at Plas Dinorwic to the south, has put development pressure on the historic estate landscape, which is protected by the buffer of the mature woodland boundary. The gently undulating topography of the estate landform rises to the east, where it reaches a steep ridge and the glacial valley of the Coed Nant-y-garth, which are part of the Caernarfon – Coast and Plateau LCA.

15.44 The landscape is typified by rolling pasture, generally with a northerly aspect, with field boundaries defined by hedges, stone walls and occasional slate fences, with large areas of mature woodland including the wooded valley of the Coed Nant-y-garth. However, the creation of a large landfill area within the valley in recent years has removed a large section of this woodland. Settlement within the northern half of the area generally consists of scattered farms and dwellings, with the village of Bethel situated on a prominent ridge to the south of the corridor. The Snowdonia Massif and surrounding foothills create a prominent feature within views from the area, with additional views to the west across the Menai Strait to Anglesey. The A487, A4087 and several busy minor roads provide access throughout the area. To the north-east of the Coed Nant-y-garth, the corridor enters the Bangor Coastal Plain LCA. The landscape of the LCA within the corridor is covered by rolling farmland around small blocks of woodland, with a larger plantation woodland to the north of the Pentir substation. The boundaries of fields across the LCA are defined by slate fences, hedges and earth banks (cloddiau), with occasional tree lines and stands of woodland. The gently rolling landform within the corridor is situated on a small plateau above the coastal plain, with a series of small hills forming small wooded valleys to the north of the Snowdon Massif and the National Park. Settlement within the corridor is limited to scattered farms and dwellings.

15.45 Continuing east the corridor crosses the A487 to the north of Y Felinheli before broadening out to approximately 600 metres in width before connecting in to Pentir substation.

15.46 Table 15-C provides a summary of the key constraints within Crossing Point C.

Crossing Option C	Constraints		
Distance	Approximate length of shore to shore crossing:	0.35km	
	Length of corridor within Anglesey:	1.5km	
	Length of corridor within Gwynedd:	3.5km	
		Approximate distance from Wylfa to this crossing option using:	Approximate distance from Wylfa to Pentir:
	Orange corridor	32km	37km
	Blue corridor	36km	41km
	Yellow corridor	39km	44km
	Purple corridor	39km	44km
Ecology	SAC	Y Fenai a Bae Conwy / Menai Strait and Conwy Bay	
Landscape	AONB	Approximately 1.5km of this corridor crosses Anglesey AONB	
	View points at the Menai Strait crossing	Plas Newydd Vaynol Hall Y Felinheli The Anglesey Coastal Path at Moel Y Don.	
Landscape Character Area Sensitivity	Proportion of corridor located in moderately and highly sensitive LCAs	H = 0% M-H = 9.47% M = 87.85%	
Cultural Heritage	Scheduled Monuments	Coed Nant y Garth (CN375) Fodol Ganol Enclosed Hut Group (CN175)	
	Registered Historic Parks and Gardens	Plas Newydd Vaynol Estate	
	Listed Buildings	1 Grade II Listed Building	
Socio-Economics and Land Use	Tourism and Recreation	Glan Faenol – National Trust Plas Newydd – National Trust	
	Residential population density	4.73	

Table 15-C: Summary of Crossing Option C

15.47 If taken forward as the preferred Crossing Option, consideration will be given to the full range of mitigation measures that might be applied to the development of the new line through this area. Suitable measures will be identified at the appropriate stage of project development.

15.48 At this outline appraisal stage of route corridor options, consideration will be given to mitigation strategies and their likely effectiveness in those locations where the potential environmental and socio-economic effects of a new line would be so significant as to materially affect whether the Crossing Option should be preferred. In the simplest form this would identify how likely it is that the most significant effects could be avoided or minimised through careful route alignment at the next stage of project design. The

appraisal and responses to consultation will also help inform a process of back-checking to consider whether the preliminary preference for an overhead line is appropriate throughout the Crossing Option, or whether potential effects are so significant as to make the use of alternative technologies, such as underground cables, more appropriate.

Crossing Option D

15.49 From Ysgubor Fawr the Crossing D corridor runs south before crossing the Menai Strait and reaching the mainland between the national Outdoor Pursuits Centre and Llanfair Hall. It then heads to the north east, north of Bethel, towards Pentir. Approximately 1km of this corridor runs through Anglesey and approximately 5.5km runs through Gwynedd. The width of the Menai Strait at the crossing point is approximately 0.8km.

15.50 The eastern boundary of Crossing Option D runs south-east from the property of Gwydryn Newydd, crosses the A4080 and runs adjacent to the access track to the property of Plas Portamel, passing to the west of the property and running down to the coastline. The western boundary runs from the mature shelterbelt woodland near the property of Hen Efail to the A4080, and passes to the north of the Llanidan Farm, reaching the coast to the east of Llanidan House.

15.51 This option approaches the Menai Strait between the communities of Brynsiencyn and Llandwen. It crosses approximately 1.2km of the Anglesey AONB, but avoids the Registered Park and Garden of Llanidan on the banks of the Strait. As it crosses the Menai the corridor is approximately 700 metres in width.

15.52 The majority of the coastal fringe is a relatively flat, open landscape, though the area through which the corridor passes is more wooded and includes the important parkland landscapes at Plas Newydd and Plas Llanidan. Although the coastal fringe opens out towards the sea, the whole inter-tidal zone is of considerable nature conservation importance within the Y Fenai a Bae Conwy/Menai Strait SAC.

15.53 Inland the area is characterised by improved agricultural land, with areas of scattered semi natural habitat including woodlands and hedgerows. In addition to the historic and cultural value of Plas Newydd, formerly the seat of the Marquis of Anglesey and now owned by the National Trust, the area around Brynsiencyn has a number of important late prehistoric archaeological sites.

15.54 Although avoiding direct effects on some of the more sensitive locations and iconic viewpoints along the Menai Strait, an overhead electricity transmission line crossing within this corridor would potentially be widely visible from sensitive receptors along the Strait, including Plas Menai national Outdoor Pursuits Centre, Llanidan estate and the coastal town of Y Fellinheli a short distance to the northeast. The length of the crossing would also mean that taller pylons would be needed at this point.

15.55 On the Gwynedd side of the Menai the corridor runs to the north of the Plas Menai Outdoor Pursuits Centre before wrapping north east along the A487 between the communities of Y Felinheli and Bethel, at this point the corridor is approximately 800 metres in width. To the east of Bethel and Saron the corridor broadens out to a width of 1.2 kilometres through the Dinorwig Historic Landscape Area to Pentir substation. The community of Fachel and the

Rectangular Earthwork of Coed Ty Mawr Scheduled Monument are located within this corridor.

15.56 The corridor avoids the prominent ridgeline running south-west from the settlement of Bethel in Gwynedd.

15.57 The landscape is typified by rolling pasture, generally with a northerly aspect although the landform reaches a low plateau above the coastal plains after crossing the ridgeline through Bethel. The topography within the corridor is characterised by distinct northeast to southwest trending ridges, and a route through this area has the potential to align with the grain of the landform, taking advantage of the potential screening and backdrops provided by the parallel ridgelines.

15.58 Table 15-D provides a summary of the key constraints within Crossing Point D.

Crossing Option D	Constraints		
Distance	Approximate length of shore to shore crossing:	0.8km	
	Length of corridor within Anglesey:	1km	
	Length of corridor within Gwynedd:	5.5km	
		Approximate distance from Wylfa to this crossing option using:	Approximate distance from Wylfa to Pentir
	Orange corridor	32km	39km
	Blue corridor	37km	44km
	Yellow corridor	39km	46km
	Purple corridor	38km	45km
Ecology	SAC	Y Fenai a Bae Conwy / Menai Strait and Conwy Bay	
	Ancient Woodland	Coed Pen y Graig	
Landscape	AONB	Approximately 1.2km of this corridor crosses Anglesey AONB	
	View points at the Menai Strait crossing	Y Felinheli settlement Brynsiencyn settlement The Anglesey Coastal Path Llanidan House Llanfair Hall	
Landscape Character Area Sensitivity	Proportion of corridor located in moderately and highly sensitive LCAs	H = 0% M-H = 0.26% M = 91.84%	
Cultural Heritage	Scheduled Monuments	Caer Idris Hillfort (AN051) Rectangular Earthwork 110m NW of Coed Ty Mawr (CN156)	
	Listed Buildings	1 Grade II Listed Building	
Socio-Economics and Land Use	Tourism and Recreation	Plas Menai Outdoor Pursuits Centre	
	Residential population density	10.13	

Table 15-D: Summary of Crossing Option D

15.59 If taken forward as the preferred Crossing Option, consideration will be given to the full range of mitigation measures that might be applied to the development of the new line

through this area. Suitable measures will be identified at the appropriate stage of project development.

15.60 At this outline appraisal stage of route corridor options, consideration will be given to mitigation strategies and their likely effectiveness in those locations where the potential environmental and socio-economic effects of a new line would be so significant as to materially affect whether the Crossing Option should be preferred. In the simplest form this would identify how likely it is that the most significant effects could be avoided or minimised through careful route alignment at the next stage of project design. The appraisal and responses to consultation will also help inform a process of back-checking to consider whether the preliminary preference for an overhead line is appropriate throughout the Crossing Option, or whether potential effects are so significant as to make the use of alternative technologies, such as underground cables, more appropriate.

Crossing Option E

15.61 Crossing E begins to the north east of Brynsiencyn before running south to the Menai Strait. It crosses the Strait in an easterly direction meeting the mainland at the sewerage works. It splits with one corridor option running north of Bethel and another running along the south, before emerging east of Bethel and heading north east towards Pentir. This is the longest corridor with approximately 2km of this corridor runs through Anglesey and approximately 6.5km runs through Gwynedd. The width of the Menai Strait at the crossing point is approximately 1km, the longest of the crossing options. As this corridor has the longest crossing distance, it would require the use of the tallest pylons of any of the five crossing options.

15.62 This crossing runs south to the east of Brynsiencyn and the west of Llanidan Registered Park and Garden. The corridor is approximately 500 metres wide as it crosses 1.4km of the Anglesey AONB. To the south of the corridor is the site of Stone Finds at Trefarthen which are currently being excavated. As the corridor crosses the Menai Strait it also crosses the Y Fenai a Bae Conwy/Menai Strait SAC.

15.63 As the corridor crosses the Menai Strait it broadens out to a width of approximately 1 kilometre before coming ashore at the disused Works in an easterly direction. It crosses two closed landfill sites before splitting as it wraps north east towards Pentir substation. The corridor splits to avoid the Caerlan Tibot Defended Enclosure SM and the communities of Bethel and Saron.

15.64 To the north of Bethel the route runs north east along the A487 between the communities of Y Felinheli and Bethel, at this point the corridor is approximately 800 metres in width.

15.65 To the south of Bethel the corridor is narrower (approximately 400 metres in width) extending east and the north east towards Pentir. The SMs of Cefn Mawr Hut Group and the Cae Metta Hut group lie within this corridor.

15.66 To the east of Bethel and Saron the corridor rejoins and broadens out to a width of 1.2 kilometres through the Dinorwig Historic Landscape Area to Pentir substation. The community of Fachel and the Rectangular Earthwork of Coed Ty Mawr SM are located within this corridor.

15.67 This section of the corridor passes through the Menai Coast, Caernarfon – Coast and Plateau and Penisarwaun Plateau LCAs. The narrow Menai Coast LCA runs from Dinas Dinlle in the west to Bangor, and includes a range of landscape types that include woodland, nature conservation, historic estates and farmland. The corridor crosses the coastal strip between Caernarfon and Felin and Felinheli through the open, sloping farmland around the sewage works to the west of the Plas Menai National Outdoor Pursuits Centre. The field boundaries are defined by hedgerows, with a belt of established scrub woodland separating the coastal farmland from the A487 road corridor.

15.68 The character of the area is heavily influenced by industry and recreational facilities, with the busy transport corridor to the south which defines the boundary of the Caernarfon – Coast and Plateau LCA. This LCA covers the broad upland fringe between the Menai Coast LCA and the hills of Moel Tryfan and Mynydd y Cillgwyn, where glacial action has formed shallow west-flowing valleys between long, distinctive ridges. The landscape is typified by rolling pasture, generally with a northerly aspect although the landform reaches a low plateau above the coastal plains after crossing the ridgeline through Bethel. The topography within the corridor where it crosses this LCA is characterised by distinct northeast to southwest trending ridges. A route through this area has the potential to align with the grain of the landform, taking advantage of the potential screening and backdrops provided by the parallel ridgelines. Field boundaries are defined by hedges, stone walls and occasional slate fences, with several small stands of established woodland across the area. A larger area of mature woodland runs from the Greenwood Forest Park to the wooded valley of the Coed Nant-y-garth, although the creation of a large landfill area within the valley in recent years has removed a large section of this woodland.

15.69 Settlement within the northern half of the area generally consists of scattered farms and dwellings, with the village of Bethel situated on a prominent ridge within the corridor.

15.70 The Snowdonia Massif and surrounding foothills create a prominent feature within views from the area, with additional views to the west across the Menai Strait to Anglesey. The A487, A4087 and several busy minor roads provide access throughout the area. To the east of Bethel, part of the corridor crosses the Penisarwaun Plateau LCA, a gently undulating agricultural area at the edge of the Snowdonia foothills. The area is characterised by small and medium sized fields used primarily for pasture, with stone walls and hedgerows defining the field boundaries, with scattered stands of woodland and areas of scrub across the LCA. There are scattered dwellings and farms across the area, with a few minor roads providing access throughout the area. The undulating landform within the corridor was formed by glacial action, with minor watercourses running through the shallow valleys.

15.71 Table 15-E provides a summary of the key constraints within Crossing Point E.

Crossing Option E	Constraints		
Distance	Approximate length of shore to shore crossing:	1km	
	Length of corridor within Anglesey:	2km	
	Length of corridor within Gwynedd:	6.5km	
		Approximate distance from Wylfa to this crossing option using:	Approximate distance from Wylfa to Pentir:
	Orange corridor	33km	43km
	Blue corridor	38km	48km
	Yellow corridor	40km	50km
	Purple corridor	39km	49km
Ecology	SAC	Y Fenai a Bae Conwy / Menai Strait and Conwy Bay	
	Ancient Woodland	Coed Pen y Graig Coed Glascoed	
Landscape	AONB	Approximately 1.4km of this corridor crosses Anglesey AONB	
	View points at the Menai Strait crossing	Y Felinheli settlement Brynsiencyn settlement The Anglesey Coastal Path Llanidan House Llanfair Hall	
Landscape Character Area Sensitivity	Proportion of corridor located in moderately and highly sensitive LCAs	H = 0% M-H = 0.57% M = 87.78%	
Cultural Heritage	Scheduled Monuments	Hut Circle South of Rhyd y Galen, Pont-Rug (CN229) Cefn Mawr Hut Group (CN200) Cae Metta Hut Group (CN168) Rectangular Earthwork 110m NW of Coed Ty Mawr (CN156) Round Barrow East of Brynsiencyn (AN060)	
	Listed Buildings	6 Grade II Listed Buildings	
Socio-Economics and Land Use	Tourism and Recreation	Plas Menai Outdoor Pursuits Centre	
	Residential population density	9.73	

Table 15-E: Summary of Crossing Option E

15.72 If taken forward as the preferred Crossing Option, consideration will be given to the full range of mitigation measures that might be applied to the development of the new line through this area. Suitable measures will be identified at the appropriate stage of project development.

15.73 At this outline appraisal stage of route corridor options, consideration will be given to mitigation strategies and their likely effectiveness in those locations where the potential environmental and socio-economic effects of a new line would be so significant as to

materially affect whether the Crossing Option should be preferred. In the simplest form this would identify how likely it is that the most significant effects could be avoided or minimised through careful route alignment at the next stage of project design. The appraisal and responses to consultation will also help inform a process of back-checking to consider whether the preliminary preference for an overhead line is appropriate throughout the Crossing Option, or whether potential effects are so significant as to make the use of alternative technologies, such as underground cables, more appropriate.

Summary of Crossing Options

15.74 A brief summary of the five crossing routes is provided in Table 15-F.

Crossing Option A	Crossing Option B	Crossing Option C	Crossing Option D	Crossing Option E
Crosses between the Menai Bridge and Britannia Bridge.	Follows the route of the existing 400kV overhead electricity transmission line.	Crosses the Strait north of Y Felinheli in the west to east direction.	Crosses the Strait between the Plas Menai National Outdoor Pursuits Centre and Y Felinheli.	Crosses the Strait south of Brynsiencyn and splits around Bethel.
Length of corridor 5 kilometres	Length of corridor 5.3 kilometres	Length of corridor 5.5 kilometres	Length of corridor 7.78km	Length of corridor 9.5km
Crossing distance is 0.85km	Crossing distance is 0.2km	Crossing distance is 0.3km	Crossing distance is 0.8km	Crossing distance is 1.0km
The following designated sites are within the corridor:	The following designated sites are within the corridor:	The following designated sites are within the corridor:	The following designated sites are within the corridor:	The following designated sites are within the corridor:
1 AONB (0.85km)	1 AONB (0.9km)	1 AONB (1.5km)	1 AONB (1.2km)	1 AONB (1.4km)
1 SAC	1 SAC	1 SAC	1 SAC	1 SAC
2 SSSI	1 SSSI	2 Scheduled Monuments	2 Scheduled Monuments	5 Scheduled Monuments
5 Scheduled Monuments	1 Scheduled Monuments			
The corridor also includes two areas of ancient woodland and a section of Caeau Glan y Mor National Trust site.	The corridor also includes an area of ancient woodland and Plas Newydd Registered Park and Garden and National Trust property.	The corridor is routed through Plas Newydd and Vaynol Estate Registered Park and Gardens. Glan Faenol and Plas Newydd National Trust properties are also within the corridor.	This corridor avoids the Registered Historic Parks and Gardens, and National Trust properties.	This corridor avoids the Registered Historic Parks and Gardens, and National Trust properties.
Residential population density: 5.70	Residential population density: 11.19	Residential population density: 4.73	Residential population density: 10.13	Residential population density: 9.73

Table 15-F: Summary of Crossing Options

16 Next Steps

Consultation

16.1 Following identification of four route corridors across Anglesey and five crossing points across the Menai Strait to Pentir, a period of stakeholder engagement and public consultation will be undertaken.

16.2 Public exhibitions will be held at a variety of locations across the Study Area over a six week period. During this time, National Grid will seek comments from members of the public and other stakeholder organisations on the proposed route corridor options. In particular, comments will be sought concerning preferences for a particular corridor and the reasons behind such preferences. Feedback will also be sought concerning sensitive areas within the corridors and potentially across the wider study area. This will allow a more complete understanding of the sites and features that might influence the selection of a preferred corridor and the local value that is given to those sites and features.

16.3 Alongside this consultation, National Grid will meet with a number of core statutory and non-statutory organisations to discuss the corridor options in detail. During these meetings, National Grid will seek to agree a scope and detailed methodologies for the further appraisal of the corridor options.

Options Appraisal

16.4 The potential effects of each of the route corridor option will be appraised against a number of environmental and socio-economic topics as set out in 'Our Approach to Options Appraisal' found in Appendix F. The results of this appraisal will help to inform the selection of the preferred route corridor.

16.5 Each Option will be considered on its own merit by individual discipline specialists and a summary of the value and importance of each site and feature, the principal risks and constraints on that site and feature from the proposed development, or any opportunities to enhance any features will be identified. This process will be further informed by the results of consultation feedback.

16.6 The appraisal may identify potential effects to sites and features that are likely to be material to the identification of the preferred route corridor. In these instances, consideration will be given to potential forms of mitigation and the degree to which these may reduce the overall effects. Examples might include the opportunity to avoid or reduce effects through careful route alignment within the preferred route corridor or the use of alternative pylon types. Other examples may include the identification of areas where the use of underground cable or the removal of existing lines might mitigate particularly significant landscape and visual effects that would otherwise be associated with an overhead line in such particularly sensitive locations.

16.7 Potential mitigation measures will be set out before the final implications and conclusions are documented.

16.8 Once draft appraisal tables have been prepared and mitigation measures identified, further consultation with the core statutory and non-statutory consultees will be undertaken to ensure that the appraisal is robust and that all key issues have been assessed. Mitigation measures will be discussed so as to ensure that appropriate mitigation measures have been identified and taken into account in the final appraisal tables.

Options Appraisal and Selection of Preferred Connection Option

16.9 The results of the environmental and socio-economic options appraisal will be considered alongside consultation feedback from the public, statutory and non-statutory consultees and community groups, together with technical and cost appraisals. This information will be considered in the context of National Grids statutory duties and national planning policy to identify a preferred route corridor and potential mitigation measures.

16.10 National Grid anticipates that the preferred connection option will be announced in 2013.

Consultation with Land Owners

16.11 Once a preferred route corridor has been established it is then 'referenced'. This means land ownership and occupancy details are gathered for the route corridor. Landowners and occupiers may have special knowledge of their land or future plans, which are relevant to the route corridor process. National Grid seeks such information as early as possible for consideration. National Grid always seeks to acquire rights to install its equipment on land through negotiation and by voluntary agreements.

Further Reports and Studies

16.12 Following the identification of preferred route corridor further studies will be undertaken. These are:

Route Alignment Study

16.13 Following the selection of a preferred route corridor, detailed consideration will be given to possible alignments within the identified corridors. The potential need for mitigation on certain sections of the transmission route will also be considered, in accordance with National Grid's Undergrounding Approach. A preferred route alignment will be identified following further appraisal of the alignment options and further public consultation.

Environmental Impact Assessment

16.14 A statutory EIA will be required to support an application for a Development Consent Order. The EIA will identify the impacts of the final route alignment upon all aspects of the environment. The scope of the EIA will be agreed with the Planning Inspectorate following a scoping request and will include consultation with Anglesey Council and Gwynedd Council, as local planning authorities.

Development Consent Application

16.15 It is envisaged that a Development Consent Application will be submitted in 2015 along with Planning Applications for any associated development that may be required. Associated with this will be an EIA and a Screening HRA.

Figure Number	Topic
Figure 1-0	Project Overview
Figure 1-1	Project Context
Figure 1-2	National Grid Transmission Towers
Figure 1-3	Principal Features and Designations
Figure 1-4	Route Corridors and Features That have Informed Corridor Extent
Figure 1-5	Ecological Designations – Overview
Figure 1-6	Cultural Heritage Features – Overview
Figure 1-7	Landscape Designations - Overview
Figure 1-8	Residential Density - Overview
Figure 1-9	Land Use – Overview
Figure 1-10	Tourism and Recreation – Overview
Figure 1-11	Safeguarding (Jacobs) - Overview

Appendix A:
Key Overview Figures

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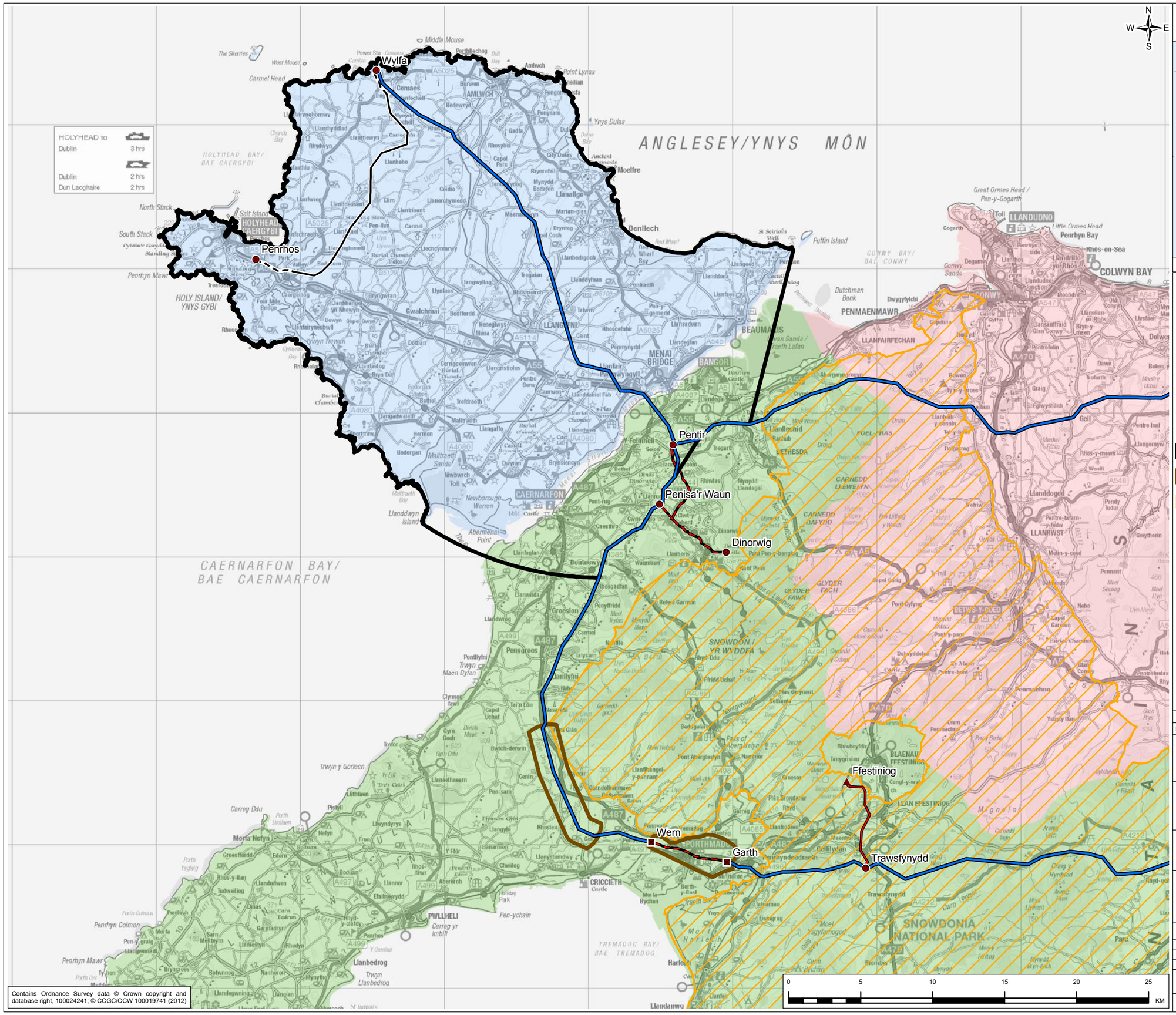
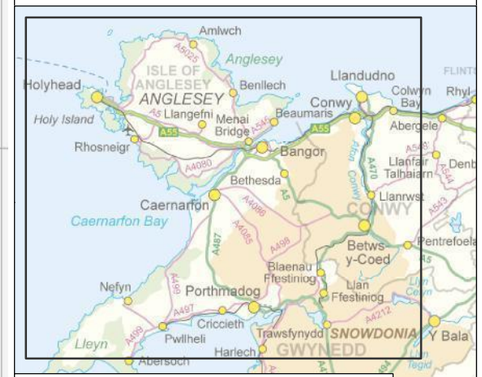


OVERVIEW



Legend

- Existing National Grid Substation
- Existing National Grid Sealing End Compound
- National Grid Hydroelectric Power Station
- National Grid 400kV Overhead Electricity Transmission Line
- National Grid 275kV Overhead Electricity Transmission Line
- National Grid 132kV Overhead Electricity Transmission Line
- National Grid 400kV Underground Electricity Transmission Cable
- National Grid 132kV Underground Electricity Transmission Cable
- Study Area for Wylfa to Pentir Overhead Electricity Transmission Line
- Other Study Areas forming part of the North Wales Connection Project
- Snowdonia National Park
- Cyngor Bwrdeistref Sirol - Conwy County Borough Council
- Cyngor Gwynedd - Gwynedd Council
- Cyngor Sir Ynys Mon - Isle of Angelsey County Council

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Project: NORTH WALES CONNECTION PROJECT
WYLFA TO PENTIR OVERHEAD ELECTRICITY TRANSMISSION LINE

Drawing Title: PROJECT OVERVIEW

Drawing Status: FINAL (Publication Version September 2012)

Scale @ A3	1:250,000	Scale @ A1 1:125,000
Jacobs No.	B1745000 WP-NG-TN-01	
Client No.		

Drawing No.: FIGURE 1-0

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Area identified in National Policy for the development of new nuclear power station. New generation from Horizon Nuclear Power to connect to the National Grid Transmission network at Wylfa

New Electricity Generation from Celtic Array offshore wind farm due to connect to the National Grid Transmission network on Anglesey

Wylfa

AMLWCH

National Grid 400kV Wylfa Substation (exporting power from Wylfa 'A' Power Station and supplying power to SP Manweb for local consumers)

National Grid Wylfa - Holyhead132kV Overhead Electricity Transmission Line

National Grid Wylfa - Pentir 400kV Overhead Electricity Transmission Line (carrying two 400kV circuits on a line of pylons)

BENLLECH

HOLYHEAD

Penrhos

VALLEY

ISLE OF ANGLESEY / SIR YNYS MÔN

National Grid Pentir - Deeside 400kV Overhead Electricity Transmission Line

GWALCHMAI

LLANGEFNI

BEAUMARIS

RHOSNEIGR

MENAI BRIDGE

BANGOR

LLANFAIRPWLL

Pentir

New Electricity Generation from Greenwire (wind energy from Ireland) due to connect to National Grid Transmission network at Pentir

National Grid 400kV Pentir Substation (a switching point to control electricity power flows in North Wales, and supplying power to SP Manweb for local consumers)

Penisa'r Waun

CAERNARFON

Dinorwig

National Grid Pentir - Trawsfynydd 400kV Overhead Electricity Transmission Line

0 1 2 3 4 5 KM

OVERVIEW

Legend

- Existing National Grid Substation
- National Grid 400kV Overhead Electricity Transmission Line
- National Grid 132kV Overhead Electricity Transmission Line
- National Grid 400kV Underground Electricity Transmission Cable
- National Grid 132kV Underground Electricity Transmission Cable
- National Policy Statement Boundary for Nuclear Development Site
- Study Area

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	SEP 12	Initial Issue	AD	VC	VC	CR

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WYLFA TO PENTIR OVERHEAD ELECTRICITY TRANSMISSION LINE

Drawing Title: PROJECT CONTEXT

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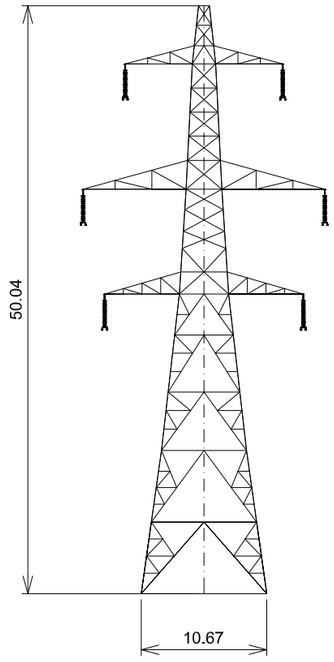
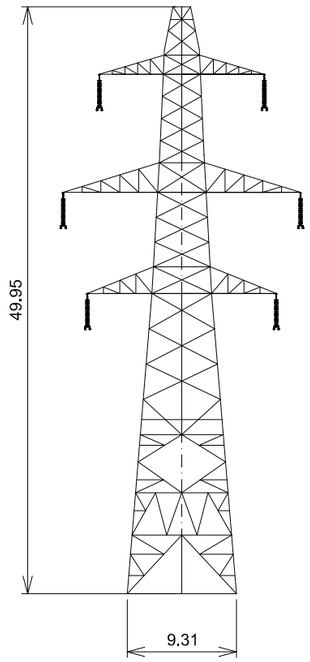


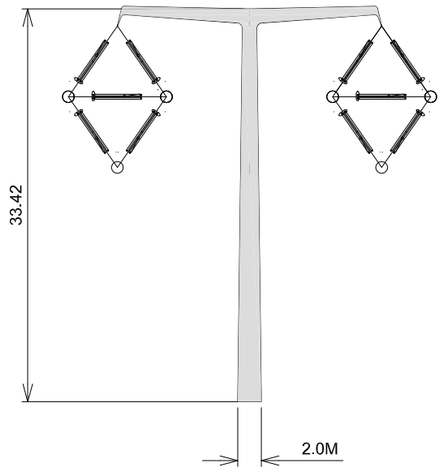
TYPICAL EXISTING
400kV TRANSMISSION
TOWER BETWEEN
WYLFA AND PENTIR

4ZA L6STD



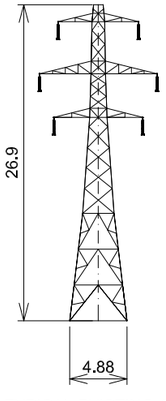
TYPICAL NEW TRANSMISSION
TOWER

L13 STD



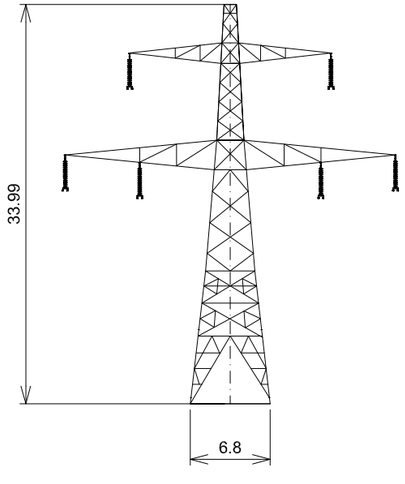
TYPICAL NEW T - PYLON
TOWER

STD



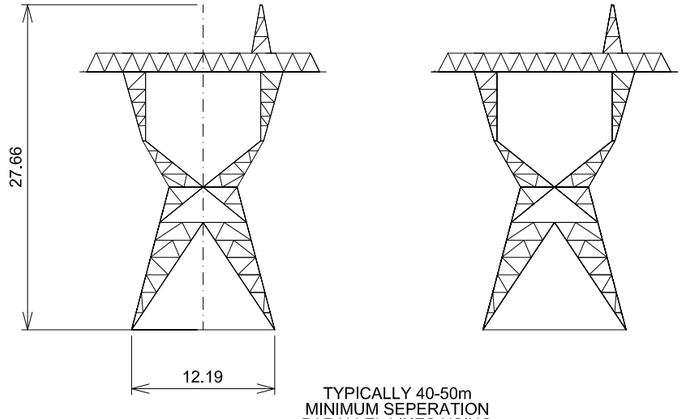
TYPICAL EXISTING 132kV
TRANSMISSION TOWER ON
ANGLESEY

EV TOWER L7 STD



TYPICAL NEW TRANSMISSION
LOW HEIGHT TOWER

L12 LD STD



TYPICALLY 40-50m
MINIMUM SEPERATION
PARALLEL LINES USING
TYPICAL SINGLE CIRCUIT
TRANSMISSION TOWERS

SF60 STD

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NORTH WALES CONNECTION PROJECT
WYLFA TO PENTIR OVERHEAD ELECTRICITY
TRANSMISSION LINE

Drawing title

NATIONAL GRID
TRANSMISSION TOWERS

Drawing status

FINAL (Publication Version Sept 2012)

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Client no.		

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FIGURE 1-2

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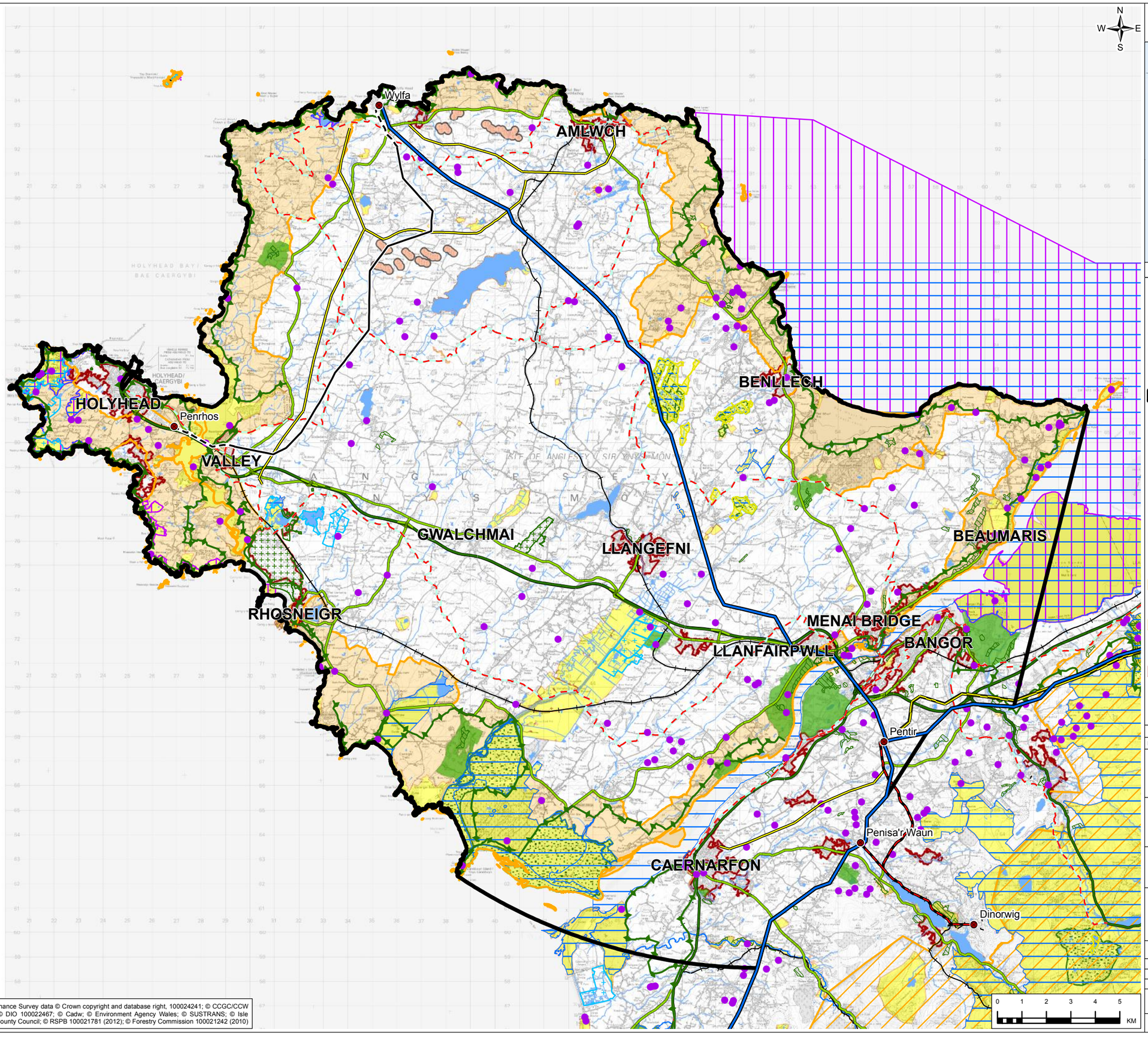

OVERVIEW

Legend

- Existing National Grid Substation
- National Grid 400kV Overhead Electricity Transmission Line
- National Grid 132kV Overhead Electricity Transmission Line
- National Grid 400kV Underground Electricity Transmission Cable
- National Grid 132kV Underground Electricity Transmission Cable
- SP Manweb 132kV Overhead Electricity Distribution Line
- Study Area
- Scheduled Monument
- National Trails
- National Cycle Route
- RSPB Reserve
- Ramsar Site
- Special Area of Conservation
- Special Protection Area
- Ancient Woodland
- National Nature Reserve
- Registered Parks and Garden
- Site of Special Scientific Interest
- Area of Outstanding Natural Beauty
- The Castle and Town Walls of King Edward in Gwynedd World Heritage Sites
- Snowdonia National Park
- Water bodies
- Ministry of Defence Land
- Principle Settlements
- Wind Turbines (154m stand off)
- Primary Road
- A Road
- Railway Network

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	SEP 12	Initial Issue	AD	VC	VC	CR

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WYLFA TO PENTIR OVERHEAD ELECTRICITY TRANSMISSION LINE

Drawing Title: PRINCIPAL FEATURES AND DESIGNATIONS

Drawing Status: FINAL (Publication Version September 2012)

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Client No.		

Drawing No.: FIGURE 1-3

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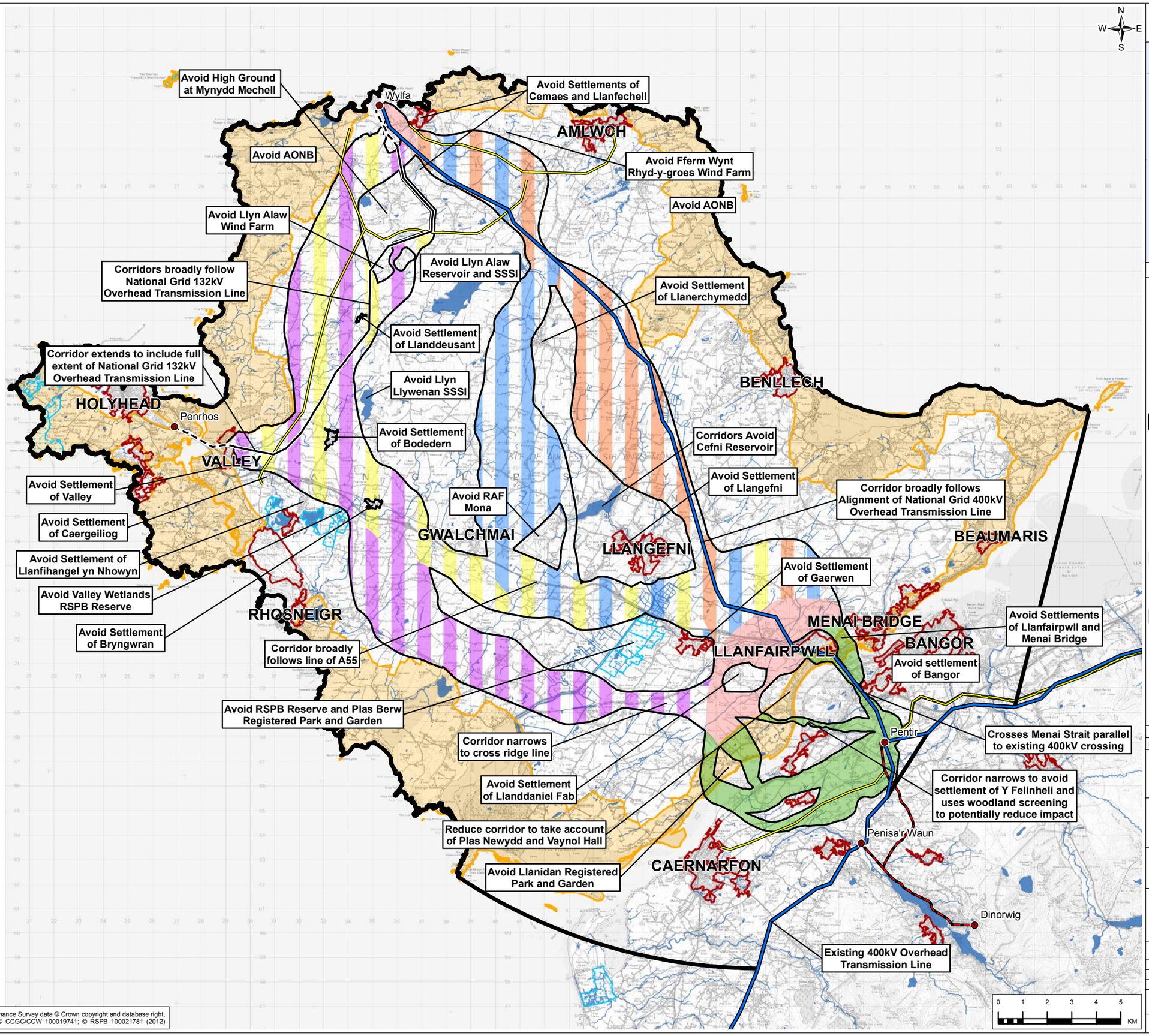

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Legend

- Existing National Grid Substation
- National Grid 400kV Overhead Electricity Transmission Line
- National Grid 132kV Overhead Electricity Transmission Line
- National Grid 400kV Underground Electricity Transmission Cable
- National Grid 132kV Underground Electricity Transmission Cable
- SP Manweb 132kV Overhead Electricity Distribution Line
- Study Area
- Purple Corridor
- Yellow Corridor
- Blue Corridor
- Orange Corridor
- Common Area
- Menai Strait Crossing Area
- Area of Outstanding Natural Beauty
- RSPB Reserve
- Water bodies
- Principle Settlements

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Drawing Title: ROUTE CORRIDORS AND FEATURES THAT HAVE INFORMED CORRIDOR EXTENT

Drawing Status	FINAL (Publication Version September 2012)	
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Jacobs No.	B1745000 WP-NG-RC-01	
Client No.		
Drawing No.	FIGURE 1-4	

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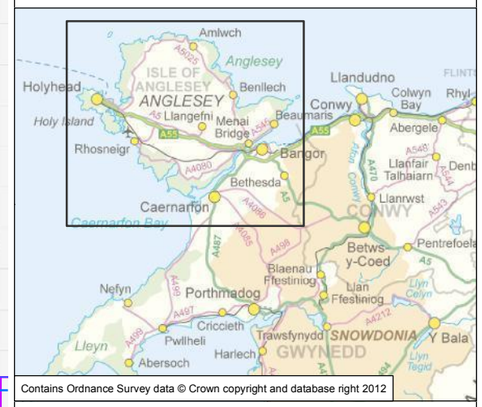
N
W E
S

Wylfa
AMLWCH
HOLYHEAD
Penrhos
VALLEY
GWALCHMAI
LLANGEFNI
BENLLECH
BEAUMARIS
RHOSNEIGR
MENAI BRIDGE
BANGOR
LLANFAIRPWLL
Pentir
Penisa'r Waun
CAERNARFON
Dinorwig

0 1 2 3 4 5 KM

OVERVIEW



Legend

- Existing National Grid Substation
- National Grid 400kV Overhead Electricity Transmission Line
- National Grid 132kV Overhead Electricity Transmission Line
- National Grid 400kV Underground Electricity Transmission Cable
- National Grid 132kV Underground Electricity Transmission Cable
- SP Manweb 132kV Overhead Electricity Distribution Line
- Study Area
- Heritage Coast
- Important Bird Area
- RSPB Reserve
- Ramsar Site
- Special Area of Conservation
- Special Protection Area
- Local Nature Reserve
- National Nature Reserve
- North Wales Wildlife Trust Reserve
- Site of Special Scientific Interest
- Ancient Woodland
- Woodland Trust Site
- Woodland
- Purple Corridor
- Yellow Corridor
- Blue Corridor
- Orange Corridor
- Common Area
- Menai Strait Crossing Area

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WYLFA TO PENTIR OVERHEAD ELECTRICITY TRANSMISSION LINE

Drawing Title: ECOLOGICAL DESIGNATIONS - OVERVIEW

Drawing Status: FINAL (Publication Version September 2012)

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Drawing No.: FIGURE 1-5

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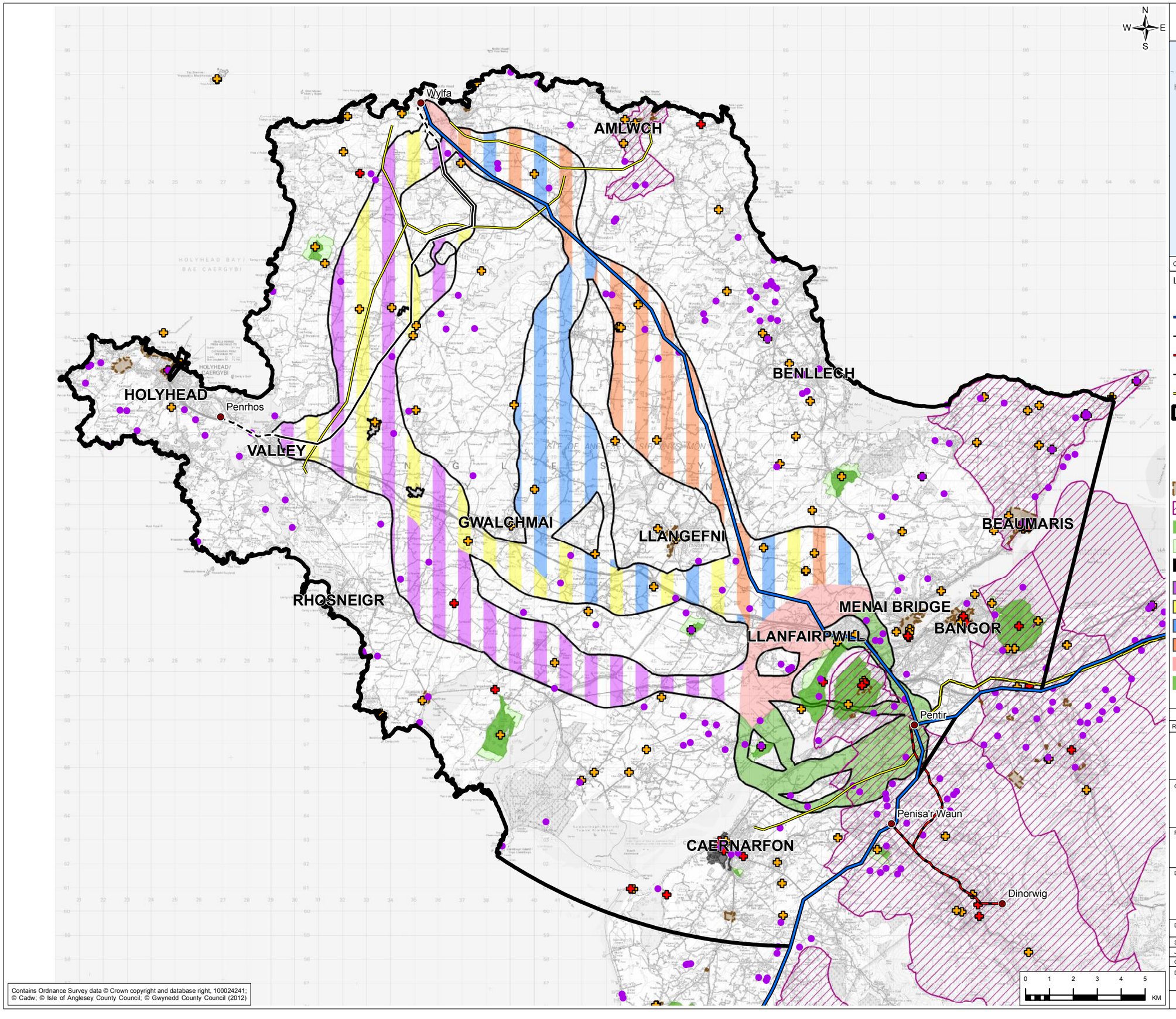

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OVERVIEW

Legend

- Existing National Grid Substation
- National Grid 400kV Overhead Electricity Transmission Line
- National Grid 132kV Overhead Electricity Transmission Line
- National Grid 400kV Underground Electricity Transmission Cable
- National Grid 132kV Underground Electricity Transmission Cable
- SP Manweb 132kV Overhead Electricity Distribution Line
- Study Area
- Grade I Listed Building
- Grade II* Listed Building
- Scheduled Monument
- Conservation Area
- Landscape of Outstanding Historic Interest
- Registered Parks and Garden - Park Boundary
- Registered Parks and Garden - Essential Setting
- The Castle and Town Walls of King Edward in Gwynedd World Heritage Site
- Purple Corridor
- Yellow Corridor
- Blue Corridor
- Orange Corridor
- Common Area
- Menai Strait Crossing Area

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Tel: +44(0)118 946 7000 Fax:+44(0)118 946 7001
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Client: nationalgrid

Project: NORTH WALES CONNECTION PROJECT
WYLFA TO PENTIR OVERHEAD ELECTRICITY TRANSMISSION LINE

Drawing Title: CULTURAL HERITAGE FEATURES - OVERVIEW

Drawing Status: FINAL (Publication Version September 2012)

Scale @ A3	1:150,000	Scale @ A1 1:75,000
Jacobs No.	B1745000	WP-NG-CH-01
Client No.		

Drawing No.: FIGURE 1-6

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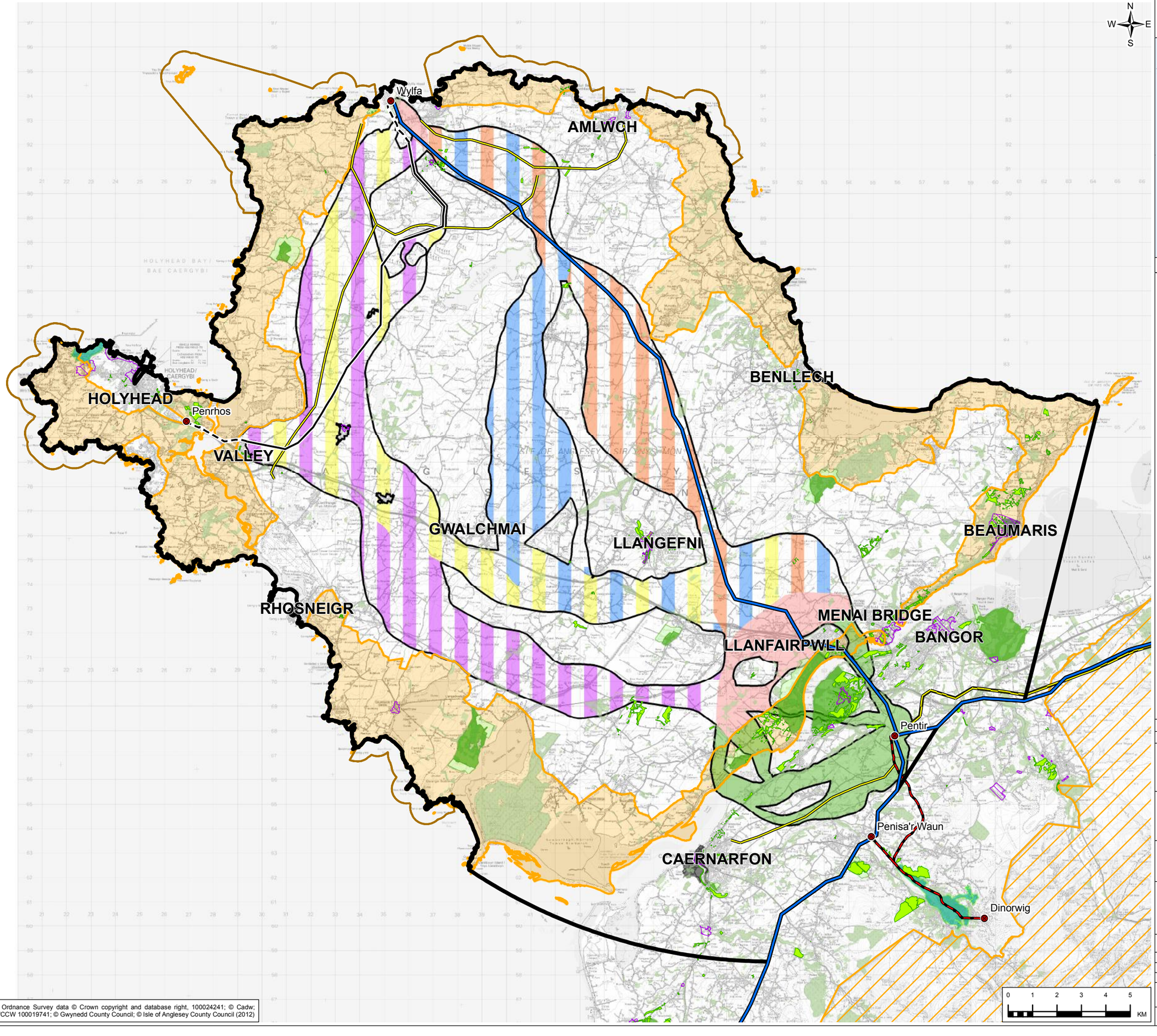

OVERVIEW

Legend

- Existing National Grid Substation
- National Grid 400kV Overhead Electricity Transmission Line
- National Grid 132kV Overhead Electricity Transmission Line
- National Grid 400kV Underground Electricity Transmission Cable
- National Grid 132kV Underground Electricity Transmission Cable
- SP Manweb 132kV Overhead Electricity Distribution Line
- Study Area
- Conservation Area
- Tree Preservation Order
- Registered Parks and Garden - Park Boundary
- Registered Parks and Garden - Essential Setting
- Country Park
- Woodland
- Snowdonia National Park
- Area of Outstanding Natural Beauty
- Heritage Coast
- The Castle and Town Walls of King Edward in Gwynedd World Heritage Site
- Purple Corridor
- Yellow Corridor
- Blue Corridor
- Orange Corridor
- Common Area
- Menai Strait Crossing Area

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	SEP 12	Initial Issue	AD	VC	VC	CR

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Client: nationalgrid

Project: NORTH WALES CONNECTION PROJECT
WYLFA TO PENTIR OVERHEAD ELECTRICITY TRANSMISSION LINE

Drawing Title: LANDSCAPE DESIGNATIONS - OVERVIEW

Drawing Status	FINAL (Publication Version September 2012)	
Scale @ A3	1:150,000	Scale @ A1 1:75,000
Jacobs No.	B1745000 WP-NG-LS-01	
Client No.		
Drawing No.	FIGURE 1-7	

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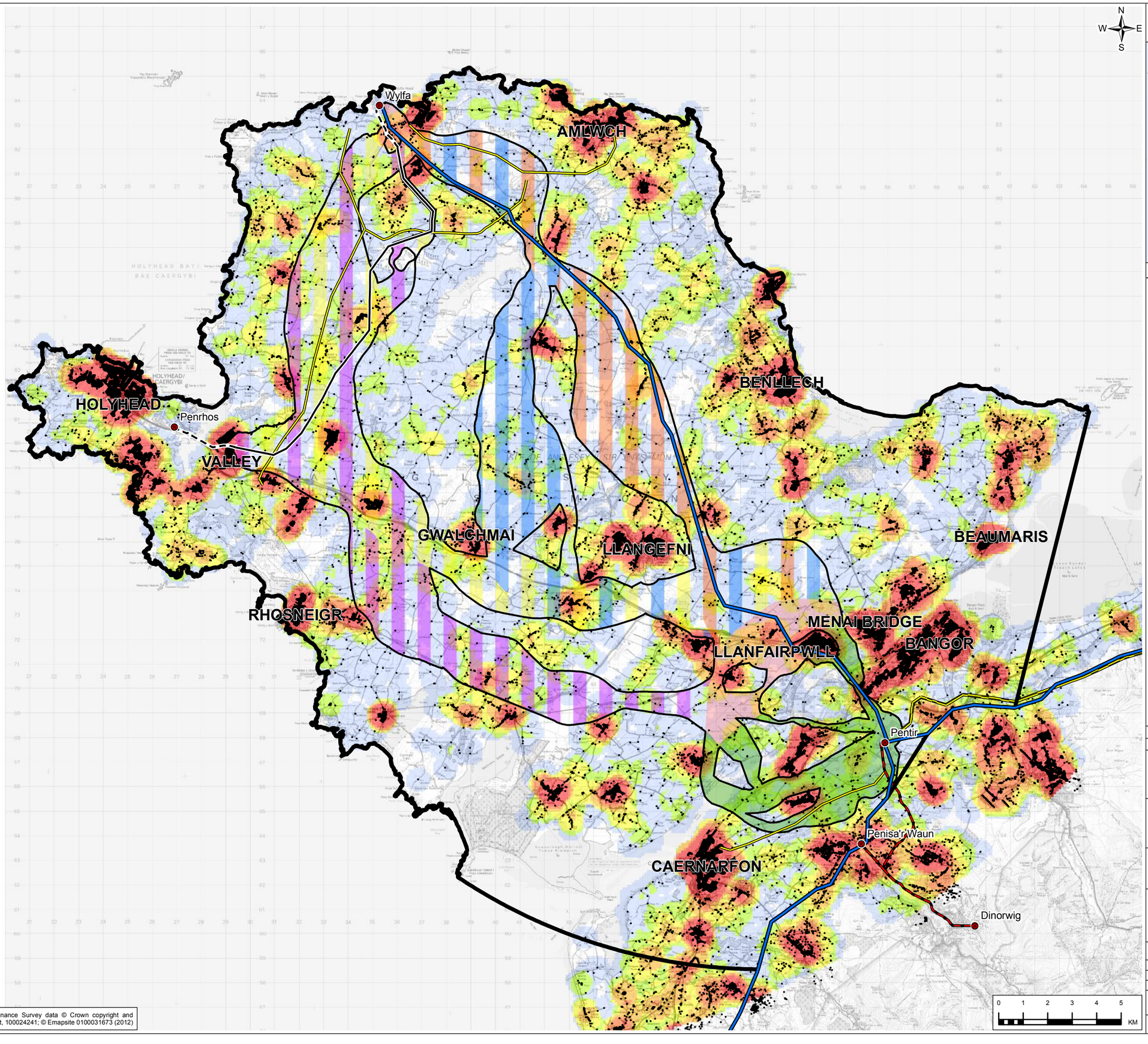

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OVERVIEW

Legend

- Existing National Grid Substation
- National Grid 400kV Overhead Electricity Transmission Line
- National Grid 132kV Overhead Electricity Transmission Line
- National Grid 400kV Underground Electricity Transmission Cable
- National Grid 132kV Underground Electricity Transmission Cable
- SP Manweb 132kV Overhead Electricity Distribution Line
- Study Area
- Purple Corridor
- Yellow Corridor
- Blue Corridor
- Orange Corridor
- Common Area
- Menai Strait Crossing Area
- Residential Property *

Number of Residential Properties within 500m

- 0
- 1-5
- 6-10
- 11-25
- 26-50
- 51-100
- 101-1956

* Residential properties sourced from OS Address Base data, June 2012.

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: nationalgrid

Project: NORTH WALES CONNECTION PROJECT
WYLFA TO PENTIR OVERHEAD ELECTRICITY TRANSMISSION LINE

Drawing Title: RESIDENTIAL DENSITY - OVERVIEW

Drawing Status	FINAL (Publication Version September 2012)		
Scale @ A3	1:150,000	Scale @ A1	1:75,000
Jacobs No.	B1745000	WP-NG-RD-01	
Client No.			
Drawing No.	FIGURE 1-8		

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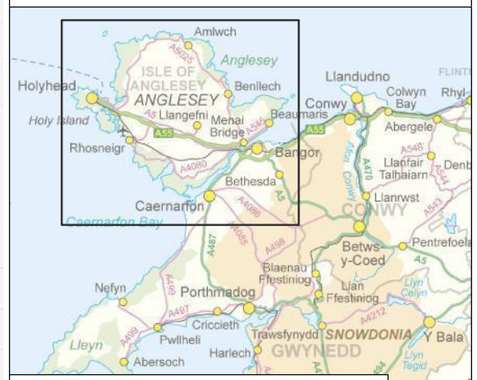
N
W E
S

Wylfa
AMLWCH
HOLYHEAD
Penrhos
VALLEY
BENLLECH
GWALCHMAI
LLANGEFNI
BEAUMARIS
RHOSNEIGR
MENAI BRIDGE
BANGOR
LLANFAIRPWLL
Pentir
Penisa'r Waun
CAERNARFON
Dinorwig

0 1 2 3 4 5 KM

OVERVIEW



Legend

- Existing National Grid Substation
- National Grid 400kV Overhead Electricity Transmission Line
- National Grid 132kV Overhead Electricity Transmission Line
- National Grid 400kV Underground Electricity Transmission Cable
- National Grid 132kV Underground Electricity Transmission Cable
- SP Manweb 132kV Overhead Electricity Distribution Line
- SP Manweb 33kV Overhead Electricty Distribution Line
- Study Area
- Water Utilities Site
- Metal Mine
- Active Waste Site
- Non-Active Waste Site
- Landfill Site
- Historic Landfill Site
- Housing Allocation
- Employment Allocation
- Woodland
- Wind Turbines (154m stand off)
- DCLG Urban Area
- Ministry of Defence Land
- Primary Road
- A Road
- B Road
- Minor Road
- Railway Network
- Tourist Railway
- Railway (Disused)
- Purple Corridor
- Yellow Corridor
- Blue Corridor
- Orange Corridor
- Common Area
- Menai Strait Crossing Area

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: nationalgrid

Project: NORTH WALES CONNECTION PROJECT
WYLFA TO PENTIR OVERHEAD ELECTRICITY TRANSMISSION LINE

Drawing Title: LAND USE - OVERVIEW

Drawing Status: FINAL (Publication Version September 2012)

Scale @ A3	1:150,000	Scale @ A1 1:75,000
Jacobs No.	B1745000 WP-NG-SI-01	
Client No.		

Drawing No.: FIGURE 1-9

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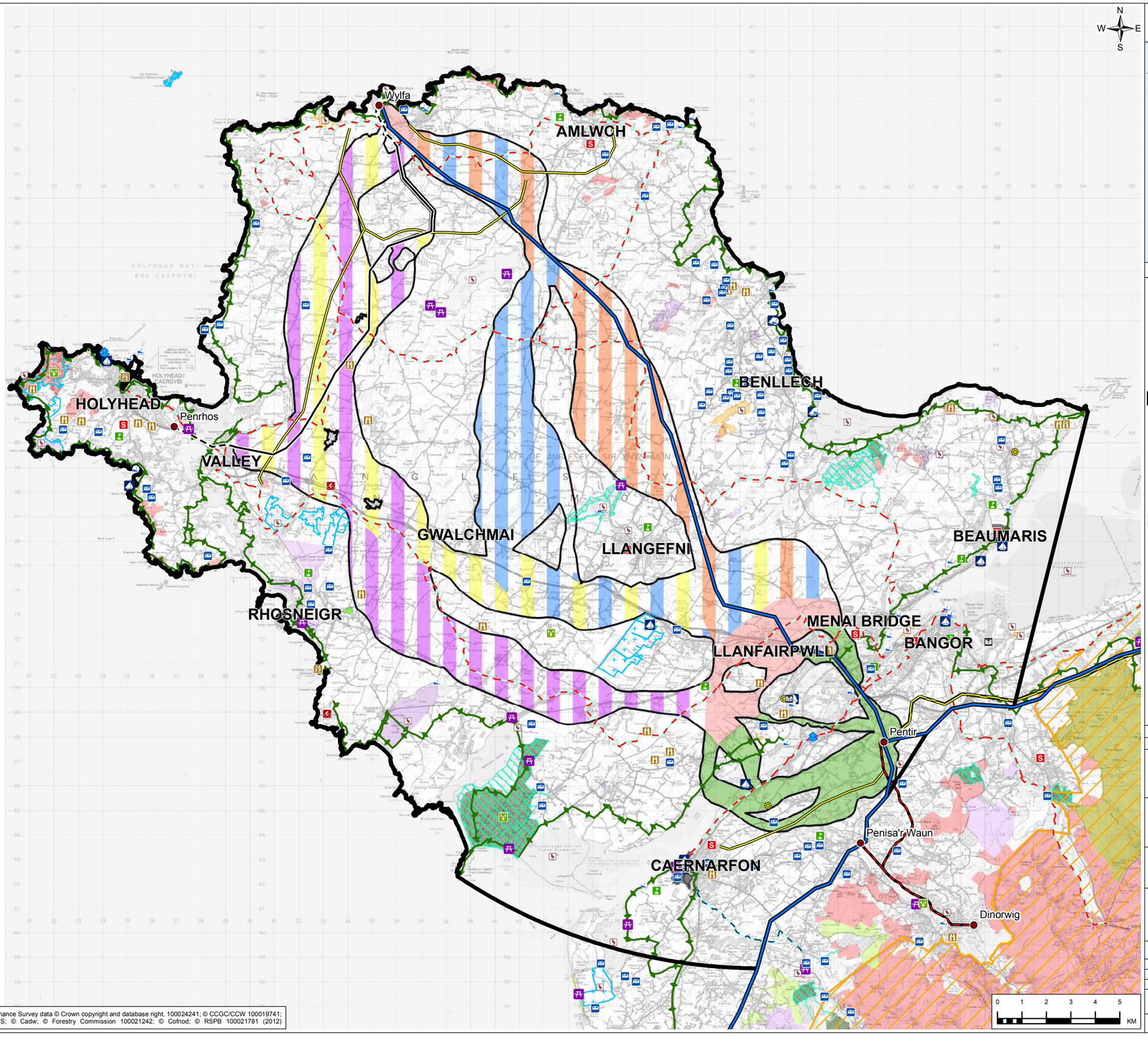

OVERVIEW

Legend

- Existing National Grid Substation
- National Grid 400kV Overhead Electricity Transmission Line
- National Grid 132kV Overhead Electricity Transmission Line
- National Grid 400kV Underground Electricity Transmission Cable
- National Grid 132kV Underground Electricity Transmission Cable
- SP Manweb 132kV Overhead Electricity Distribution Line
- Study Area
- Purple Corridor
- Yellow Corridor
- Blue Corridor
- Orange Corridor
- Common Area
- Menai Strait Crossing Area
- Snowdonia National Park
- RSPB Reserve
- Woodland Trust Site
- The Castle and Town Walls of King Edward in Gwynedd World Heritage Site
- North Wales Wildlife Trust Reserve
- Forestry Commission Wales Land
- Urban Commons
- Commons with deeds for access
- Countryside and Rights of Way Access Act - Public Forests
- Countryside and Rights of Way Access Act - Registered Common Land
- Countryside and Rights of Way Access Act Land
- Caravan/Camping Site
- Castle or Historic House (open to the public)
- Forest and Country Park
- Garden (open to the public)
- Golf Course
- Landmark/Antiquity
- Marina
- Motor Sports
- Nature Reserve
- Picnic Site
- Jetty or Slipway
- Sports or Leisure Centre
- Water Activities
- National Trails
- Regional Cycle Route
- National Cycle Route
- National Cycle Network Link

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	SEP 12	Initial Issue	AD	VC	VC	CR

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Client: nationalgrid

Project: NORTH WALES CONNECTION PROJECT
WYLFA TO PENTIR OVERHEAD ELECTRICITY TRANSMISSION LINE

Drawing Title: TOURISM AND RECREATION - OVERVIEW

Drawing Status: FINAL (Publication Version September 2012)

Scale @ A3	1:150,000	Scale @ A1 1:75,000
Jacobs No.	B1745000 WP-NG-TR-01	
Client No.		

Drawing No.: FIGURE 1-10

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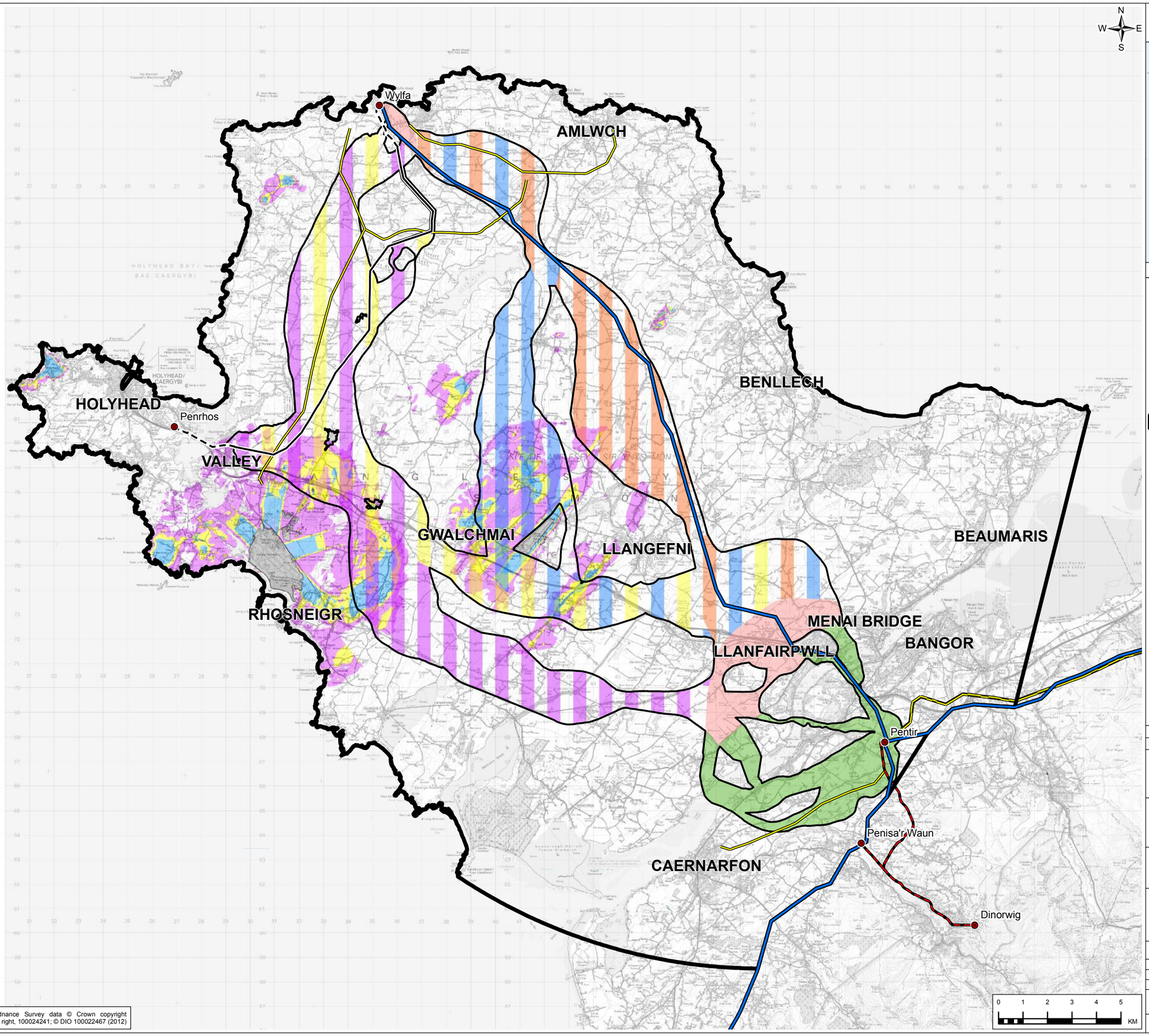

OVERVIEW

Legend

- Existing National Grid Substation
- National Grid 400kV Overhead Electricity Transmission Line
- National Grid 132kV Overhead Electricity Transmission Line
- National Grid 400kV Underground Electricity Transmission Cable
- National Grid 132kV Underground Electricity Transmission Cable
- SP Manweb 132kV Overhead Electricity Distribution Line
- Study Area
- Ministry of Defence Land

Calculated areas where structures taller than:

- 28 metres
- 37 metres
- 50 metres

} would infringe the calculated safeguarding 'surface' of RAF Valley and RAF Mona (taking account of landform)

- Purple Corridor
- Yellow Corridor
- Blue Corridor
- Orange Corridor
- Common Area
- Menai Strait Crossing Area

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	SEP 12	Initial Issue	AD	VC	VC	CR

JACOBS
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www.jacobs.com

Client: nationalgrid

Project: NORTH WALES CONNECTION PROJECT
WYLFA TO PENTIR OVERHEAD ELECTRICITY TRANSMISSION LINE

Drawing Title: AVIATION SAFEGUARDING (JACOBS) - OVERVIEW

Drawing Status: FINAL (Publication Version September 2012)

Scale @ A3	1:150,000	Scale @ A1 1:75,000
Jacobs No.	B1745000 WP-NG-SJ-01	
Client No.		

Drawing No.: FIGURE 1-11

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Appendix B:
Overhead Line Technical Considerations

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Associated Figures

Figure Number	Topic
Figure 1-2	National Grid Transmission Towers (found in Appendix A)
Figure B-1	Effect of Crossing Distances on Possible Pylon Heights

The Construction Process

Set out below are the key issues associated with the construction, maintenance and subsequent dismantling of typical transmission lines. It is intended that this should provide a better understanding of the potential effects of construction and engineering works associated with transmission lines.

The description is not specific to the construction of an overhead transmission line in the area between Wylfa and Pentir. Any such proposal would be developed in response to local circumstances, informed by consultation feedback and detailed engineering and environmental appraisals.

Preparatory Works

Before constructing any new line, a precision ground survey is carried out on foot to confirm the ground profile both along the centre of the line and on either side where the ground profile slopes across the line route. This ensures that the locations selected for pylons and their relationship with each other comply with the technical limits laid down for maximum span lengths and with the required ground clearances.

At prospective pylon sites, trial bores are carried out to determine foundation design requirements. Consideration is also given to the wishes of the landowners and their operations. Where the route of any line passes over or close to trees which could infringe safe clearances to live conductors, the trees may need to be removed or reduced in height prior to the construction of the line. This work is normally carried out during the winter period to avoid the March - August bird nesting period.

Vehicular access to every pylon site is required, and routes and detailed arrangements are agreed in advance with each landowner or occupier. In certain circumstances where no existing access is available or where ground conditions prevent normal access, it can be necessary to construct a temporary access route. This is usually achieved by using aluminium panels, laid over the existing ground surface, or by the installation of temporary stoned tracks. These are installed following the stripping and storage of topsoil and the laying of a geo-textile blanket. This aids quick and effective reinstatement of the access routes following completion of construction. All access routes and working areas are clearly demarcated to ensure that the extent of the construction impact is contained to a reasonably practicable minimum.

Photo B-1: Temporary Stone Access Track with Demarcated Pylon Construction Area

Following identification of any existing services it may be necessary to relocate or bury third party services in advance of construction starting.

Installation of Pylon Foundations

The first major works are the construction of the foundations for each pylon. These foundations are normally constructed from mass concrete. However, should detailed geotechnical surveys identify a need the alternative of piled foundations might be used. If mass concrete foundations are appropriate then holes large enough for the pyramid-shaped concrete foundations are mechanically excavated. The dimensions of the excavation differ, depending on the type of pylon to be installed. On excavation of all four leg foundations, steel stubs are suspended from a template to achieve the correct dimensions and rake for each leg of the pylon. All excavations are fenced for protection and the foundations concreted in position, using specially designed shuttering. Concrete is delivered by ready mixed concrete truck either direct to site or by 4 x 4 dumper vehicles, or by other means to minimise land damage. After a period of 48 hours the concrete formwork is removed and the excavations backfilled and consolidated. The template is then removed from the steel stubs, to be used again.

Photo B-2: Steel Foundations for Pylon Legs

If geological conditions are such that mass concrete foundations are not appropriate, then piled foundations are installed. Typical methods are driven steel tube, driven pre-cast concrete and augured piles. For all methods a specialist piling rig is used at each pylon site. Where more than one pile is required for a particular foundation, then the tops of each pile are joined together by encasing them in a concrete pile cap.

The dimensions of each pile cap differ depending on the type of pylon to be installed.

Pylon Erection

The next major step is the delivery of steelwork members of the pylons using a 4 x 4 lorry. The assembly of each pylon at ground level proceeds as far as possible until the utilisation of a crane is necessary to enable the assembly of the main body section to be completed. It is National Grid's normal practice to use cranes to erect steelwork, subject to good access being available. This reduces the timescale for construction, as well as the number of personnel and vehicle movements to/from the pylon sites. Anti-climbing guards are fitted and maintained at an early stage of erection.

Photo B-3: Pylon Construction Site Showing Partial Assembly at Ground Level

Photo B-4: Pylon 'Peak' being Lifted into Place

Conductor Stringing

Having completed the erection of a number of pylons along the line route, the next stage is to equip them with insulators and the equipment necessary for running out and stringing the conductors ('wires'). The erection equipment and conductor drums for a complete section of line, that is, between angle or tension pylons, is transported to site at each angle pylon or conductor pulling position. The 'full tension' stringing method is normally used whereby a winch is placed at one end and a tensioner at the other. A pilot wire for each conductor is

then pulled by a tractor (or by hand in sensitive areas) through the section of line, passing over pulleys at intermediate pylons and attached to a winch at one end. By winching the pilot wire the conductor is then drawn through the section of line under a constant tension, by application of brakes, and is erected without touching the ground, thus avoiding damage to both the conductors and the surface of the ground. The conductor is subsequently tensioned to the correct value and clamped at each tension pylon position. Running blocks are then removed and spacers fitted between the pairs of conductors in each phase. Where the route crosses roads, other electricity lines or telephone wires, protection works are completed before the conductors can be run out. Scaffolding and nets need to be erected over public highways; lower voltage lines have to be made dead or provided with protective scaffolding if not already placed underground in advance of the works.

Photo B-5: A Line of Pylons Waiting to be Strung

Photo B-6: Power Winch used for Pulling Wires along a Section of Overhead Line

Photo B-7: Typical Scaffold and Netting to Safeguard Public Highway during Line Stringing (Fitting of Wires)

After completion of these major operations, sites are cleared and tidied up. Finally, fences are repaired and access routes and disturbed land reinstated in agreement with landowners.

Duration of Construction

The erection of an individual pylon normally takes between 7 and 24 days depending on size and type of pylon. The overall construction programme for any line is dependent upon the length and technical complexity of the line being built.

Pollution Control during Construction

Care is taken to ensure that no soil or water becomes contaminated with fuel or lubricants from plant or machinery or with any other potentially polluting chemicals that are used on site. In order to achieve this, the following measures are taken:

- Fuels required on-site are registered at the site offices and stored according to the manufacturer's specifications in approved, designated areas away from the working areas;
- All plant is inspected for fuel and oil leaks before being permitted to access construction sites and possess drip trays to catch leaks from engine or fuel points. Thereafter, regular vehicle and plant maintenance inspections are carried out to minimise the risk of ground and surface water contamination arising from improperly maintained machinery; and
- With the exception of the puller/tensioner, all vehicles are re-fuelled away from the construction works.

Maintenance

In general, the majority of components of overhead lines require little maintenance. The effects of the environment and dynamic conditions after many years in service do give rise to corrosion, wear, deterioration and fatigue and occasionally to breakdowns. Regular maintenance inspection identifies unacceptable deterioration at an early stage so that action can be taken to maintain a high level of security and safety on all components. Annual or biennial helicopter patrols to inspect the line and identify problems of maintenance are normal, and foot patrols along the route of the line take place four times a year to check pylon structures, insulators, fittings, etc. and to note tree growth in the vicinity. In sensitive areas, foot patrols are made on a more frequent basis.

Life Cycle

The conductors of an overhead line may require replacement after a period of anywhere between 20 – 60 years, depending upon the local climate, altitude and degree of exposure and the electrical loads to which they are subject. The pylons of an overhead line are similarly subject to different rates of corrosion and wear dependent upon the climate, altitude and exposure. The life span of a pylon is longer than the conductors at around 80 years. It can be anticipated, therefore, that two replacements of conductors (reconductoring) would occur during the life of the pylons on a typical overhead line, unless there is no longer an identified need for the line route.

Dismantling Overhead Lines

Conductors, Fittings and Insulators

Prior to the commencement of any dismantling, temporary scaffolding and nets are erected over roads and low voltage lines. The next step is to unclamp the conductors and place in rollers. The tension of the line is then released and the conductors are lowered to the ground, cut into manageable lengths, coiled and removed from site for recycling. Finally, the insulator strings are removed from each pylon and transported from site.

Pylons

If sufficient space is available to allow the exercise to be carried out without any safety implications, the pylons are felled by cutting two pylon legs and pulling the pylon over onto its side with a tractor. If this method poses a safety risk, the pylon would be unbolted and lowered in sections using a derrick or crane. Finally, the pylons are cut up into manageable sized sections and removed from site for recycling by a registered waste carrier.

Foundations

The pylon base can be removed completely if required but the foundations and stub steelwork remaining in the ground after the pylons, conductors, insulators and fittings have been dismantled are normally removed to a level of 1.5 metres below ground level using compressors and cutting equipment. This prevents undue soil disturbance and the pylon site can then be brought back into normal agricultural use at an earlier date. The broken concrete and stub steelwork are finally transported from site.

Safety

Clearances

Overhead transmission lines must conform to the specifications contained in HM Government's Electricity Supply Regulations 1988. The minimum heights at which the conductors are strung between pylons are specified for each type of line; the minimum statutory clearance to ground for conductors operating at 400kV is 7.6 metres. Statutory clearances from overhead lines are illustrated on the figure below.

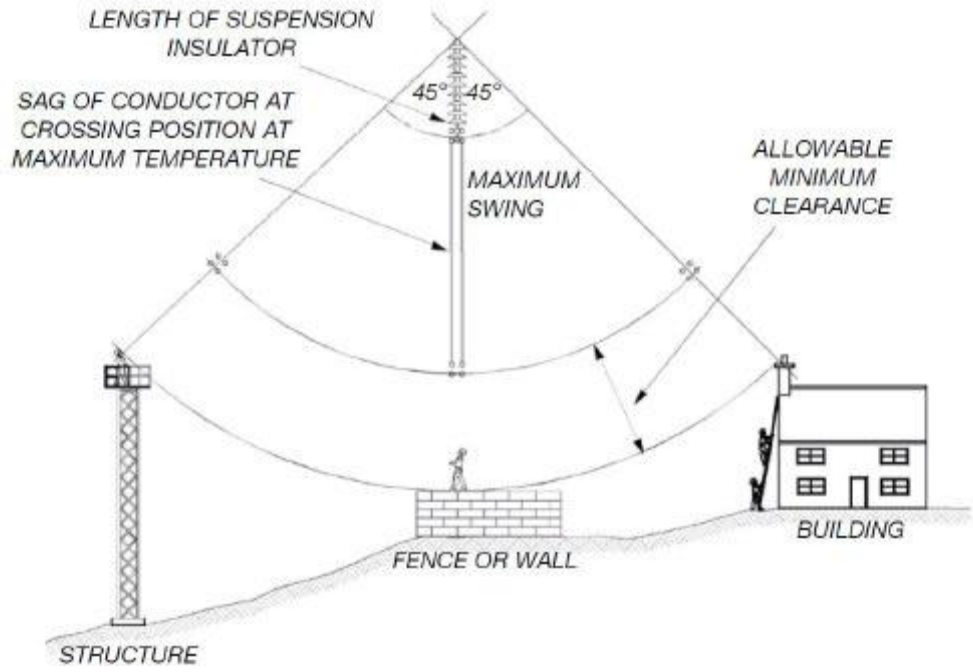

Photo B-8: Clearance to Objects (on which a person can stand)

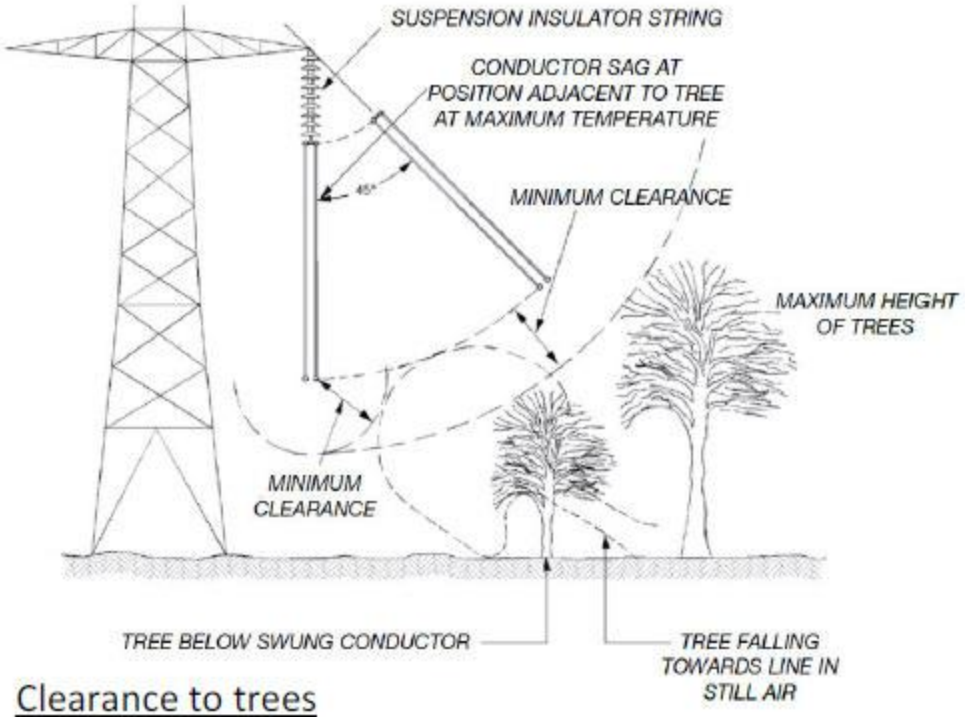

Photo B-9: Clearance to Trees

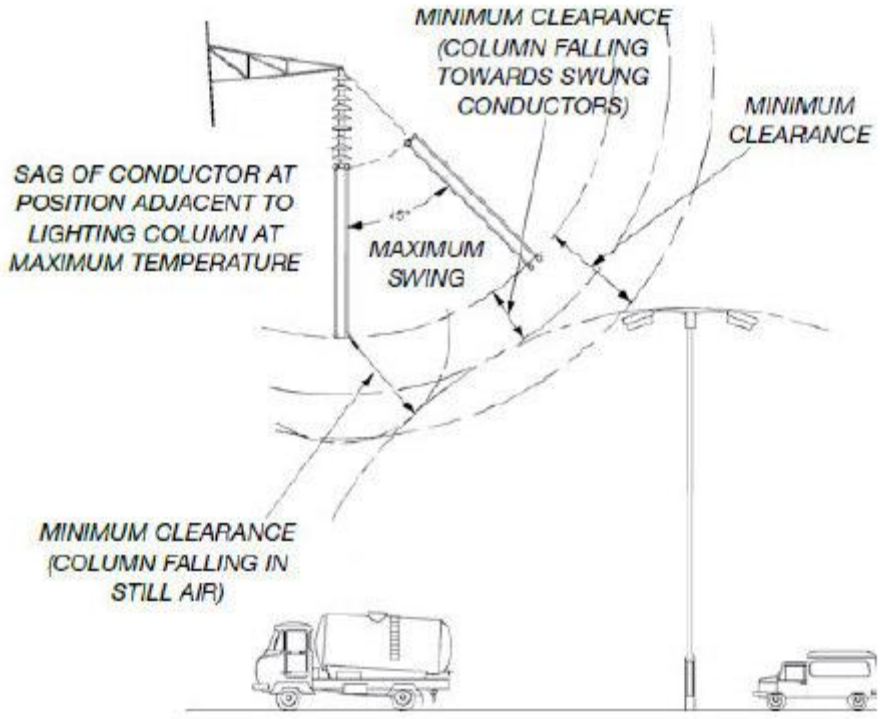

Photo B-10: Clearance to Lighting Columns

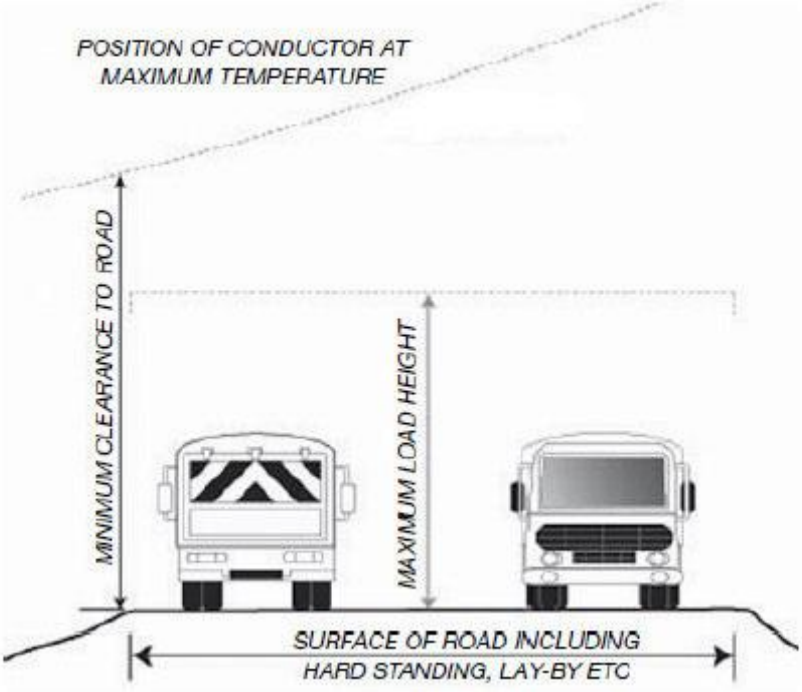

Photo B-11: Clearance to Roads

Description of Clearance	Minimum clearance (metres) at 400kV	Minimum clearance (metres) at 275kV
To ground	7.6	7.0
To normal road surface	8.1	7.4
To road surface of designated '6.1 metres high load' routes	9.2	8.5
To motorway or other road surface where Skycradle can be used	10.5	9.8
To motorway road surface where scaffolding is to be used on: (i) Normal 3 lane motorways (ii) Elevated 2 lane motorways	 16.3 13.3	 15.6 12.6
To any object on which a person may stand including ladders, access platforms etc.	5.3	4.6
To any object to which access is not required AND on which a person cannot stand or lean a ladder	3.1	2.4
To trees under or adjacent to line and: (i) Unable to support ladder/climber (ii) Capable of supporting ladder/climber (iii) Trees falling towards line with line conductors hanging vertically only	 3.1 5.3 3.1	 2.4 4.6 2.4
To trees in orchards and hop gardens	5.3	4.6
To irrigators, slurry guns and high pressure hoses	30.0	30.0
To street lighting standards with: (i) Standard in normal upright position (ii) Standard falling towards line with line conductors hanging vertically only (iii) Standard falling towards line	 4.0 4.0 1.9	 3.3 3.3 1.4

Photo B-12: Description of Clearance

Pylon Design

Pylon Design drawings are found below; Figure 1-2 in Appendix A illustrates them in more detail.

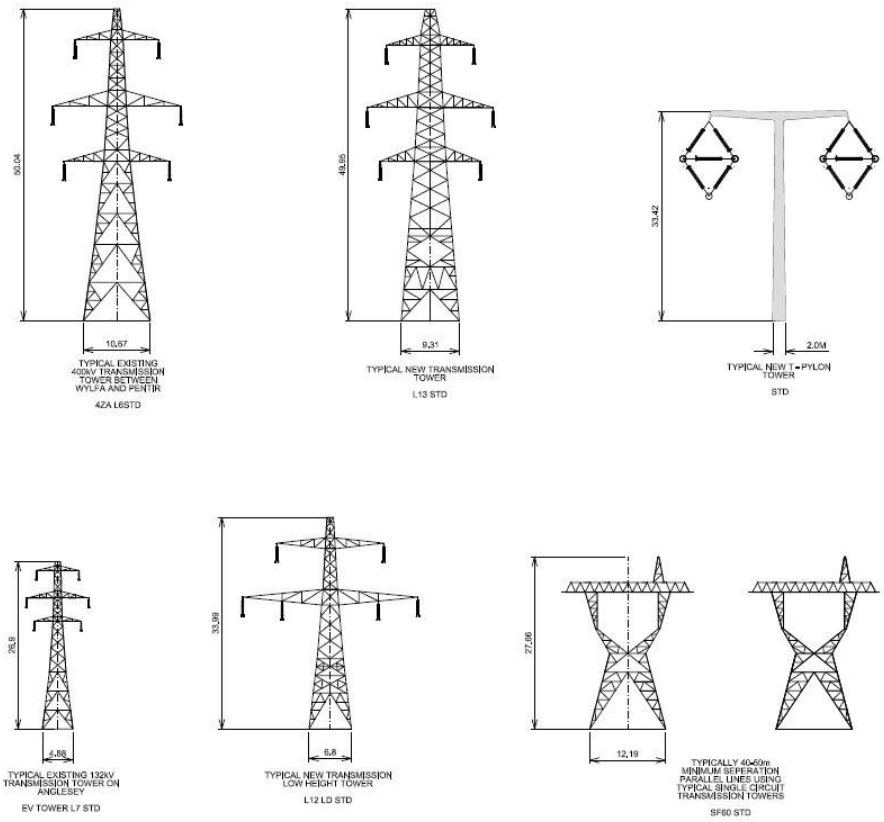

Photo B-13: Pylon Design Drawings

Figure 12-2 illustrates indicative pylon heights for various Menai Strait crossing distances

Overhead lines are also constructed to confirm with the Electricity Supply Industry's own engineering standards which govern the minimum clearances to be provided between the conductors, roads, trees, etc. Sufficient clearance in accordance with this standard is provided to enable the land under and near lines to be used normally.

Each transmission pylon has property signs, individual number plates and a safety warning. In order to discourage access by unauthorised persons, transmission pylons are provided with anti-climbing devices.

National Grid writes annually to all whose land is crossed by overhead lines, reminding them of the need for care in the use of tall machinery and other equipment. Any queries relating to clearances below or adjacent to an overhead line should be referred to National Grid for specific advice.

Design and Testing of Equipment

Overhead line components including conductors, insulators, pylons and all conductor joints and fittings are designed and tested to prove compliance with structural, mechanical and electrical requirements.

Electrical testing is carried out at manufacturers' works and independent laboratories. Such testing examines the performance of insulators under stress, the current carrying capability of conductors and the effect of voltage and current on the mechanical strength of fittings.

The 'T' Pylon

In 2011 the Department for Energy and Climate Change launched a design competition, run by the Royal Institute of British Architects and supported by National Grid, to design a new type of pylon that might be used to connect sources of power generation to the transmission system in place of the 'traditional' lattice steel pylon.

A winner was announced in September 2011, which was selected on aesthetic design grounds, having passed technical and operational thresholds. This design has become known as the 'T-Pylon' on account of its shape. A standard height 'T-Pylon' is illustrated in Figure 1-2 in Appendix A and Figure B-9 below where it is compared to a standard lattice steel pylon. The new 'T-Pylon' would be approximately 33 metres in height (similar to the height of a 'low height' lattice steel design).

The 'suspension', or straight line, 'T-Pylon' comprises a single monopole body, which in most cases is likely to be supported on a monopile foundation. 'T-Pylon' designs capable of carrying the additional forces that occur at changes in line direction are also under development (see http://www.nationalgridt-talk.com for more information).

National Grid plans to be able to use the 'T-Pylon' on major infrastructure projects, and is undertaking detailed engineering design and investigating how the pylon might be constructed and maintained.

Figure B-14 Comparison of 'T' Pylon and Standard Lattice Pylon

Appendix C:
Relevant Local Planning Authority Policies

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Anglesey

(Stopped) Ynys Môn Deposit Unitary Development Plan (unadopted)

Policy Reference	Policy
PO-8 – Environment	Development which causes unacceptable harm to the natural and historic environment will not be permitted. The Anglesey Area of Outstanding Natural Beauty, Special Areas for Conservation, Special Protection Areas, Sites of Special Scientific Interest (SSSI), National Nature Reserves and World Heritage Site(s) will be conserved and enhanced.
EN-1 – Landscape Character	Development will be required to fit into its surroundings without significant harm to the Landscape Character Areas.
EN2 – Areas Of Outstanding Natural Beauty	Within the Area of Outstanding Natural Beauty (which includes defined Heritage Coast), the Council will give priority to the conservation and enhancement of the landscape. The acceptability of development proposals will be evaluated in terms of: i) intrusive impact on the landscape character and visual qualities of the designated areas and; ii) the effectiveness of any mitigation measures that are proposed and; iii) the necessity of the development and the availability of alternative locations outside the designated area. Applications for major development will be subject to the most rigorous examination and include an assessment of: i) the need for the development in terms of national considerations and the public interest, and the impact of permitting it or refusing it upon the local economy; ii) the cost of and scope for developing outside the designated area or meeting the need for it in some other way; iii) any detrimental effect on the environment and landscape, and the extent to which that could be moderated. Any construction or restoration should be carried out to high environmental standards.
EN4 – Biodiversity	Development will only be permitted where it does not cause unacceptable harm to the biodiversity interest of Ynys Môn. Development must be designed to maintain, and where appropriate enhance the biodiversity of the natural environment including particular species.
EN5 – International Sites	Development will not be permitted where it would adversely affect either directly or indirectly the integrity of a site, or proposed sites of European importance for nature conservation, including Special Protection Areas, Special Areas of Conservation, and Ramsar Sites, including potential or candidate or listed sites awaiting designation. The Authority will need to be satisfied that: i) there is no alternative solution; and ii) there are imperative reasons of overriding public interest for the development or land use proposed. Where development is permitted the authority will consider the use of conditions or planning obligations to ensure the protection and enhancement of the site's nature conservation interest. Developments not directly connected with or necessary to the management of a European site, a proposed European site or a Ramsar site which are likely to have significant effects on the site (either individually or in combination with other plans or projects) will be subject to the most rigorous examination.

Policy Reference	Policy
EN6 – National Sites	Development that is likely to result in damage or have a detrimental effect on a Site of Special Scientific Interest will be subject to special scrutiny and will not be permitted unless the reasons for the development clearly outweigh the value of the site itself. Where development is permitted the authority will consider the use of conditions or planning obligations to ensure the protection and enhancement of the site's nature conservation interest.
EN7 – Local Sites	Development will not be permitted where it would cause unacceptable harm to a Local Nature Reserve, Ancient Woodlands and ancient woodland sites that have been replanted/regenerated, a site of Importance for Nature Conservation or a Regionally Important Geological / Geomorphological Site unless it can be demonstrated that there are reasons for the proposal which clearly outweigh the need to safeguard the site. Where proven environmental, economic or social need necessitates the loss or damage of all or part of a site, developers will be expected to create a suitable replacement habitat and to make provision for future management.
EN9 – Development In Or Near Wetlands, Water Courses & Shorelines	Proposals for development in or the vicinity of wetlands, watercourses or the shoreline will only be permitted where the proposed use is satisfactory in terms of water conservation, water quality, nature conservation and public access considerations. .
EN10 – Landscapes, Parks and Gardens	There will be a presumption in favour of the protection, conservation, restoration of parks and gardens of special historic interest and their settings included in the volume of the CADW/ICOMOS Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales. There will be a presumption in favour of protecting two historic landscapes on Ynys Môn which are included in the second part of the Register and Information about these will be taken fully into account in assessing the implications of development which has more than local impact on these landscapes.
EN11 – World Heritage Site(s).	The Castle of Beaumaris is designated as a World Heritage Site and development will only be permitted which protects or enhances the appearance of the site and respects its setting. Developments which enhance the opportunity of acquiring World Heritage Status for other sites including Amlwch and Parys Mountain, the Menai Suspension and Britannia Bridges will be permitted.
EN12 – Archaeological Sites and the Historic Environment	The Council will use its planning powers to ensure that Scheduled Ancient Monuments and their settings are retained intact and preserved for future generations. Unscheduled Archaeological Sites and broader historic landscapes which merit protection for their historic interest and significance will also be protected. Opportunities to record, investigate, and properly manage, understand and enhance the historic environment will be permitted. Where proposals affect other unscheduled archaeological remains which do not merit preservation, provision will be made to encourage, develop or provide further opportunities to record, investigate, properly manage, understand or enhance the historic environment. Schemes for the development of visitor and educational facilities on suitable sites will be permitted provided that the archaeological site is not put at risk. A representative sample of industrial archaeological sites will be retained and protected from development and from derelict land reclamation schemes.

Policy Reference	Policy
EN13 – Conservation of Buildings	The character and appearance of all designated conservation areas will be protected from unsympathetic development. Enhancement of their characters will be achieved by carrying out improvements and permitting suitably designed new development. Buildings of special architectural and historic interest and their settings will be protected from unsympathetic development, alterations or demolition. Appropriate uses which help to preserve their character and fabric will be permitted.
EN14 – Tree Preservation Orders and Hedgerows	Measures for the protection and retention of existing trees, hedgerows and woodlands will be required to be submitted as part of development proposals. Where trees or hedgerows are removed as part of a development, replacements will be required to reinstate those features lost. Tree Preservation Orders will be made on individual, or groups of, tress which are important to the local landscape or are considered at risk. Hedgerows will be protected from inappropriate development.
(New Policy) EN16 – Landscape features of major importance for flora and fauna	Development that would adversely affect the integrity or continuity of the following landscape features (which are of major importance for wild fauna and flora) will be permitted if it can be demonstrated that the need for the development clearly outweighs the need to retain the features. Mitigating measures which would reinstate the integrity or continuity of the features will be required. The following list of features apply: Hedgerows; ditches and bank; stone walls and cloddiau; tree belts; woodlands; veteran trees; parklands; green lanes; river and stream corridors; lakes; ponds; road verges; or habitat mosaics or networks of other locally important habitats."
SG2 – Development and Flooding	Development (including the raising of land) will only be permitted where: (a) it would not result in risk to human life and damage to property within the Areas of Indicative Flood Risk defined on the proposal Maps; and/or (b) it would result in flooding, including tidal inundation, either on or off site, or adversely affect flood management or maintenance schemes. In areas of flood plain currently unobstructed, where water flows in time s of flood, built development will only be permitted wholly exceptionally and will be limited to essential transport and infrastructure.
SG7 – Noise	Development will not be permitted: i) within the Noise Constraint Area defined on the Proposal Maps where the development would be subject to an unacceptable exposure to noise; and/or ii) when the level of noise generated by the development does not satisfy the relevant current standards, and would be detrimental to the amenity of adjacent users.

Ynys Môn Local Plan (adopted December 1996)

Policy Reference	Policy
General Policy 1	The Council will determine planning applications in accordance with policies and proposals in this Plan. In considering planning applications, the Council will take into account : ▪ The needs and interests of the Welsh language. ▪ Access for disabled people. ▪ Energy conservation. ▪ The effect on pedestrian and vehicular travel patterns including the use of public transport, public rights of way and cycling. ▪ The need to ensure that foul sewers and sewage treatment facilities of adequate capacity and design are or will be available to serve the development. ▪ Pollution or nuisance problems. ▪ The need to protect the quality of surface, underground and coastal waters. ▪ The need to ensure that adequate water resources exist or can be made available without detriment to existing users. ▪ The increased danger of flooding. ▪ The effect on any site or area of ecological, landscape, scientific, archaeological or architectural interest or a wildlife species of significance. ▪ The extent to which siting, scale, density, layout and appearance, including external materials, fit in with the character of the area. ▪ Adequate and appropriate landscaping. ▪ The effect on residential amenities. ▪ The need to ensure that vehicular access, the roads leading to the site and parking provisions are safe and adequate. ▪ Safeguarding of mineral reserves. ▪ Protection of the best and most versatile agricultural land.
30 – Landscape	Within the Area of Outstanding Natural Beauty (which includes defined Heritage Coast) shown on the Proposals Map, the Council will give priority to the protection and enhancement of the landscape when considering planning applications.
31 – Landscape	With the exception of the AONB, and that land which falls within the settlement boundaries as defined in the Plan, the island is designated as a Special Landscape Area. Proposals for development in the Special Landscape Area will be expected to have particular regard to the special character of their surroundings. In considering the landscape impact of any proposal, the Council will need to be satisfied that the development can be fitted into its surroundings, without unacceptable harm to the general landscape character, before planning permission is granted.
33 – Nature Conservation	The Council will refuse to permit any development that will unacceptably affect either directly or indirectly, any notified or proposed Site of Special Scientific Interest (SSSI), Local Nature Reserve (LNR), or Marine Nature Reserve (MNR).
34 – Nature Conservation	The Council will ensure that non-statutory sites known to be important for nature conservation including sites of geological importance and fisheries are protected from damaging or inappropriate development.
35 – Nature Conservation	Development will be permitted away from sites recognised as being important for nature conservation, provided that it does not have an adverse impact on a wildlife species with statutory protection, and accords with the other policies of this plan.

Policy Reference	Policy
36 – Coastal Development	Development will not be permitted in the undeveloped areas on and adjoining the coast where the nature or scale of the development would harm the character of the coast. Proposals in such areas will be considered in terms of: Heritage Coast: i) The need for a costal location. ii) Effects on features of: (a) landscape significance; (b) nature conservation or historic value; and (c) tourism, recreation or general amenity value. iii) Potential effects on the marine environment. iv) Risk, including flooding, erosion and land instability.
37 – Public Access	Proposals encouraging pedestrian access to the coast and countryside will be permitted provided it can be demonstrated that they are not damaging to nature conservation. The Council will give priority to the development of a Coastal Footpath Network and links from this to leisure facilities and population centres inland.
39 – Archaeology	The Council will use its planning powers to ensure that Scheduled Ancient Monuments and their settings are retained intact. Unscheduled archaeological sites and their settings of sufficient importance to merit preservation will also be protected. Where proposals affect other unscheduled archaeological remains which do not merit preservation, provision will be made for an appropriate archaeological response. Schemes for the development of visitor and educational facilities on suitable sites will be permitted provided that the archaeological site is not put at risk.
40 – Conservation of Buildings	The character and appearance of all designated conservation areas will be protected from unsympathetic development. Enhancement of their characters will be achieved by carrying out improvements and permitting high quality new development. The Council will define and designate additional Conservation Areas within other areas of special architectural or historic interest where it is considered necessary to preserve and enhance the character and appearance of those areas.
41 – Conservation of Buildings	Buildings of special architectural and historic interest and their settings will be protected from unsympathetic development, alterations or demolition. Appropriate uses which help to preserve their character and fabric will be permitted.

Gwynedd

Gwynedd Structure Plan

Policy Reference	Policy
Strategic Policy 4	In considering development proposals, to have regard to the need to both protect and enhance the marine, coastal, terrestrial and atmospheric environments of the County.
Policy CH18	The County Council will, support the development of the following major recreation routes: ▪ North Wales Coastal Footpath; ▪ Ynys Môn Coastal Footpath; ▪ Dwyfor Coastal Footpath; ▪ The route of the former We Highland Railway from Llanwnda to Beddgelert and Porthmadog; ▪ Trawsfynydd to Bala; and ▪ Other opportunities consistent with the policies of this plan which may present themselves.
Policy DI	It is the policy of the Council to protect and enhance the environment of Gwynedd and in particular of: i) The Snowdonia National Park; ii) Llŷn and Ynys Môn AONBs; and iii) Heritage Coast.
Policy D7	The retention in farming use of agricultural land within classification grades 1, 2 and 3a will be encouraged through the control of development.
Policy D9	Within environmentally sensitive areas, development that does not conform with the policies of this plan and the essential character of the countryside will not be permitted.
Policy D10	To ensure that the County's heritage of wild flora and fauna and geological and physiographic features are safeguarded, particularly NNR's, SSSI's, RSPB Reserves, Wetlands, Ramsar Sites, Special Protection Areas (under EC Bird Directive 74/409), Local Nature Reserves and other areas of high nature conservation interest.
Policy D11	The nature and quality of linear landscape areas such as river valleys and estuaries will be protected.
Policy D15	In considering proposals for development the planning authorities will ensure that: ▪ Scheduled ancient monuments and their settings will be preserved intact; ▪ Areas of archaeological importance and unscheduled archaeological sites (including those important sites which are presently unknown but which may be discovered during the plan period) and their settings which are considered to be of sufficient regional, local or academic interest to merit preservation and planning permission will be refused; ▪ For archaeological sites not meriting preservation, planning consent will be withheld until provision has been made by the developer for an appropriate archaeological response before and during the development, wither through written legal agreement or through the attachment of conditions to any planning consent; ▪ For archaeological sites of unknown importance and areas of high archaeological potential provision will be made for investigation before and during development; and ▪ Schemes for development of visitors and educational facilities at and management of appropriate archaeological sites will be encouraged provided they comply with the above.
Policy D16	There will be a presumption in favour of retaining a representative selection of industrial, archaeological sites and monuments which will be protected from redevelopment and derelict land reclamation schemes.

Gwynedd Unitary Development Plan 2001 – 2016 (adopted)

Policy Reference	Policy
Strategic Policy 1 - Taking a Precautionary Approach	Development proposals that would have an adverse or uncertain impact on the environment, the economy or cultural character (including the Welsh language) of the Plan area will be refused unless it can be conclusively shown by an appropriate impact assessment that this can be negated or mitigated in a manner acceptable to the Planning Authority.
Strategic Policy 2 - The Natural Environment	The area's natural environment and its landscape character, and views in and out of the Snowdonia National Park and the Anglesey and Llŷn Areas of Outstanding Natural Beauty, will be safeguarded, maintained or improved by refusing development proposals that will significantly harm them.
Strategic Policy 3 - Built and Historic Environment	The area's built and historic environment will be protected from development that would significantly harm it and new developments in historic areas will be expected to conform to particularly high design standards which will maintain or improve their special character.
Policy B1 – Demolition of Listed Buildings	Proposals for the total or significant demolition of Listed Buildings will be refused unless there are exceptional circumstances. Such proposals will be assessed against the following criteria: ▪ the condition of the building, repair and maintenance costs; ▪ that every effort has been made to retain the current use or seek a new viable use and that these efforts have failed; ▪ that either every effort has been made over a reasonable period to dispose of the property at a fair price and that this has been unsuccessful, or that such disposal would be inappropriate; ▪ that it is not possible or appropriate to retain the building under charitable or community ownership; and ▪ that there is a detailed plan for redevelopment of the site and that redeveloping the site would offer significant benefits to the local community and override the need to retain the building. In circumstances where consent is granted to demolish the building or structure, conditions will be attached to the consent prohibiting demolition work until the contract to redevelop the site has been let and to ensure that building materials from the original building are used in the Plan to redevelop the site or are available to reuse in another development scheme. The Royal Commission on the Ancient and Historical Monuments of Wales must be notified of all proposals for the total or significant demolition of Listed Buildings and is allowed access to buildings which it wishes to record before demolition takes place.
Policy B3 – Development affecting the setting of Listed Buildings	Proposals on sites affecting the setting of Listed Buildings will only be approved provided that all the following criteria can be met: ▪ that the design of the development enhances the special quality of the main building as well as the positive qualities of the local environment; ▪ that it does not lead to the loss of features such as walls, railings, ancillary buildings, landscaping, hedges, trees, associated objects, surfaces or archaeological remains that contribute to the special haracter of the Listed Building; and ▪ that it does not cause significant harm to important views of and from the building.
Policy B4 – Developments in or affecting the setting of Conservation Areas.	Proposals in or near conservation areas will be refused unless they preserve or enhance the character or appearance of the conservation area and its setting. All proposals should: ▪ retain the historic street pattern and the character of individual streets or public spaces; ▪ ensure that the scale, mass, form, use of materials and building techniques harmonise with the buildings and features that contribute positively to the character of the conservation area; and ▪ ensure that important views across, into or out of the conservation area are retained. Thorough consideration will be given to the information provided by any published Conservation Area Appraisals or Conservation Area Plans and Delivery Strategies.

Policy Reference	Policy
Policy B7 – Sites of Archaeological Interest	Proposals that will damage or destroy archaeological remains of national importance (whether scheduled or not) or their setting will be refused. A development which affects other archaeological remains will be permitted only if the need for the development overrides the significance of the archaeological remains. In areas where there are likely to be archaeological remains, the developer will be required to commission either an Archaeological Assessment and/or field evaluation in order to determine the archaeological impact of the proposed development before the Planning Authority determines the application. The assessment/evaluation results must be submitted with the planning application, in addition to a plan showing how the impact of the proposal on the archaeological remains will be mitigated. If a proposed development would affect nationally important archaeological remains, then the developer should prepare sympathetic plans, which retain the remains in situ. Where preservation in situ is not feasible planning conditions or agreements will be used in appropriate cases to ensure that the work of excavating and recording the remains takes place prior to commencement of the development. Schemes that will facilitate the appropriate management and interpretation of archaeological sites for educational or tourism purposes will be supported.
Policy B8 – The Llŷn and Anglesey Areas of Outstanding Natural Beauty	The aim will be to safeguard, maintain and enhance the character of Areas of Outstanding Natural Beauty. Development proposals that would cause significant harm to the area's landscape and coastline (including views into and out of the area), wildlife, historic remains and buildings, language and culture and its quiet, unpolluted nature will be refused, unless, in exceptional circumstances, all the following criteria will be met: ▪ that a significant national economic or social need has been established for the development and refusing permission would be extremely detrimental to the local economy; ▪ that consideration has been given to the cost and scope for providing the development outside the area or of meeting the need for it in some other way; ▪ that consideration has been given to limiting any detrimental effect on the area's character and measures to attain this have been included as part of the application. It will be necessary to show that detailed consideration has been given to the character of the area in every development proposal and that a suitable design, site and materials are selected in order to minimise the impact of the development. Detailed consideration will be given to information contained in the Llŷn Area of Outstanding Natural Beauty Management Plan.
Policy B9 – Heritage Coast	Within the Heritage Coast, proposals for any building or structure will be refused unless they comply with all the following criteria: ▪ a coastal location is necessary; ▪ there will be no adverse impact on: a. the built environment or the landscape; b. the importance of the coastline in scientific, historical or biodiversity terms; and c. natural or physical coastal processes priority will be given to locations that are visually well related to existing buildings or structures; and • there are no suitable locations outside the Heritage Coast.

Policy Reference	Policy
Policy B10 - Protecting and Enhancing Landscape Conservation Areas.	Proposals for development in Landscape Conservation Areas will be assessed against the following criteria: • the impact of the proposed development on the positive features in the landscape and those elements of it that contribute to the distinctive character of the local landscape; • the proposed location, design and materials of the proposed development and its ability to integrate with the landscape; • the economic and social benefits of the proposed development in relation to criterion 1 and 2 above. All developments will have to be designed and landscaped to a good standard, ensuring that appropriate landscape elements that function as either mitigation measures or are important to ensure integration are included. Consideration will be given to the information provided by the LANDMAP information system about the character and quality of the landscape in each area.
Policy B12 – Protecting Historic Landscapes, Park and Gardens	Proposals that are within or on sites visible from a park and garden identified and described in Part 1 of the Register of Historic Landscapes, Parks and Gardens of Special Interest in Wales will be refused if they cause significant harm to their character, appearance or setting. Consideration will be given to the information about the historic landscapes identified in Part 2 of the same Register when assessing the impact of proposals that are of such a scale and magnitude as to have more than a local impact.
Policy B13 – Protecting the Open Coastline	Outside the Heritage Coast, proposals on open coastal areas included in the Plan area will only be approved if they comply with all the following criteria: • they require a location on or in close proximity to the coast or open estuaries; • there will be no adverse impact on: a. water quality b. public access considerations c. the built environment or the landscape d. nature conservation interest of the area due to their location, noise, scale, form, appearance, materials, noise or emissions or due to an unacceptable increase in traffic; • priority will be given to locations that are visually well related to existing buildings or structures; • there are no suitable locations within developed areas of coastline.

Policy Reference	Policy
Policy B15 – Protection of International Nature Conservation Sites	Proposals not directly linked with or necessary in order to manage a site, and which are likely to cause direct or indirect significant harm (either individually or in combination with other plans or projects) to the integrity of Special Protection Areas (potential or classified), Special Areas of Conservation (candidate or designated), Ramsar sites (proposed or listed) will be refused unless all the following criteria can be met: • there is no alternative solution; • there are imperative reasons of over-riding public interest for the development or land use change which override the ecological importance of the site; • in the case of sites where priority habitats or species are affected, the only considerations which could justify granting planning permission are those associated with public health, public safety or those that bring benefits of primary importance for the environment and that proposals meet all the following requirements: a. the location, design and construction of the development is such that damage to nature conservation features are minimised, and opportunities for nature conservation gain are taken; b. compensating and equivalent nature conservation features are provided; c. the remaining nature conservation features are protected and enhanced and provision is made for their management; d. opportunities are provided for the public to enjoy and interpret the site.
Policy B16 – Protecting Nationally Important Conservation Sites	Proposals likely to cause direct or indirect significant harm to a Site of Special Scientific Interest (SSSI) or National Nature Reserve (NNR) (either individually or in combination with other plans or projects) will be refused unless, either damage to nature conservation features can be avoided and the developer takes steps to protect, enhance and manage nature conservation features, or the reasons for the proposals clearly outweigh the particular nature conservation importance of the site and the national policy of protecting such sites. and all the following criteria can be met : a. the location, design and construction of the development is such that damage to nature conservation features are minimised, and opportunities for nature conservation gain are taken; b. compensating and equivalent nature conservation features are provided; c. the remaining nature conservation features are protected and enhanced and provision is made for their management; d. opportunities are provided for the public to enjoy and interpret the site. When a development is approved planning conditions or agreements will be used in order to conserve and enhance the biodiversity value of any affected site, or any new site that is created, and to put in place appropriate compensatory and management measures.

Policy Reference	Policy
Policy B17 – Protecting Sites of Regional or Local Significance	Proposals likely to cause direct or indirect significant harm to a Local Nature Reserve (LNR), or Non-statutory Nature Reserve (NNR) or Wildlife Site (WS) will be refused unless: • the damage to nature conservation features can be prevented and the developer takes steps to protect, enhance and manage the nature conservation features, or • the proposal is required in order to fulfil social, environmental and/or economic needs that override the site's regional or local importance • and all the following criteria can be met: a. the location, design and construction of the development is such that damage to nature conservation features are minimised, and opportunities for nature conservation gain are taken; b. compensating and equivalent nature conservation features are provided; c. the remaining nature conservation features are protected and enhanced and provision is made for their management; d. where appropriate opportunities are provided for the public to enjoy and interpret the site. When a development is approved planning conditions or agreements will be used in order to conserve and enhance the biodiversity value of any affected site, or any new site that is created, and to put in place appropriate compensatory and management measures.
Policy B19 – Protected Trees, Woodlands and Hedgerows	Proposals that lead to the loss or damage to a tree, woodland or hedgerow that is protected or lies within a designated ancient and semi-natural woodland will be permitted only where any harm is clearly outweighed by the economic and/or social benefits of the development. Proposals will be assessed against the following criteria. In the case of protected trees and woodlands: • whether the social and economic benefits of the development outweighs: a. the archaeological, historical and landscape value of the protected tree/woodland; b. the contribution of each tree/woodland to public amenity; c. the recreational value of the protected tree/woodland, or; d. the ecological, biodiversity and wildlife value of the protected tree/woodland; • whether other trees will be planted instead of those lost to development; In the case of hedgerows: • whether the social and economical benefits of the development outweigh the archaeological, landscape, ecological, biodiversity and wildlife value of the hedgerow; • whether new hedgerows can be planted instead of those lost to development.

Policy Reference	Policy
Policy B20 – Species and their Habitats that are Internationally and Nationally Important.	Proposals likely to result in direct or indirect unacceptable disturbance or harm to protected species and their habitats will be refused unless: In the case of protected trees and woodlands: In the case of a species protected under European legislation: there is no other satisfactory alternative, and the development will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range and, the development will 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. In the case of a species protected under national legislation: the effects will be minimised or mitigated through careful design, work arrangements or other actions or, when this is not practical and the following is likely to prove effective; the developer will take careful and effective steps to relocate the species or habitat. When a development is approved, planning conditions and/or agreements will be used in order to protect and sustain the species' vitality.
Policy B21 – Wildlife Corridors, Habitat Linkages and Stepping Stones	Development which may adversely affect the integrity or continuity of the landscape features which are of major importance for wild flora and fauna will only be permitted if it can be shown that the reasons for the development clearly outweigh the need to retain the features and that mitigating measures can be provided, which are within the control of the developer, which would reinstate the integrity or continuity of the features. Appropriate management of these features will be encouraged generally and particularly by the imposition of conditions on planning permissions, by the use of planning agreements and by entering into management agreements with landowners and developers where appropriate.
Policy B29 - Development on land at risk from Flooding	Proposals for development that is highly vulnerable[1] or proposals for emergency services on a site forming part of an area categorised as zone C2 (areas of the floodplain without significant flood defence infrastructure) will be refused. New development should be directed away from zone C and towards suitable land in zone A, or otherwise zone B. The tests outlined in TAN15 will be applied to development within zone C. Proposals for a less vulnerable development[2] in zone C2 (areas of the floodplain without significant flood defence infrastructure) or any new development proposal in zone C1 (areas of the floodplain which are developed and served by significant infrastructure, including flood defences) will be refused unless it can be clearly demonstrated that: • its location in zone C is necessary to assist, or be part of, a Local Authority and other key partners' regeneration initiative or a local authority strategy required to sustain an existing settlement, or • its location in zone C is necessary to contribute to key employment objectives supported by the Local Authority, and other key partners, to sustain an existing settlement or region, and • it concurs with the aims of PPW and meets the definition of previously developed land, and the potential consequences of a flooding event for the particular type of development have been found to be acceptable in relation to the tests set out in TAN15 Development proposals (including raising ground levels) will be approved in other areas provided that they do not present an unacceptable risk of flooding either on or off the site, or cause significant harm to flood management or maintenance schemes.

Appendix D:
National Grid's Stakeholder, Community and Amenity Policy

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National Grid's commitments when undertaking works in the UK

Our stakeholder, community and amenity policy

nationalgrid

The power of action.℠

This note sets out National Grid's ten commitments when undertaking electricity and gas works in the UK. It covers how we will meet our amenity responsibilities and our commitments to effectively involving stakeholders and communities.

Engaging stakeholders and communities

The development of gas and electricity networks, and their maintenance and refurbishment, can affect communities through which the networks pass. How we manage our relationships and work together with these communities and other affected stakeholders is important to us.

National Grid aspires to engage positively with stakeholders and communities. We are committed to involving stakeholders and communities effectively in our works and recognise the benefits of doing this. We will listen, take into account views and opinions expressed and respond to these when developing and undertaking works.

The principles contained in our Commitment 2 (Involving stakeholders and communities) provide the framework that will help us to promote genuine and meaningful stakeholder and community engagement and to develop and maintain a culture that delivers this.

Application

This document applies to National Grid's transmission activities in the UK, for both electricity and gas works. It also applies to all works on our gas distribution network operating above 7 bar (gauge) pressure. Gas works for networks of below 7 bar in pressure are excluded from these commitments because they are of much smaller scale, tend to be undertaken in the public highway and are controlled under the provisions of the New Roads and Street Works Act 1991 and Traffic Management Act 2004. They are also planned and implemented in much shorter timescales resulting in short-term impacts which are generally less significant and restricted to the communities in the immediate vicinity of the works.

In this document, we interpret **amenity** to mean the natural environment, cultural heritage, landscape and visual quality. We also include within this interpretation the impact of our works on communities, such as the effects of noise and disturbance from construction activities.

By **works** we mean constructing new transmission or distribution infrastructure such as overhead lines, underground cables, sealing end compounds and substations; pipelines, compressor stations, pressure reduction installations and other above ground gas installations (where all are part of networks operating above 7 bar (gauge) pressure); major refurbishment of any of these; and the dismantling and removal of any parts of the system.

By **stakeholders** we mean organisations and individuals who can affect or are affected by our works. By **communities** we include those stakeholders (organisations and individuals including residents) with a particular remit or interest in the local area affected by the works.

Before
Construction of one of two new gas pipelines through the south west.

After
Careful reinstatement of the land upon completion of the groundwork.

Location: Gas pipeline reinforcement at Milford Haven to Aberdulais.

A reinstatement to a road crossing on the route of The South West Reinforcement Project. The breach was repaired using traditional Devon Banks methods.

Our Commitments

We, at National Grid, have made ten commitments to underpin our aspirations to engage positively with stakeholders and communities and to meet our amenity responsibilities when undertaking electricity and gas works.

1. Establishing need

We will only seek to build electricity lines or pipelines along new routes, or above ground installations in new locations, where our existing infrastructure cannot be technically or economically upgraded to meet system security standards and regulatory obligations, where forecasted increases in demand for electricity or gas will not be satisfied by other means, or where connections to customers are required.

2. Involving stakeholders and communities

We will promote genuine and meaningful stakeholder and community engagement. We will meet and, where appropriate, exceed the statutory requirements for consultation or engagement.

We will adopt the following principles to help us meet this commitment:

- we will seek to identify and understand the views and opinions of all the stakeholders and communities who may be affected by our works
- we will provide opportunities for engagement from the early stages of the process, where options and alternatives are being considered and there is the greatest scope to influence the design of the works
- we will endeavour to enable constructive debate to take place, creating open and two-way communication processes
- we will ensure that benefits, constraints and adverse impacts of proposed works are communicated openly for meaningful stakeholder and community comment and discussion. We will be clear about any aspects of the works that cannot be altered
- we will utilise appropriate methods and effort in engaging stakeholders and communities, proportionate to the scale and impact of the works
- we will provide feedback on how views expressed have been considered and the outcomes of any engagement process or activity

3. Routeing of networks and site selection

If new infrastructure is required, we will seek to avoid the following areas which are nationally or internationally designated for their landscape, wildlife or cultural significance: National Parks; Areas of Outstanding Natural Beauty; National Scenic Areas; Heritage Coasts; World Heritage Sites; Sites of Special Scientific Interest; Special Protection Areas; Special Areas of Conservation; Ramsar sites; National Nature Reserves; Scheduled Ancient Monuments; and registered parks and gardens.

4. Minimising the effects of new infrastructure

We will seek to minimise the effects of works and new infrastructure on communities by having particular regard to safety, noise and construction traffic. We will also seek to minimise the effects of new infrastructure on areas which are nationally or internationally designated for their landscape, wildlife or cultural significance and other sites valued for their amenity such as listed buildings, conservation areas, areas of archaeological interest, local wildlife sites, historic parks and gardens and historic battlefields. We will take into account the significance of these and other areas through consultation with local authorities and other stakeholders with particular interests in such sites.

5. Mitigating adverse effects of works

We will undertake relevant environmental investigations and report on these in any applications for consent for new works. We will use best practice environmental impact assessment techniques to assess possible effects of our works and identify opportunities for mitigation measures. In the course of this we will consult with relevant stakeholders and affected landowners. Where works are likely to have an adverse effect on amenity, we will carry out mitigation measures to reduce those effects as far as reasonably practicable.

6. Offsetting where mitigation is not practicable

Where mitigation measures cannot adequately mitigate against loss of amenity, or where mitigation is not practicable, we will offer to undertake practical offsetting measures. These measures, which will be developed in discussion with relevant stakeholders, could include landscaping and planting works or other benefits to affected communities.

7. Enhancing the environment around our works

When undertaking works, we will consider what practicable measures can be taken to enhance areas in the vicinity of the works for the benefit of local communities and the natural environment.

8. Monitoring and learning for the future

We will monitor, evaluate and review our engagement processes so that we can learn from our experiences and continue to improve engagement programmes in the future. We will carry out periodic reviews of the environmental impact of our works and consider the effectiveness of our assessment and any mitigation we have undertaken. The results of these reviews will be used to foster continuous improvement in the environmental assessment and management of works. In undertaking all reviews of our processes and procedures we will take into account stakeholder and community feedback.

9. Reviewing these commitments

We intend to review these commitments at least every five years. Additional revisions will be made as necessary in response to new legislation, policy and guidance. As a responsible company practising good corporate governance, we will review the relevance of these commitments and report on our web site case studies illustrating our stakeholder and community engagement and our performance in preserving amenity.

10. Working with others

We require others undertaking works on our behalf to demonstrate these same commitments and we will create an environment where best practice can be shared and delivered.

Background

Meeting our duties under Schedule 9 of the Electricity Act

Electricity Act 1989
Extracts from Schedule 9
Preservation of amenity: England and Wales
Paragraph 1(1)
1.-(1) In formulating any relevant proposals, a licence holder or a person authorised by exemption to generate or supply electricity-
(a) shall have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest; and
(b) shall do what he reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects.

Paragraph 2(1)
A licence holder shall within twelve months from the grant of his licence prepare, and from time to time modify, a statement setting out the manner in which he proposes to perform his duty under paragraph 1(1) above, including in particular the consultation procedures.

This document sets out how National Grid, as an electricity transmission system licence holder, will meet the duty placed on it under Section 38 and Schedule 9 of the Electricity Act 1989 (see above). This duty relates to the preservation of amenity and forms only part of National Grid's wider environmental responsibilities. Information on those environmental issues not formally covered by Schedule 9, such as our role in countering climate change, in connecting new and renewable sources of electricity generation, in pollution control, and in electric and magnetic fields is available in other publications.

There is no equivalent to a Schedule 9 statement requirement in the provisions of the Gas Act 1986. However, National Grid believes that the principles in this document should apply equally to both our electricity and gas transmission and gas distribution works above 7 bar in pressure.

History

The first significant revision to our Schedule 9 Statement was prepared following a stakeholder workshop facilitated by the Environment Council in 2001. The statement and our performance in meeting the commitments were reviewed in 2006 and our statement was modified slightly as a result. In preparing that revision we consulted the bodies referred to in Schedule 9 of the Act which have statutory responsibilities for amenity, namely: Natural England; Countryside Council for Wales; CADW: Welsh Historic Monuments; and English Heritage. In addition, we consulted other non-government organisations concerned with amenity such as: Civic Trust; Council for National Parks (now the Campaign for National Parks); Tree Council; Wildlife Trusts; RSPB; CPRE; and representatives of other stakeholder groups together with our staff.

Preparing this policy

With the advent of the Planning Act 2008, we have incorporated our Schedule 9 statement duty into this wider policy, which incorporates gas works (above 7 bar in pressure), and new commitments to stakeholder and community engagement. In preparing our stakeholder and community engagement commitments we commissioned work from the consultancies, Corven and Entec UK, utilised best practice from 3G Communications Ltd., and met with a number of non-government organisations.

We are keen to hear your views on this policy comments should be sent to:
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The power of action.℠

Appendix E:
Our Approach to the Design and Routeing of New Electricity Transmission Lines

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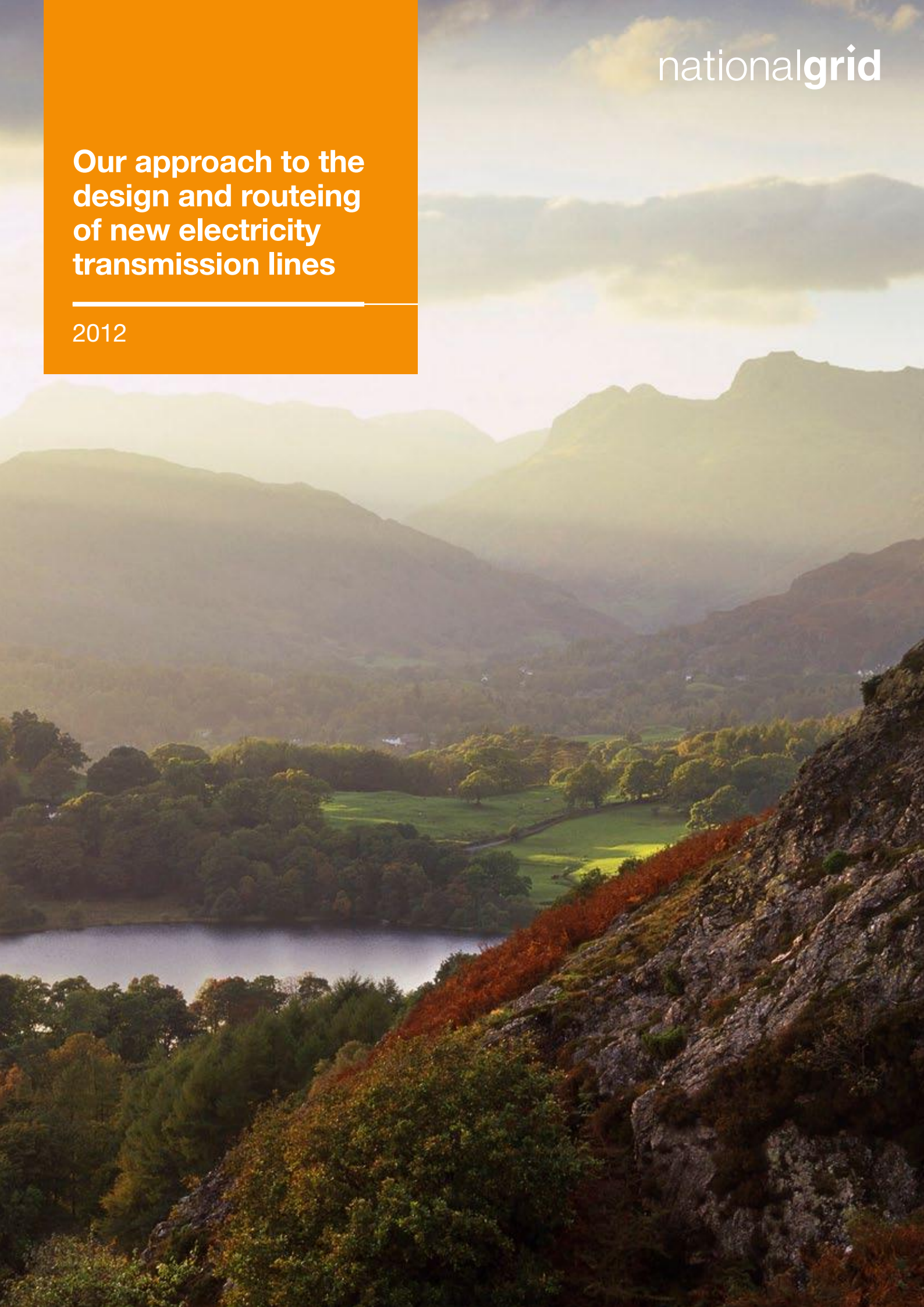
Our approach to the design and routeing of new electricity transmission lines

2012



National Grid's job is to connect people to the energy they use to warm and light their homes, to connect factories and offices to the power that keeps them going and to provide the infrastructure essential to maintain our modern lifestyle.

We own and manage the grid to which many different energy sources are connected. In Britain we run systems that deliver gas and electricity across the entire country, holding a vital position at the centre of the energy system. That puts us at the heart of one of the greatest challenges facing our society: the creation of new sustainable energy solutions and the development of an energy system that can underpin our economic prosperity in the 21st century.

Introduction

The energy challenge and electricity eransmission

The UK faces a major challenge in the way it produces and generates electricity. As a country we need to ensure secure and reliable energy supplies while at the same time tackling climate change. This means a significant investment in new low carbon power sources.

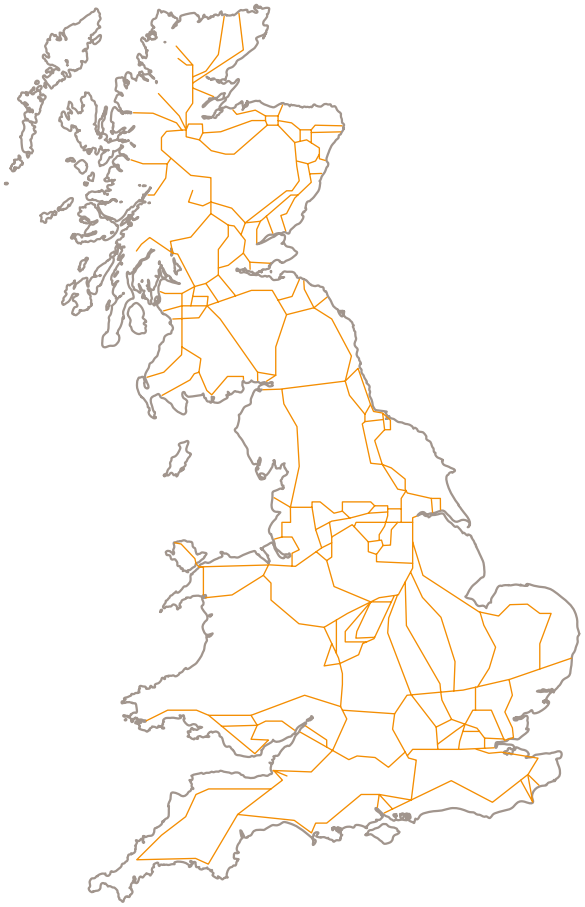
Part of this challenge is ensuring that these new power sources, whether from nuclear, wind and other renewables, gas or clean coal, are connected to the high voltage electricity transmission network in order to carry the electricity to where it is needed. In England and Wales, much of the new electricity generation will be sited on the coast, or offshore, where there is currently very little existing transmission infrastructure. New electricity transmission lines will therefore be required in these areas. We may also need to carry out work on existing areas of the network to upgrade and reinforce it to make it fit for these new low carbon sources of electricity.

Deciding where and how to build new high voltage electricity transmission lines is a complex issue. Most of the existing network takes the form of overhead lines, as these provide the most economic solution to the energy transmission challenge, and therefore the least impact on consumer bills. As we build the country's new network, we need to balance the need for secure and reliable energy supplies with affordability for bill-payers and the visual impact of the network.

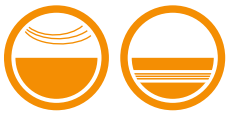
We are very aware of the impact of new overhead transmission lines on the landscape and on local communities, and we do consider other technologies to mitigate this such as placing new electricity lines underground as buried cables. This is known as 'undergrounding'.

We carried out a public consultation on this topic between December 2010 and July 2011, and we have listened to communities on this important issue. Respondents to this consultation demonstrated strong support for undergrounding. This document sets out how we consider undergrounding together with other methods of mitigating the visual impacts of our transmission lines.

The current UK high voltage electricity transmission network



We have no inherent preference for either overhead or underground approaches and we will always seek to deliver the best balance.



Our duties and obligations

We are regulated by Ofgem, the electricity and gas markets regulator, to ensure value for money for consumers and we must satisfy our various statutory duties (see back page). We are required under the Electricity Act (1989) to "develop and maintain an efficient, coordinated and economical electricity transmission system, and to facilitate competition in the supply and generation of electricity". We need to be responsible for the cost of projects we promote as those costs will ultimately be borne by all electricity users.

We also have a duty to "consider the desirability of preserving amenity" when undertaking projects which includes impacts on communities, landscape and visual amenity, cultural heritage and ecological resources. To satisfy this duty, we seek to avoid areas which are nationally or internationally designated for their landscape, wildlife or cultural significance, such as National Parks.

We recognise, however, that not all sites that are valued by, and important for, the wellbeing of local communities are included in designated areas. Our approach therefore ensures that we consider all of the potential economic, environmental and social impacts of proposed projects, not just those relating to designated sites.

Achieving the balance

Satisfying all of our duties can be complex and so we treat each project on a case-by-case basis to strike the appropriate balance. Our stakeholders confirmed that this was the right approach during our public consultation on undergrounding.

We believe that we will best achieve this balance by:

Consulting widely, effectively and at a formative stage of our project proposals.

Being open with information and transparent about the judgements we make.

Developing proposals that deliver what society needs from us.

Ultimately the relevant decision-making body has to decide whether our proposals strike the right balance and so we aim to bring them fully developed and well-considered plans on which to base their decisions.

Our Process

This document sets out how we identify the most appropriate location and technology for any new electricity transmission line in order to best satisfy society's needs. It sets out how we will collect data, undertake research and analysis, consult stakeholders and communities and listen to feedback in order to inform our judgements.

To find out more about the Holford Rules and our other statutory duties see pages 18–20

The process involves the development of our projects from the earliest stage of identifying high-level options right through to the submission of detailed proposals. We begin by looking at all of the feasible options, which may cover a very wide geographical area and a number of different technologies such as underground cables or overhead lines. We then narrow down the options through a process of careful analysis and consultation. Having established which of the potential option(s), we think best meet(s) society's needs, we focus in on broad corridor locations for any new transmission lines by talking with local communities and others, and then we concentrate on where a new line might run to minimise any impacts on local people.

At each stage of refinement we gain more detailed information about the constraints that might affect a particular route. These might include designated sites like National Parks but could also include non-designated areas such as particularly sensitive landscapes or iconic views. As we learn more, we back-check at each stage to see if any new information exists that would have an impact on the best technology or route.

Our Approach is informed by the results of our undergrounding consultation and our experience of major transmission infrastructure projects. It complies with the requirements of the Planning Act 2008 and the National Policy Statement on Electricity Networks Infrastructure (EN-5), and retains the principles of the Holford Rules which give guidance on the routeing of overhead lines.

We will review our Approach in the light of:

- changes to our responsibilities, legislation, government policy or guidance;
- changes in best practice guidance in environmental, social or economic appraisal;
- relevant technology advances; or
- new information about the application or costs of different technologies.

This process, which is described fully overleaf, is intended as guidance for our project teams and for all stakeholders with an interest in our projects. All projects are different and where we need to deviate from this process, we will explain the reasons, and ensure that we still satisfy all of our obligations. For example, in the case of some smaller projects, such as the replacement of a short section of overhead line, we may combine some or all of stages 1, 2 and 3 to identify a preferred choice.

Stage 01 – **Strategic Options**

Stage 02 – **Outline Routeing and Siting**

Stage 03 – **Detailed Routeing and Siting**

Stage 04 – **The Proposed Application**

Stage 05 – **Application for Development Consent**

Stage 06 – **Consideration and Hearing**

Stage 1
Strategic Options

What is needed?

The identified need could be: to connect new generation sources to the existing network; to create more capacity where needed in the existing network; or an investment in anticipation of potential new generation. The need case is kept under review throughout the development of the project.

Do we need new infrastructure?

We always see if the existing network can accommodate the customer or capacity needs economically and efficiently before we would consider building any new infrastructure. We look at alternatives to meet the required need, which may include adjusting arrangements with customers, how we operate the network, or investments in equipment that can optimise the use of the existing network to reduce or avoid the need for major investment. This is usually more sustainable, less expensive and is likely to have the least visual impact.

Identifying Strategic Options

Where new infrastructure is needed, we consider the many ways in which this could be achieved. We call this 'generating strategic options'. We will identify a number of different strategic options, which might include:

- different technologies (such as underground cables, gas-insulated lines, overhead lines or sub-sea High Voltage Direct Current (HVDC) cables);
- different geographical connection points; or
- a combination of the two.

Technical Compliance Filter

Before we do any further work we make sure that all of the potential strategic options would work on our network and we reject any that would not meet technical standards. We do this because we need to understand which options would work in practice before we talk to stakeholders.

Benefit Filter

There are potentially many ways in which we could meet the identified need, and many of them will be very similar. We reduce the number of options for stakeholders in an open and transparent way by making sure that every potential strategic option we take forward for further appraisal has some benefit over another option.

At this Stage we explore with stakeholders the different ways in which we might meet the need for new infrastructure in a particular area, and discuss those options and how we assess them with core stakeholders.

Consult Core Stakeholders

At the early stages of the project we consult a number of organisations – referred to as our core stakeholders – who represent statutory interests. We talk to core stakeholders about the potential options we are considering and how we should assess them. We seek their views as to which considerations should inform our judgements based on what is important to local stakeholders. We ask the relevant local authorities to input into our consultation arrangements.

More information about who we consult and when is on page 16

Options Appraisal

Options Appraisal is the method we use to compare options and analyse their relative costs and benefits. We take a structured approach to determining overall preferences among alternative options. This means that stakeholders can see the basis on which we have made our judgements and have balanced our duties. We consider environmental, socio-economic and technical issues alongside a capital and lifetime cost for each strategic option.

More information on Options Appraisal is on page 17

Consult Core Stakeholders

We consult our core stakeholders on the results of options appraisal and ask for their views about the different strategic options.

Preferred Strategic Option

We identify a preferred strategic option or options to take forward for further assessment. This may involve a choice of technology or may simply be the identification of connection points, with further development of the technology choice at Stage 2.

If a predominantly overhead route is preferred at this stage, there will still be a continuing process of appraisal and consultation throughout Stages 2 and 3, which will consider the ways in which the impact of a new line can be mitigated and may ultimately result in undergrounding of certain sections of the route. At this stage we may also look for options which have opportunities to remove existing infrastructure in order to minimise the overall ‘wirescape’.

We may promote a sub-sea or predominantly underground strategic option at this stage, particularly in light of very significant constraints relating to landscape or visual issues. Such constraints might include: locations with physical difficulties in constructing an overhead line (such as in urban areas or mountains) or the presence of highly valued landscapes such as National Parks or Areas of Outstanding Natural Beauty (AONBs). Sometimes there are significant constraints to a sub-sea or underground solution, such as important ports and harbours, or significant concentrations of buried archaeology.

Outputs

Need Case

Strategic Options Report including Options Appraisal

Project Consultation Strategy

Stage 2
Outline Routeing and Siting

Route Corridor Studies

Routeing studies are carried out to identify broad potential corridors for the new transmission route within all strategic options that we are still considering. Similar siting studies are carried out to identify suitable locations for infrastructure, such as substations or converter stations if required.

When routeing overhead lines, we apply the Holford Rules (see page 18) and start to consider the types of mitigation that could offset any landscape or visual effects.

The routeing of sub-sea cables can be affected by constraints at the point of landfall, such as eroding shorelines or sensitive sand dune systems, and by marine constraints such as shipping lanes, fisheries, major ports and harbours, and ecological constraints, such as Special Protection Areas or Special Areas for Conservation. If a constraint was identified at this stage that could not be avoided or mitigated, then we may need to reconsider land-based options.

For onshore underground options we would consider the type of technology (cross-linked polyethylene insulated (XLPE) or Gas-Insulated Lines (GIL)) and whether the cable would be buried directly or in a surface trough or tunnel. When routeing underground cables, we may be restricted by built development, topography, soil type or existing land use. There may also be valuable habitats or cultural heritage sites that would be affected by ground disturbance. In these cases, we try to find a route corridor that avoids these constraints altogether. Where that is not possible, we may consider placing a section of line overhead on an otherwise underground route. The siting of sealing end compounds (which are used to make the transition from underground cable to overhead line) also requires careful consideration.

We identify and appraise a number of potential route corridors through which the transmission line could be routed and identify potential locations for associated infrastructure. We consult again with core stakeholders and local communities.

Consult Core Stakeholders

We consult our core stakeholders on the potential route corridor options we are considering and on the scoping of the next stage of Options Appraisal (below). We again seek views on the factors that are most important to local stakeholders and which are likely to be the most significant in judging the route corridors that would best serve society's needs.

Options Appraisal

Options Appraisal is again applied to determine the environmental, socio-economic, technical, and cost implications associated with the different route corridor options. At this stage we have more detailed information about the different route corridors and carry out a more detailed appraisal.

Consult Stakeholders and Communities

During Stage 2 we will carry out a public consultation, which examines all of the options we have considered, and asks for views both on our preferred strategic option and the potential route corridors we have identified to achieve this. As a result of this public consultation, we may re-examine options that we have previously discounted or consider new alternatives proposed by members of the public. We produce a feedback report which will identify all of the comments received and how we intend to take them into account. Where we cannot take someone's comments into account, we will explain why not.

Choice of Preferred Route Corridor

The results of the consultations, together with all of the studies carried out to this point, are used to identify the preferred route corridor or corridors.

In cases where we have previously chosen a predominantly overhead option, we may propose a fully overhead corridor or a route corridor which is a mixture of overhead and underground technologies, depending upon the constraints identified. Candidates for undergrounding might include: locations with physical difficulties in constructing an overhead line (such as in urban areas), wide river or estuary crossings, the presence of highly valued landscapes (which include National Parks and AONBs but could also include particularly sensitive landscapes and iconic views or areas where other potential impacts could only be mitigated by undergrounding). This is not an exhaustive list and all projects will be considered on a case-by-case basis.

If the preferred route corridor is predominantly overhead line, there will still be a continuing process of appraisal and consultation throughout Stage 3, as a result of which we may propose undergrounding certain sections of the route.

Where we have previously chosen a sub-sea strategic option, we will identify the preferred marine corridor and the locations for any associated land-based infrastructure. Where we have chosen an underground strategic option, we will identify the preferred underground corridor and the locations for any associated above-ground infrastructure. In some cases, we may not make a decision on technology at Stage 2, but simply identify a land-based corridor, and determine the most appropriate technology at Stage 3 once we have a full understanding of all of the constraints.

Outputs

Route Corridor Study including Options Appraisal

Project Consultation Strategy

Consultation Feedback Report

Stage 3
Detailed Routeing and Siting

Development of the Detailed Alignment

Whether the preferred route corridor is predominantly overhead, underground or sub-sea, detailed survey and assessment work is carried out to find the alignment of the transmission line which best satisfies all of our obligations and the needs of stakeholders. In doing this we seek to avoid as far as possible any impacts on people, settlements, and environmentally sensitive areas.

We continue to refine the route alignment to minimise any visual and other environmental impacts, in consultation with stakeholders and communities.

In cases where a predominantly overhead route has been selected, we will continue to apply the Holford Rules and we will identify any sections where it would be more appropriate to place the infrastructure underground. We may propose other forms of mitigation, which could involve tree planting or alternative pylon designs or the removal of other electricity transmission or distribution infrastructure. We will use the same approach for siting the associated land-based / above-ground infrastructure such as substations, converter stations or sealing end compounds.

Consult Stakeholders and Communities

We continue to exchange information with our stakeholders during the development of the detailed alignment. During consultation with the public we may establish community forums as a mechanism to support this consultation.

We may also establish thematic groups, which will involve experts including local representatives of technical consultees to review our approach to specific issues. We will revisit earlier stages of our project development as required and will publish the outcomes of our public consultations explaining why we have selected a particular proposal. This will allow stakeholders to see how and where we have exercised our judgement and the factual basis upon which we have done so. We will develop our draft Statement of Community Consultation with the relevant local authorities, which sets out who and how we will consult on our proposals.

Environmental Impact Assessment and Options Appraisal

Where we are required to do so, we will carry out a full Environmental Impact Assessment of our preferred alignment and will consult with key stakeholders on the scope and results of this study. We may use Options Appraisal to compare the environmental and socio-economic performance of alternative alignments, and we will publish the results of our appraisal of the preferred alignment in a report or draft Environmental Statement.

Preliminary Environmental Information

Outputs of Options Appraisal if appropriate

Draft Statement of Community Consultation

Consultation Feedback Report

Having identified a broad route corridor, we look within that route to identify and appraise the preferred alignment through which the transmission line will be routed and the locations of any associated infrastructure. We do this in close liaison with stakeholders including landowners, local residents and organisations.

Stage 4
The Proposed Application

We hold a public consultation on our draft proposals to help us prepare our application for submission to the Planning Inspectorate for decision.

Consult All Stakeholders

We will carry out a public consultation on our proposed application as required by Sections 42 and 47 of the Planning Act (2008). This consultation includes communities, local councils, expert consultees and those who may be affected by our proposals. At the close of the consultation period, we will review our proposals and make any necessary amendments to what we propose in the light of information received through consultation. If necessary we will carry out further survey and appraisal work for alternative solutions.

We will produce a Consultation Report which sets out all of the feedback we have received throughout the process and how we have responded to it. This will allow all stakeholders who have contributed to see how their comments have been taken into account.

Examples of current and existing Consultation Reports can be found on our website

Preparation of documentation

Having carried out detailed assessments and consultation with the public and key stakeholders we will prepare all of the documents necessary for our proposed application.

We will consult with Local Planning Authorities and seek to agree Statements of Common Ground with them and potentially with other interested parties.

Outputs

- Consultation Report
- Draft Application Documents
- Statements of Common Ground
- Statement of Community Consultation
- Draft Environmental Statement

Stage 5
Application for Development Consent

Submission of our application

Once we have assessed the outcomes of the public consultation and made any necessary changes to the proposals we will submit our application for development consent to the Planning Inspectorate or other relevant decision-maker.

We follow the processes of the Planning Inspectorate for overhead line applications in England and Wales. We formally notify the public, core stakeholders and other bodies prescribed in the APFP Regulations 2009* of our application and those consulted have the opportunity to make relevant representations to the Planning Inspectorate and to register themselves as interested parties.

In England, our application will usually also include any additional development associated with overhead lines, such as substations and sealing end compounds.

In Wales, consent for this associated infrastructure will be determined by the relevant local planning authority.

Underground cables in England and Wales are considered as permitted development which means that planning permission has already been granted. Any planning applications for associated above-ground infrastructure such as sealing end compounds and substations are determined by the relevant local planning authority if not as part of a Development Consent Order (DCO) application.

For sub-sea cables, applications in English waters are determined by the Marine Management Organisation, and in Welsh waters by the Welsh Government. In both cases, applications for associated onshore infrastructure such as converter stations will be determined by the relevant local planning authority.

* Infrastructure Planning (Application: Prescribed Forms and Procedure) Regulations 2009

Stage 6
Consideration and Hearing

Once we have submitted our application we will provide such further information on our proposals as may be required for a hearing or Public Inquiry.

We will continue to follow the process of the relevant decision-making authority (see Stage 5) and to engage with interested parties.

Interested parties have the opportunity to influence the decision-making body through written representations and by giving evidence at a hearing or Public Inquiry.

The following reports are available at www.nationalgrid.com/majorprojectdocuments

Our approach to Options Appraisal

Our approach to Consultation

Our approach to Socio-economics

Who do we consult?

Core stakeholders

Our core stakeholders for most projects would be drawn from the following:

- Local authorities
- Environment Agency
- English Heritage and/or Cadw
- Natural England and/or Countryside Council for Wales
- Marine Management Organisation and/or Welsh Government
- Joint Nature Conservation Committee
- Other parties proposed by the above
- Scottish Natural Heritage and Marine Scotland for projects that link to the network in Scotland

These parties are consulted from the earliest stages of our projects as a matter of good practice to ensure we take the best technical advice and local knowledge into account in the early development of our projects. The group of stakeholders is expanded and refined as the project develops and more local groups become involved. At this early stage we do not usually consult the public, as we may not have enough information about where any new lines might be located to have a meaningful dialogue. However the role of local groups including local planning authorities is partly to represent local opinion.

What is the role of the public?

We talk to people who may be affected by our new transmission lines throughout the development of each project. Our first public consultation will normally take place at Stage 2, but will cover all issues in the development of the project to date including the need case, strategic options and route corridor options. This gives local communities the opportunity to review the judgements we have made, and the information we have based them on. We publish the results of all our consultations, so that stakeholders can see how they have influenced the design of the scheme.

At the detailed routeing stage, we talk regularly to our consultees including more local stakeholders such as parish councils and local interest groups. We also consult with landowners along the proposed alignment. A further formal period of public consultation is held before we submit an application for development consent as required by the Planning Act 2008.

Once an application is submitted, taking account of the feedback from local people, the public can continue to make representation to the relevant decision-making body either in writing or in person at a hearing or Public Inquiry.

For more information on Options Appraisal, please refer to National Grid's 'Our Approach to Options Appraisal' document which can be found at www.nationalgrid.com/majorprojects

Options Appraisal

Our Options Appraisal methodology takes the following considerations (referred to in our internal guidance as 'topics' and 'sub-topics') into account when appraising alternative strategic options or route corridors.

Environment

- Landscape/Visual
- Ecology
- Historic Environment
- Air Quality
- Noise and Vibration
- Soils and Geology
- Water

Socio-economic

- Aviation and Defence
- Traffic and Transport
- Local Economic Impact

Technical

- Technical Complexity
- Delivery
- Capacity
- Technology
- Network Efficiency/Benefits

Cost

- Capital Cost
- Lifetime Cost

The methodology helps us to assess the implications of each alternative across a range of critical issues with the input of core stakeholders and the public. By assessing each of these areas, we are able to judge which option will deliver the needed infrastructure whilst balancing the various considerations such as minimising the visual impact and reducing the cost on consumers. There is no hierarchy between the environmental, socio-economic, technical and cost requirements, and each project will take into account the views of its stakeholders in determining the weight to be attributed to different sub-topics.

Whilst the results of Options Appraisal will inform decision-making, the methodology itself does not provide the answer. Instead it objectively sets out the implications of the different options across a wide range of subjects, and broadly shows which option performs best across the board. Those sub-topics that are considered by the stakeholders to be especially important will merit particular consideration in the decision-making process.

Options Appraisal is a robust and transparent approach to the option selection process, ensuring that all interested parties will be able to understand the information and analysis that underpin the judgements we make.

The Holford Rules

These guidelines on overhead line routeing were first set out in 1959. They are presented in the National Policy Statement for Electricity Networks Infrastructure (EN-5) and will continue to form the basis on which we route overhead lines.

Since the formulation of the original Rules, formal requirements for environmental assessment have been introduced. Whilst environmental assessment for overhead lines addresses wider topics than the visual amenity issue on which the Rules concentrate, they remain a valuable tool in selecting and assessing potential route options as part of the environmental assessment process. The Rules and our added notes of clarification are set out below:

Rule 1

Avoid altogether, if possible, the major areas of highest amenity value, by so planning the general route of the line in the first place, even if the total mileage is somewhat increased in consequence.

Note on Rule 1

Investigate the possibility of alternative routes, avoiding where possible the areas of the highest amenity value. The consideration of alternative routes must be an integral feature of environmental statements.

Areas of highest amenity value include: Areas of Outstanding Natural Beauty; National Parks; Heritage Coasts; World Heritage Sites and Registered Parks and Gardens.

Rule 2

Avoid smaller areas of high amenity value or scientific interests 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.

Note on Rule 2

Some areas (e.g. Sites of Special Scientific Interest) may require special consideration for potential effects on ecology (e.g. to their flora and fauna).

Where possible choose routes which minimise the effects on the setting of areas or architectural, historic and archaeological interest including Conservation Areas, Listed Buildings, Listed Parks and Gardens and Ancient Monuments. Again, recognise that some sites of value may not be within designated areas.

Rule 3

Other things being equal, choose the most direct line, with no sharp changes of direction and thus with fewer angle towers.

Note on Rule 3

Where possible choose inconspicuous locations for angle towers, terminal towers and sealing end compounds.

Rule 4

Choose tree and hill backgrounds in preference to sky backgrounds wherever possible. When 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.

Rule 5

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.

Note on Rules 4 and 5

Utilise background and foreground features to reduce the apparent height and domination of towers from main viewpoints. Minimise the exposure of numbers of towers on prominent ridges and skylines. Where possible avoid cutting extensive swathes through woodland blocks and consider opportunities for skirting edges of copses and woods. Protect existing vegetation, including woodland and hedgerows, and safeguard visual and ecological links with the surrounding landscapes.

Rule 6

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'.

Note on Rule 6

In all locations minimise confusing appearance.

Arrange wherever practicable that parallel or closely related routes are planned with tower types, spans and conductors forming a coherent appearance; where routes need to diverge, allow where practicable sufficient separation to limit the effects on properties and features between the lines.

Rule 7

Approach urban areas through industrial zones, where they exist; and when pleasant residential and recreational land intervenes between the approach and the substation, carefully assess the comparative costs of undergrounding.

Note on Rule 7

When a line needs to pass through a development area, route it so as to minimise as far as possible the effect on development.

Alignments should be chosen after consideration of effects on the amenity of existing development and on proposals for new development.

When siting substations take account of the effects of the terminal towers and line connections that will need to be made and take advantage of screening features such as ground form and vegetation.

Supplementary notes

Residential Areas

Avoid routeing close to residential areas as far as possible on grounds of general amenity.

Designations of County, District and Local Value

Where possible choose routes which minimise the effect on Special Landscape Areas, areas of Great Landscape Value and other similar designations of County, District or Local Value.

Alternative Tower Designs

In addition to adopting appropriate routeing, evaluate where appropriate the use of alternative tower designs now available.

Our Statutory Duties

These are some of National Grid's statutory duties most relevant to our development of new infrastructure.

Section 9(2) of the Electricity Act 1989 (General duties of licence holders)

"It shall be the duty of the holder of a licence authorising him to transmit electricity:

(a) to develop and maintain an efficient, co-ordinated and economical system of electricity transmission;…"

Section 38 and Schedule 9 of the Electricity Act 1989

"(1) In formulating any relevant proposals, a licence holder or a person authorised by exemption to generate, transmit, distribute or supply electricity:

(a) shall have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archeological interest; and

(b) shall do what he reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects."

Section 11A(2) of the National Parks and Access to the Countryside Act 1949 (Duty of certain bodies and persons to have regard to the purposes for which National Parks are designated).

"In exercising or performing any functions in relation to, or so as to affect, land in a National Park, any relevant authority shall have regard to the purposes specified in subsection (1) of section five of this Act and, if it appears that there is a conflict between those purposes, shall attach greater weight to the purpose of conserving and enhancing the natural beauty, wildlife and cultural heritage of the area comprised in the National Park."

Section 85 of the Countryside and Rights of Way Act 2000 (General duty of public bodies etc)
"(1) In exercising or performing any functions in relation to, or so as to affect, land in an area of outstanding natural beauty, a relevant authority shall have regard to the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty."

Section 40 of the Natural Environment and Rural Communities Act 2006 states that "Every public body 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."

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Appendix F:
Our Approach to Options Appraisal

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nationalgrid

Our approach to Options Appraisal

2012

National Grid's job is to connect people to the energy they use to warm and light their homes, to connect factories and offices to the power that keeps them going and to provide the infrastructure essential to maintain our modern lifestyle.

We own and manage the grid to which many different energy sources are connected. In Britain we run systems that deliver gas and electricity across the entire country, holding a vital position at the centre of the energy system. That puts us at the heart of one of the greatest challenges facing our society: the creation of new sustainable energy solutions and the development of an energy system that can underpin our economic prosperity in the 21st century.

Options Appraisal

As part of National Grid's development of new gas and electricity infrastructure, we carry out Options Appraisal on our projects. Options Appraisal has been developed primarily for major infrastructure projects under the Planning Act 2008, though we may apply the process to other National Grid projects. There are often a number of different ways that we could satisfy the need for a new connection, perhaps involving different locations, technologies or designs. Each time a new connection is needed, we have to make judgements about the best way to achieve it. Options Appraisal provides information to help inform those judgements.

Stage 01 – **Strategic Options**

Stage 02 – **Outline Routeing and Siting**

Stage 03 – **Detailed Routeing and Siting**

Stage 04 – **The Proposed Application**

Stage 05 – **Application for Development Consent**

Stage 06 – **Consideration and Hearing**

What is Options Appraisal?

Options Appraisal is a robust and transparent process we use to compare options and to assess the positive and negative effects they may have across a wide range of criteria including environmental, socio-economic, technical and cost factors.

Options Appraisal is one part of our project development process. The different planning stages of our project development are shown in the diagram opposite. This diagram shows the development of our projects from the earliest stage of identifying high-level (strategic) options right through to the submission of detailed proposals. We begin by looking at all of the technically feasible options, which may cover a very wide geographical area and a number of different technologies, such as gas pipelines or compressors. We then narrow down the options through a process of careful analysis and consultation. Having established which of the potential options we think best meet society's needs, we focus in on broad corridor locations for any new infrastructure by consulting local communities and others. Finally we concentrate on exactly where a new connection might run to minimise any impacts on local people and the environment.

The process, which is described fully in this document, is intended as guidance for our project teams and for all stakeholders with an interest in our projects. All projects are different and where we need to deviate from this process, we will explain the reasons and ensure that we satisfy all of our obligations. For example, in the case of some smaller projects such as the replacement of a short section of gas pipeline or overhead line, we may combine some or all of stages 1, 2 and 3 to identify a preferred choice.

At each stage of the process we gain more detailed information about the constraints and issues that might affect a particular option. As we learn more, we back-check at each stage to see if any new information has come to light which affects any conclusions previously made as regards technology or options.

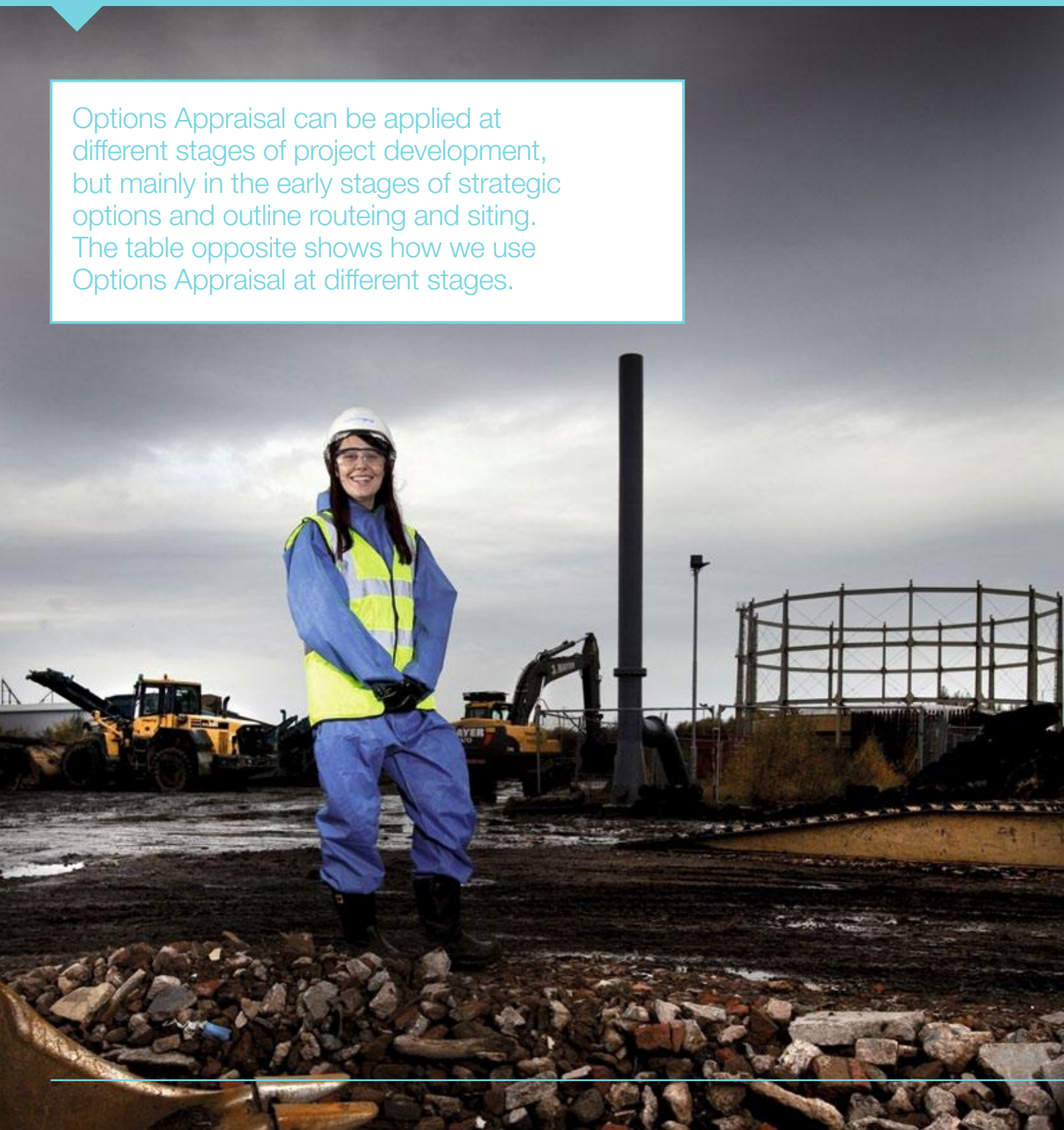
Why do we do Options Appraisal?

We carry out Options Appraisal because it provides a framework which allows us to identify and balance technical, socio-economic, environmental and cost considerations in selecting project options. It also enables us to document in a transparent manner the information on which we have based our judgements.

The information we collect as part of Options Appraisal goes on to inform discussions with stakeholders including the public. Alongside community and stakeholder consultation, Options Appraisal is a key tool in helping us develop, and make decisions on projects.

When do we use Options Appraisal?

Options Appraisal can be applied at different stages of project development, but mainly in the early stages of strategic options and outline routeing and siting. The table opposite shows how we use Options Appraisal at different stages.



Project Stage	Options Appraisal normally required?	Purpose of OA work at this stage
Stage 1 Strategic Options Looking at the range of possible ways that a connection can be achieved	Yes	(i) Comparing technically feasible strategic options to inform the selection of a preferred strategic option(s).
Stage 2 Outline Routeing / Siting Looking at broad corridors for linear infrastructure or general locations for other structures	Yes As appropriate	(i) Comparing route corridors / sites to inform the selection of a preferred route corridor / site. (ii) Back-checking and review of the performance of the preferred route corridor or site against the anticipated performance of the preferred strategic option if there have been material changes.
Stage 3 Detailed Routeing / Siting Looking at the precise alignment or precise location for infrastructure	As appropriate As appropriate	(i) Comparing alignment options to inform the selection of a proposed alignment (if required), In some cases, only a single alignment will be developed. (ii) Back-checking and review of the performance of the preferred alignment against the anticipated performance of the preferred route corridor if there have been material changes.
Stage 4 Proposed Application Consulting and preparing an application for development consent	As appropriate As appropriate	(i) Appraisal of the performance of any further technically feasible options that have not previously been considered and which have been identified through formal pre-application consultations. (ii) Back-checking and review of the performance of the proposed scheme in the light of any new information arising through consultation.
Stage 5 Application for Development Consent	N/A	
Stage 6 Consideration and Hearing	N/A	

How we use Options Appraisal to inform decisions

Options Appraisal ensures that we have considered all the relevant factors when selecting a preferred option.

Options Appraisal is underpinned by a set of overarching principles which reflect our statutory duties, which assist us in our decision-making and which help achieve an appropriate balance between competing interests that must be taken into account in Options Appraisal.

We will generally consider options to have an advantage if:

- **we can use or adapt existing infrastructure, or where we can negotiate different commercial arrangements with our customers to achieve a need, rather than building new infrastructure;**
- **they are shorter, compared with longer routes;**
- **they are financially less expensive compared to other more expensive options;**
- **they avoid or mitigate environmental or socio-economic impacts.**

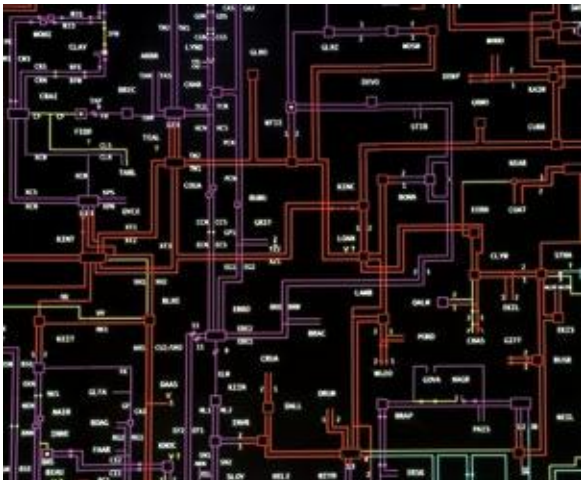
Taking into account the views of our stakeholders National Grid will make a judgement on the option which best balances all of our duties and obligations.

Together with the feedback we receive during the consultation process, Options Appraisal informs our decision-making at various points of the project. It helps us to make comparisons between the options available, by taking into account the information we have collected for each individual topic and sub-topic for each option.

In most cases a single preferred option will be identified. However, where it is not possible or appropriate to narrow down the selection to one preferred option, then more than one option may be taken forward.

One option may perform better on technical and environmental grounds than another, but at much higher cost. In those cases, we need to make a judgement as to whether the additional benefits of the more expensive option justify the additional cost. In doing this we will take into account consultation feedback we have received.

Further information on Appraisal sub-topics can be found on pages (10–15).



Outputs of Options Appraisal

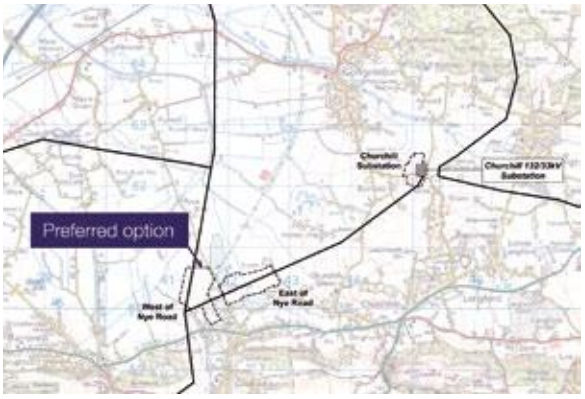
The results of Options Appraisal are normally reported at each stage of the project evaluation and will inform the project consultation.

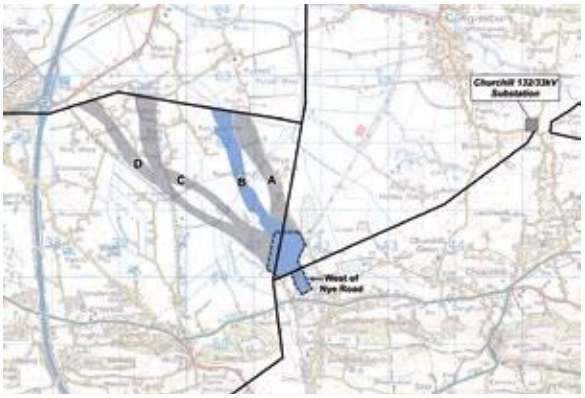
For Stage 1 where we compare strategic options, results are reported in our Strategic Options Report.

At Stage 2 where we look at broad corridors or general locations, the findings will be presented in the Route Corridor or Siting Study Report.

At Stage 3 where we consider the precise alignment or location of any infrastructure, then any Options Appraisal carried out will be included in the consideration of alternatives section in the Environmental Statement.

At Stage 4 where we consult on and prepare our application for development consent, any Options Appraisal carried out will be included in the application documents.





Appraisal Topics

There are four main topics we consider during our assessments of potential options. These can be broken down further into sub-topics, which are shown in the table below.

Options Appraisal is designed to be as useful as possible, both to us in making a decision, and to the public in understanding what information we have used to help us reach our decision. For this reason, we carefully consider all sub-topics and only include in our Options Appraisal those which could have a bearing on the choice of option. For example, if there are no features of historic importance, this topic will not be considered within our appraisal.

We will not include sub-topics if all of the options we are considering would have similar effects. For example, if all of our options would have similar effects on air quality or noise levels, then we will scope those sub-topics out of our Options Appraisals (though we will still consider any likely effects in our Environmental Statement). Once we have decided which of the sub-topics are most relevant to each option, we discuss this scope with our stakeholders and consult them on which sub-topics they consider to be particularly important given their knowledge of the local area.

Technical	Environmental	Socio-economic	Cost
Technical complexity	Landscape and Visual	Local economic impact	Capital cost
Construction/project delivery issues (incl resource and waste issues)	Ecology	Aviation and Defence	Lifetime cost
Suitability of technology	Historic environment	Traffic and Transport	
Network capacity	Water		
Network efficiencies/ benefits (incl energy efficiency)	Local air quality		
	Noise and Vibration		
	Soils and Geology		

Technical Considerations

Before we start Options Appraisal, we review the technical feasibility of potential options to ensure that the options we are considering are all achievable.

The technical sub-topics we use in Options Appraisal are listed below.

Technical complexity

Options that are more complex may increase the overall complexity of the transmission system. This in turn can make it more difficult for us to switch off parts of the system (e.g. for maintenance) and may make the system less able to cope with some faults. We generally consider those options which are less complex as more advantageous.

Construction/project delivery (including resource and waste issues)

Options that involve a greater quantity of construction, require us to switch off parts of the system for long periods of time to allow for construction and/or which require untried or untested or difficult construction techniques, may all present a delivery and cost risk to the project. We consider the volumes of materials used in constructing different infrastructure options and the volumes of waste that will be generated, to identify the least 'resource-hungry' options.

Suitability of technology

In some situations, a new or emerging technology may appear to be suitable, but it may not be proven to work in the precise situation required. This can present a technology risk that could increase costs, delay the delivery of the project and/or reduce the resilience of the network to some faults. We will generally therefore consider options which use proven technologies to be an advantage where we are unable to mitigate the risks associated with alternatives.

Network capacity

Options which provide the gas or electricity transmission system with additional capacity, over and above the minimum required for that project may reduce the requirement for or cost of further reinforcement in the future. We will therefore consider such options to have an advantage if we believe there will be a need for increased capacity in the future.

Network efficiencies/benefits

Some options will have additional benefits beyond what they are designed to do. Options which improve the overall efficiency of the transmission network (for example, by reducing transmission system losses), and/or which deliver any other system benefits, will generally be considered to have an advantage over those which do not.

Where appropriate we can also compare the implications on climate change for each of the options under consideration by comparing their energy use. For example, for gas infrastructure projects we can compare the energy efficiency of using pipelines compared with compressors.

Operating our networks safely is a fundamental prerequisite and a vital requirement underpinning our licensed network operator responsibilities. Only options that would be safe to build and operate will be taken forward for further consideration.

Environmental Considerations

We consider a wide range of environmental sub-topics throughout the different stages of the Options Appraisal process. Generally, the environmental sub-topics that we use in Options Appraisal are set out below.

Landscape and Visual

The effects of our infrastructure on the character of the landscape or on people's views are important issues that we need to consider. Even infrastructure which is largely underground can affect the landscape and can require some above-ground structures. For each option, we assess the likely effects on important areas such as National Parks or Areas of Outstanding Natural Beauty (AONB), and the effect on views from settlements or other features. We recognise however, that not all sites that are valued by and important for the wellbeing of local communities are included in designated areas. In general, options will be of benefit if they avoid or minimise effects on the landscape or on views.

Ecology

Wherever possible we seek to avoid negative effects on nature conservation. We assess the likely effects of each option on important areas including Special Areas for Conservation (SACs), Special Protection Areas (SPAs), Sites of Special Scientific Interest (SSSIs) and other features of nature conservation value. When comparing between options, those which avoid or mitigate impacts on sites of importance for ecology or biodiversity will be considered advantageous.

Historic Environment

Wherever possible we seek to avoid negative effects on important historic features. In carrying out Options Appraisal, we compare the likely effects of different options on features such as World Heritage Sites, Scheduled Monuments and Listed Buildings. Most "point" sites can relatively easily be avoided by National Grid infrastructure, but there may be impacts on the setting or context of such features. Those options which can avoid or mitigate impacts on features of cultural heritage will generally be advantageous compared with those which do not.

Local air quality

Although there may be some temporary impacts on local air quality due to dust and emissions caused during construction, most National Grid infrastructure does not have significant impacts on local air quality. However under certain circumstances, such as if there is an Air Quality Management Area, or where different technology options with very different effects on local air quality are being considered, this will be included in Options Appraisal. Options which have less effect on air quality will be advantageous.

Noise and Vibration

During the Options Appraisal we consider any effects of noise or vibration on people and the local environment. While noise and vibration issues are considered at the Environmental Assessment stage of any potential project, they are not always relevant during Options Appraisal. However, if there are sensitive receptors in the area, and if there is an obvious difference in the noise performance of options under consideration, then it can be differentiated from other options at this early stage. Options which have less noise effects will be advantageous compared with those with more.

Water

We consider all effects on the water environment including water quality and flood risk. This is particularly relevant for infrastructure with a large footprint or which is located underground. Options which have less effects on the quality of water or the risk of flooding will be advantageous.

Soils and Geology

These are important resources both economically, for agriculture, and biologically. Where possible we therefore seek to minimise effects on the soil resource. We identify areas of value such as Geo-parks, geological SSSIs and large areas of valuable farmland and assess the potential effects of each option. Those options which can avoid or effectively mitigate any such impacts will be advantageous.

Socio-economic Considerations

The potential effects of our projects on people, communities and the economy are important considerations in our appraisals of options. The socio-economic sub-topics which we consider are set out below.

Local Economic Activity

Economic activity is included in our Options Appraisal process to make sure that we consider any benefits or disadvantages our infrastructure might have on the local economies where they are located. We do not take into account the wider national economic benefits of our projects, as these would normally be the same for each option considered and hence would not help in deciding between options.

Ultimately, when considering whether particular proposals should be granted consent, the decision-making body must, as set out in the Overarching Energy National Policy Statement EN-1, consider whether any adverse impacts arising from the proposed development outweigh its benefits. To that end, broader national, regional and local economic benefits arising from the connection of secure, reliable, affordable and low carbon sources of energy will be taken into account by decision-makers.

At Stages 1 and 2, we appraise our options with regard to key receptors including, significant areas of economic activity such as major businesses, tourist attractions and large areas of land zoned for industrial or employment use which could potentially be affected by the option. Where Options Appraisal is considered appropriate at Stage 3, we would carry out a more detailed analysis of the impact of different options on the local economy. We will generally consider as advantageous options which benefit or do not have an adverse impact on local economies.

Traffic and Transport

We assess the potential effects of our projects on traffic and transport infrastructure and the users of it, including road, rail, ports, waterways, public rights of way and, where appropriate, public transport. At Stage 1 this may include a very high-level assessment to identify any potentially significant transportation issues, such as inadequate road networks to transport large materials or equipment. At later stages, we carry out a more detailed assessment of the potential effects on local road users. We generally consider as advantageous options that cause the least disruption to local users or roads and rights of way.

Aviation and Defence

Aviation and defence areas may also have an influence over the selection of options. Examples may include airports, airfields, radar sites and military training areas. Some of these may be absolute constraints on location, or may have safeguarding limitations that we would need to comply with, for example by the use of low height pylons or undergrounding. We may therefore discount an option if we are unable to find an acceptable means of avoiding or mitigating such constraints.

Cost Considerations

National Grid has a statutory duty to develop and maintain a safe, efficient coordinated and economical network. The financial impact of a project is therefore a fundamental part of the appraisal process. The differences in cost between options can often be extremely large, especially when different technologies are being considered (e.g. overhead lines versus underground cables, or gas pipelines versus compressors), as well as the length of the connection. It is therefore important to factor this in to any decision we make about which option we choose.

We prepare a cost estimate for each option, based on broad assumptions regarding the technology to be used and the likely length or scale of the scheme. We explain how we have done this and which unit cost estimates we have used in the relevant report for that Stage of the process, for example; Strategic Options Report, Route Corridor Study etc..

The cost estimates we produce for new infrastructure include not only the total cost of construction/installation, but also the lifetime operation and maintenance costs. We take account of relevant recent information on costs and use a net present value (NPV) discount rate consistent with our lifetime cost calculations.

As set out in the guiding principles, options with lower capital and lifetime costs will generally be advantageous compared with those with higher costs.

Further Information

The following reports are available at www.nationalgrid.com/majorprojectdocuments

Our approach to the design and routeing of new electricity transmission lines

Our approach to Consultation

Our approach to Socio-economics


uvex

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Appendix G:
The Holford Rules

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Guidelines on overhead electricity transmission line routeing were first formulated in 1959 by Sir William later Lord, Holford, who was a part-time member of the CEGB. National Grid has reviewed these guidelines, known as the 'Holford Rules', and concluded that they have stood the test of time. National Grid therefore intends to continue to employ them as a basis of the company's approach to overhead electricity transmission line routeing.

Since the formulation of the original Rules, formal requirements for environmental assessment have been introduced. Whilst environmental assessment for overhead electricity transmission lines addresses wider topics than the visual amenity issue on which the Rules concentrate, they remain a valuable tool in the selecting and assessing potential route options as part of the environmental assessment process.

Government Policy as set out in National Policy Statement EN-5 Energy Network recognises the valuable guidance that the 'Holford Rules' can provide in routeing an overhead transmission line. The Policy Statement goes on to state that these guidelines should be followed by developers when designing their proposals and that the Planning Inspectorate and Secretary of State should take them into account when considering the proposals.

The original Rules and their added notes of clarification are set out below.

GUIDELINES FOR THE ROUTEING OF NEW HIGH VOLTAGE OVERHEAD TRANSMISSION LINES

Rule 1:

Avoid altogether, if possible, the major areas of highest amenity value, by so planning the general route of the first line in the first place, even if the total mileage is somewhat increased in consequence.

Note on Rule 1:

Investigate the possibility of alternative routes, avoiding if possible the areas of the highest amenity value. The consideration of alternative routes must be an integral feature of environmental statements. Areas of highest amenity value are:

- Areas of Outstanding Natural Beauty;
- National Parks;
- Heritage Coasts; and
- World Heritage Sites.

Rule 2:

Avoid smaller areas of high amenity value, or scientific interests by deviation; provided that this can be done without using too many angle pylons, i.e. the more massive structures which are used when lines change direction.

Note on Rule 2:

Some areas (e.g. Site of Special Scientific Interest) may require special consideration for potential effects on ecology (e.g. to their flora and fauna). Where possible choose routes which minimise the effects on the setting of areas of architectural, historic and archaeological interest including Conservation Areas, Listed Buildings, Listed Parks and Gardens and Ancient Monuments.

Rule 3:

Other things being equal, choose the most direct line, with no sharp changes of direction and thus with fewer angle pylons.

Note on Rule 3:

Where possible choose inconspicuous locations for angle pylons, terminal pylons and sealing end compounds.

Rule 4:

Choose tree and hill backgrounds in preference to sky backgrounds wherever possible; and when the line has to cross a ridge, secure this opaque background as long as possible and cross obliquely when a dip in the ridge provides an opportunity. Where it does not, cross directly, preferably between belts of trees.

Rule 5:

Prefer moderately open valleys with woods where the apparent height of pylons will be reduced, and views of the line will be broken by trees.

Notes on Rules 4 and 5:

Utilise background and foreground features to reduce the apparent height and domination of pylons from pan viewpoints. Minimise the exposure of numbers of pylons on prominent ridges and skylines. Where possible avoiding cutting extensive swathes through woodland blocks and consider opportunities for skirting edges of copses and woods. Protecting existing vegetation, including woodland and hedgerows, and safeguard visual and ecological links with the surrounding landscape.

Rule 6:

In country which 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 or ‘wirescape’.

Note on Rule 6:

In all locations minimise confusing appearance. Arrange wherever practicable that parallel or closely related routes are planned with pylon types, spans and conductors forming a coherent appearance; where routes need to diverge, allow where practicable sufficient separation to limit the effects on properties and features between the lines.

Rule 7:

Approach urban area through industrial zones, where they exist; and when pleasant residential and recreational land intervenes between the approach line and the substation, go carefully into the comparative costs of the undergrounding, for lines other than those of the highest voltage.

Note on Rule 7

When a line needs to pass through a development area, route it so as to minimise as far as possible the effect on development. Alignments should be chosen after consideration of effects on the amenity of existing development and on proposals for new development. When siting substations take account of the effects of the terminal pylons and line connections that will need to be made and take advantage of screening features such as ground form and vegetation.

SUPPLEMENTARY NOTES:

Residential Areas - Avoid routeing close to residential areas as far as possible on grounds of general amenity.

Designations of County, District and Local Value - Where possible choose routes which minimise the effect on Special Landscape Areas, areas of Great Landscape Value and other similar designations of County, District or Local value.

Alternative Pylon Designs - In additional to adopting appropriate routeing, evaluate where appropriate the use of alternative pylon designs now available where these would be advantageous visually, and where the extra cost can be justified.

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Appendix H:
Baseline Figures

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FIGURE 8-1A to D	Ecological Designations
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FIGURE 8-2 A to D	Countryside Council for Wales Phase 1 Habitat Survey Data
FIGURE 9-1	Cultural Heritage Features - Overview
FIGURE 9-1 A to D	Cultural Heritage Features
FIGURE 10-1	Landscape Designations - Overview
FIGURE 10-1 A to D	Landscape Designations
FIGURE 10-2	Landscape Character Areas
FIGURE 10-3	LANDMAP Visual and Sensory Evaluation - Overview
FIGURE 10-3 A to D	LANDMAP Visual and Sensory Evaluation
FIGURE 10-4	LANDMAP Landscape Habitat Evaluation - Overview
FIGURE 10-4 A to D	LANDMAP Landscape Habitat Evaluation
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FIGURE 10-5 A to D	LANDMAP Cultural Landscape Evaluation
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FIGURE 10-11 A to D	Visual Receptors and Screening Elements
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Figure Number	Topic
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Appendix I:
Corridor Figures

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All Route Corridor Options and Designations

Plates 1 to 6 (Ref Figure 14-1)

Figure Number	Topic
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FIGURE 14-5	Route Corridors and Ecological Designations – Sheet 2
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Figure Number	Topic
FIGURE 14-40	Route Corridors and Environmental Agency Wales Flood Zones - Sheet 1
FIGURE 14-41	Route Corridors and Environmental Agency Wales Flood Zones - Sheet 2
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FIGURE 14-46	Route Corridors and Other Features - Sheet 1
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South Common Area and Crossing Options

Plate 7 (Ref Figure 14-1)

Figure Number	Topic
FIGURE 15-1	South Common Area and Crossing Options - Sheet 7
FIGURE 15-2	South Common Area, Crossing Options and Ecological Designations - Sheet 7
FIGURE 15-3	South Common Area, Route Corridors and Cultural Heritage Designations - Sheet 7
FIGURE 15-4	South Common Area, Crossing Options and Landscape Designations - Sheet 7
FIGURE 15-5	South Common Area, Crossing Options and Visual Receptors and Screening Elements - Sheet 7
FIGURE 15-6	South Common Area, Crossing Options and Residential Density - Sheet 7
FIGURE 15-7	South Common Area, Crossing Options and Safeguarding (Jacobs) - Sheet 7
FIGURE 15-8	South Common Area, Crossing Options and Environmental Agency Wales Flood Zones - Sheet 7
FIGURE 15-9	South Common Area,Crossing Options and Other Features - Sheet 7

Appendix J:
Photographs of the Study Area

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Corridor / Crossing	Map Reference Number	Aerial Fly-over Reference
Northern Common Area	1	11473-1
Orange / Blue Corridor	2	11473-13
	3	11473-16
	4	11473-30
Orange Corridor	5	11473-35
	6	11472-44
	7	11472-49
	8	11472-34
	9	11475-30
Blue Corridor	10	11472-59
	11	11475-39
Yellow / Purple	12	11472-81
	13	11474-76
	14	11474-89
	15	11475-53
	16	11476-75
Yellow Corridor	17	11476-82
	18	11477-41
	19	11477-25
	20	11476-90
Purple Corridor	21	11477-52
	22	11478-59
Southern Common Area	23	11473-66
	24	11471-85
	25	11478-75
	26	11471-99
	27	11478-71
Crossing Point A/B	28	11471-90
	29	11471-82
	30	11470-38
Crossing Pont C	31	11471-73
	32	11470-39
	33	11479-95
Crossing Point D/E	34	11471-80
	35	11471-69
	36	11470-44
	37	11479-87
Pentir Substation	38	11479-102

AERIAL PHOTOGRAPHY

Legend

- Existing National Grid Substation
- National Grid 400kV Overhead Electricity Transmission Line
- National Grid 132kV Overhead Electricity Transmission Line
- National Grid 400kV Underground Electricity Transmission Cable
- National Grid 132kV Underground Electricity Transmission Cable
- Study Area
- Purple Corridor
- Yellow Corridor
- Blue Corridor
- Orange Corridor
- Common Area
- Menai Strait Crossing Area
- Oblique Photograph Location and Direction

For photograph image refer to Appendix J

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	SEP 12	Initial Issue	AD	VC	VC	CR

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Client: nationalgrid

Project: NORTH WALES CONNECTION PROJECT
WYLFA TO PENTIR OVERHEAD ELECTRICITY TRANSMISSION LINE

Drawing Title: LOCATION OF OBLIQUE AERIAL PHOTOGRAPHS

Drawing Status: FINAL (Publication Version September 2012)

Scale @ A3	1:150,000	Scale @ A1 1:75,000
Jacobs No.	B1745000 WP-PH-LO-01	
Client No.		

Drawing No.: FIGURE 6-2

0 1 2 3 4 5 KM

Northern Common Area

Photo Number 1. View of Wylfa and Cemaes looking south east. (11473-1)

Orange / Blue Corridor

Photo Number 2. View towards Carreglefn looking south. (11473-13)

Photo Number 3. View of Rhosgoch tank farm and Llyn Alaw looking south east. (11473-16)

Photo Number 4. View of Rhosybol and Llyn Alaw looking south west. (11473-30)

Orange corridor coverage continues at photo 5.

Blue corridor coverage continues at photo 10.

Orange Corridor

Photo Number 5. View of Capel Parc looking south. (11473-35).

Photo Number 6. View from Cefni Reservoir looking north towards Amlwch. (11472-44).

Photo Number 7. View from Cefni Reservoir looking east. (11472-49).

Photo Number 8. View of Llangefni looking north. (11472-34).

Photo Number 9. View of Llangefni and Talwrn looking north. (11475-30)

Blue Corridor

Coverage continued from 'Orange and Blue Corridor' photo 4.

Photo Number 10. View of Llanerchymedd looking north to Llyn Alaw. (11472-59).

Photo Number 11. View from RAF Mona looking north west. (11475-39).

Coverage continues at photo 19.

Yellow / Purple Corridor

Photo Number 12. View of Wylfa and Cemlyn Bay looking north (11472-81)

Photo Number 13. View from Cemlyn Bay looking south to Llyn Llygeirian (11474-76)

Photo Number 14. View of Mynydd Mechell and Llyn Alaw Windfarm looking south (11474-89)

Photo Number 15. View of Bodedern looking north west. (11475-53).

Photo Number 16. View of Bryngwran looking south east. (11476-75).

Yellow Corridor

Photo Number 17. View of Gwalchmai looking south east. (11476-82).

Photo Number 18. View of Gwalchmai looking north west. (11477-41).

Photo Number 19. View of Malltraeth Marsh looking north west. (11477-25).

Photo Number 20. View of Rhostrehwfa looking south east. (11476-90).

Coverage continues as ''Southern Common Area'' photo 23.

Purple Corridor

Coverage continued from "Yellow and Purple Corridor" photo 16

Photo Number 21. View looking north west towards Rhosneigr and RAF Valley. (11477-52).

Photo Number 22. View looking south east from Capel Mawr towards Llangaffo. (11478-59)

Coverage continues as ''Southern Common Area'' photo 23.

Southern Common Area

Photo Number 23. View of Menai Bridge and Llanfair PG looking south west.. (11473-66)

Photo Number 24. View of Llanfair PG and Menai Bridge looking east.. (11471-85).

Photo Number 25. View of Llandniel Fab looking east towards Menai Strait (11478-75).

Photo Number 26. View of Gaerwen looking south east. (11476-99).

Photo Number 27. View of Gaerwen Industrial Estate looking east to Menai Strait. (11478-71).

Coverage continues as "Crossing Points" from photo 28

Crossing Point A/B

Photo Number 28. View of Britannia and Menai Bridge looking south east from Anglesey. (11471-90).

Photo Number 29. View of Llanfair PG looking east to Menai Bridge and Bangor. (11471-82).

Photo Number 30. View of Goetre and Parc Menai looking north west to Britannia Bridge. (11470-38.)

Crossing Point C

Photo Number 31. View from Anglesey looking east to Y Felinheli. (11471-73).

Photo Number 32. View looking south west to Y Felinheli (11470-39).

Photo Number 33. View of Pentir Substation looking north west to Vaynol and Britannia Bridge. (11479-95).

Crossing Point D/E

Photo Number 34. View looking south from above Plas Newydd. (11471-80).

Photo Number 35. View looking east from Brynsiencyn. (11471-69).

Photo Number 36. View of Menai Strait looking south west to Plas Menai. (11470-44).

Photo Number 37. View of Pentir Substation looking south west toward Bethel. (11479-87).

Pentir Substation

Photo Number 38. Detailed view of Pentir Substation. (11479-102).

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Appendix K:
Ecological Designations and Sensitivities

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Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Ramsar		
Corsydd Môn a Llŷn / Anglesey and Llŷn Fens RAMSAR	Cors Goch, Cors Erddreiniog, Cors Bodeilio, and Cors y Farl on the eastern section of Anglesey and Cors Edern and Cors Geirch on the Llŷn Peninsula (Gwynedd) comprise an internationally important suite of base-rich fens, a rare wetland habitat type which has undergone large scale decline in the British Isles. The composite site qualifies under Ramsar criterion 1d as an example of a type of wetland which is rare and unusual in the biogeographic region and under criterion 2b as it is of special value for maintaining the genetic and ecological diversity of the region because of the quality and peculiarities of its flora and fauna. These fens are notable as the best Welsh sites for stoneworts (large freshwater algae which precipitate lime deposits and contribute to the deposition of marl) such as dwarf stonewort *Nitella tenuissima*.	Habitats and most species present within the site are not considered to be sensitive to overhead lines. Water fowl and terrestrial bird species present at the site may be initially sensitive to overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site including marsh fritillary, Geyer's whorl snail and Southern Damselfly (SAC qualifying features) are potentially highly sensitive to construction of pylons due to habitat loss.
Special Protection Area (SPA)		
Glannau Ynys Gybi / Holy Island Coast SPA	The SPA and proposed extensions consist of sea cliffs with cliff-top heath and grassland. The cliffs rise to 120m and the hinterland to 220m on Holyhead Mountain. There are many small offshore stacks and islets. The SPA also includes additional areas of maritime heath, maritime grassland and rocky outcrops, which are known to be important feeding habitat for chough *Pyrrhocorax pyrrhocorax*. Species of interest are breeding chough, raven *Corvus corax*, kestrel *Falco tinnunculus*, shag *Phalacrocorax aristotelis*, guillemot *Uria aalge*, razorbill *Alca torda*, kittiwake *Rissa tridactyla* and fulmar *Fulmarus glacialis* which nest on the cliffs. The islets around the headland support breeding cormorants *Phalacrocorax carbo*, herring gull *Larus argentatus*, lesser black backed gull *Larus fuscus* and great black-backed gull *Larus marinus*. Breeding linnet *Carduelis cannabina*, yellowhammer *Emberiza citrinella*, whitethroat *Sylvia communis*, wheatear *Oenanthe oenanthe* and stonechat *Saxicola torquata* can be found in the large areas of maritime heath and scrub along the mainland coastal strip.	Terrestrial bird species (including chough) along with seabirds which commute and forage over land and rivers e.g. gulls and cormorants are initially sensitive to overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and other species present within the site are not considered to be sensitive to overhead lines. Habitats and certain species present on site including chough (SAC qualifying feature) are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Traeth Lafan / Lavan Sands, Conway Bay	The SPA consists of a large area of intertidal habitats including mud flats which provide suitable habitat for great crested grebes *Podiceps cristatus* and supports nationally important wintering populations of oystercatchers *Haemtopus ostraleques* (1% of the GB wintering population) and curlew *Numenius arquata* (2% of GB population). The boundaries of the SPA are coincident with those of the Traeth Lafan SSSI.	Waterfowl and terrestrial bird species are initially sensitive to overhead lines due to the risk of collision, although this risk should reduce over time. Habitats present within the site are not considered to be sensitive to overhead lines but habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance. However it is highly unlikely that pylons will be constructed on any habitat present within the SPA (intertidal). Intertidal habitat loss would not be applicable.
Ynys Feurig, Cemlyn Bay And The Skerries	The SPA comprises three separate areas and is a site is of importance for four species of breeding terns. The three separate areas are treated as a single site as a consequence of regular movement by birds between the component parts. Ynys Feurig consists of a series of sparsely vegetated low-lying islands extending about 1 km out to sea from a sandy shore. At Cemlyn Bay, a shingle storm beach forms a bar between a tidal lagoon and the open shore. The shingle habitats, together with saltmarsh developing around the lagoon and brackish pools further inland are an unusual combination of habitats. The Skerries are a group of sparsely vegetated islets, 17 ha in extent. They are protected by strong currents but are very exposed to strong westerly and northerly winds. The species of tern for which the SPA is designated are roseate tern *Sterna dougallii,* common tern *Sterna hirundo*, Arctic tern *Sterna paradisaea* and Sandwich tern *Sterna sandvicencis.*	Terns and other seabirds that migrate/court overland are potentially initially sensitive to overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and other species present within the site are not considered to be sensitive to overhead lines however habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Special Area of Conservation (SAC)		

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Afon Gwyrfai a Llyn Cwellyn	This site comprises the Afon Gwyrfai and Llyn Cwellyn. The Gwyrfai flows out of Llyn y Gader near Rhyd Ddu and passes through Llyn Cwellyn on its way to the sea at Y Foryd, Caernarfon Bay. It also includes a tributary of the Gwyrfai, the Afon Treweunydd, and the small lake it flows from on the slopes of Snowdon. Sporadically throughout its course, the SAC is abutted by semi-natural wetland riparian habitat much of which is within the underpinning SSSI. Llyn Cwellyn has long been recognised for its conservation importance and is an excellent example of a deep (maximum depth of 37m, average depth of 23m) oligotrophic lake formed during the last Ice Age. Its nutrient–poor waters support a range of typical macrophytes, and one of the best populations of floating water plantain in the UK. The whole of the Gwyrfai river system is of outstanding ecological quality. The river is particularly noted for its excellent salmon population, for which it is considered to be one of the best supporting rivers in the United Kingdom. It is also notable for its otter population which occur here in good numbers because of the relative naturalness of its riparian habitats and the abundance of undisturbed dense cover. In addition to the lake, the river supports a discrete community of floating water plantain, and water-crowfoot *Ranunculus spp*, with other associated vegetation including bryophyte assemblages occurring in various sectors of the river. The qualifying features of this SAC are Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoteo-Nanojuncetea; water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation; Atlantic salmon *Salmo salar*; floating water-plantain *Luronium natans* and European otter *Lutra lutra.*	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from water pollution, and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Bae Cemlyn / Cemlyn Bay	At Cemlyn Bay, a shingle storm beach forms a bar between a tidal lagoon and the open shore. The shingle habitats, together with saltmarsh developing around the lagoon and brackish pools further inland are an unusual combination of habitats. The SAC site is of importance for its coastal lagoons and perennial vegetation of stony banks lagoon and associated species and the shingle ridge and its vegetation. Other areas of importance are areas of scrub, marshy grassland, coastal grassland, saltmarsh, ditches, intertidal, maritime cliff and associated ledges and crevices.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Corsydd Môn / Anglesey Fens	The composite SAC sites form part of the Ramsar Corsydd Môn a Llŷn/ Anglesey and Ll n Fens. Habitat types and species for which the site is designated are: ▪ calcareous fens with *Cladium mariscus* and species of the Caricion davallianae; ▪ alkaline fens; ▪ Southern Damselfly *Coenagrion mercuriale*; ▪ Marsh Fritillary butterfly *Euphydryas (Eurodryas, Hypodryas) aurinia*; ▪ hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp; ▪ Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*); ▪ Northern Atlantic wet heaths with *Erica tetralix;* ▪ Geyer's whorl snail *Vertigo geyeri,*	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Bird species such as waterfowl present at the site may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site including marsh fritillary, Geyer's whorl snail and Southern Damselfly (SAC qualifying features) are potentially highly sensitive to construction of pylons due to habitat loss.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Glannau Môn: Cors Heli/ Anglesey Coast: Saltmarsh	The SAC extends along the south western coast of Anglesey from Abermenai Point to Aberffraw. The site is designated for the following important habitats: Atlantic salt meadows (Glauco-Puccinellietalia maritimae); estuaries; mudflats and sandflats not covered by seawater at low tide; and *Salicornia* and other annuals colonising mud and sand.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss.
Glannau Ynys Gybi / Holy Island Coast	This site comprises heathland and maritime grassland communities, coastal cliffs and ledges, with assemblages of vascular plants, birds and invertebrates of considerable interest. The qualifying features are vegetated sea cliffs of the Atlantic and Baltic coasts; Northern Atlantic wet heaths with *Erica tetralix*; European dry heaths; reefs; submerged or partially submerged sea caves and Atlantic grey seal *Halichoerus grypus*. The South Stack fleawort *Tephroseris integrifolia subsp. maritima* is not found anywhere else in the world and the nationally rare spotted rock-rose *Tuberaria guttata* occurs within the mosaic of heath and grassland communities above the cliffs, together with pale heath violet *Viola lactea*. Other nationally scarce plant species on the cliffs include golden samphire, *Inula crithmoides* and the endemic rock sea-lavender *Limonium britannicum subsp. celticum* and *L. procerum subsp. procerum*. Juniper *Juniperus communis*, a locally uncommon plant, occurs on the cliffs and there are Atlantic bryophytes and ferns such as hay scented buckler fern *Dryopteris aemula*, Wilsons filmy fern *Hymenophyllum wilsonii* and Tunbridge filmy fern *H. tunbrigense*. The cliffs support important seabird colonies; guillemots *Uria aalge*, razorbills *Alca torda* and puffins *Fratercula arctica* combine to create one of the largest colonies of breeding auks in North Wales. The site supports a good range of invertebrates including the silver studded blue Plebejus argus. Marsh fritillary *Eurodryas aurinia* has been recorded here in the past.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Seabirds and terrestrial birds commuting or foraging overland are potentially initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Glan-traeth	The shallow pools at Glan-traeth, which were created by the extraction of sand, support one of the largest breeding populations of great crested newt *Triturus cristatus* in Wales.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from water pollution, and disturbance.
Llyn Dinam	This lake is the northernmost lake within the Llynnau y Fali SSSI lake complex. The site is designated for its natural eutrophic lakes with *Magnopotamion* or *Hydrocharition*-type vegetation. It supports a clear-water aquatic plant community characterised by a wide variety of pondweeds, while the lakes persist. Reedswamp and fen should support, amongst other things, marsh fern *Thelypteris palustris*, while providing suitable habitat for breeding and wintering wildfowl and other wetland birds. The mixture of lakes, ponds, ditches and other water habitats; together with the reedbeds, marshland, scrub and wet grassland, should display the process of natural succession from open water to marshy grassland.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines Waterfowl and terrestrial bird species present on the site are initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Y Fenai A Bae Conwy/ Menai Strait And Conwy Bay	The northern boundary of the SAC extends from the east coast of Anglesey at Moelte, east to a point above Llandudno and south through the Menai Straits to Abermenai Point, south of Caernarfon. *This site comprises large shallow inlets and bays; mudflats and sandflats not covered by seawater at low tide; reefs; sandbanks which are slightly covered by sea water all the time; and submerged or partially submerged sea caves.*	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance. However it is highly unlikely that pylons will be constructed on any habitat present within the SAC (intertidal), in which case habitat loss would not be applicable.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Y Twyni O Abermenai I Aberffraw/ Abermenai To Aberffraw Dunes	The SAC is divided into several areas along the south west coast of Anglesey extending from Aberffraw to Abermenai. The qualifying features of this SAC are fixed dunes with herbaceous vegetation "grey dunes"; dunes with *Salix repens ssp. Argentea* (Salicion arenariae); embryonic shifting dunes; humid dune slacks; natural eutrophic lakes with Magnopotamion or Hydrocharition-type vegetation; petalwort *Petalophyllum ralfsii*; shore dock *Rumex rupestris*; and shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes').	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Site of Special Scientific Interest (SSSI)		
Afon Gwyrfai A Llyn Cwellyn	Afon Gwyrfai a Llyn Cwellyn is of special scientific interest for its geological and biological features. Llyn Cwellyn is an important example of a large, deep oligotrophic to mesotrophic lake. It is one of three remaining natural localities in Wales for the Arctic charr, *Salvelinus alpinus*, and supports a genetically distinct race of this species. Brown trout *Salmo trutta*, and salmon *Salmo salar* have been recorded in Llyn Cwellyn, and the lake is accessible to eels *Anguilla anguilla* and sea trout. The nationally scarce plant species awlwort *Subularia aquatica* is abundant in places. Other nationally scarce species present are six-stamened waterwort *Elatine hexandra*, occurring in shallow water near the north shore and spring quillwort *Isoetes echinospora*. The area is considered to be one of the best in the United Kingdom for the nationally scarce plant floating water-plantain *Luronium natans*. Two nationally scarce beetles have been recorded in Llyn Cwellyn, namely *Laccobius atratus* a scavenger water beetle, and *Oulimnius troglodytes* a riffle beetle. The Afon Gwyrfai is considered to be one of the best examples in the United Kingdom of an oligotrophic to mesotrophic river with submerged beds of aquatic plants, especially its *Callitricho-Batrachion* vegetation community. Small populations of both river lamprey *Lampetra fluviatilis* and brook lamprey *Lampetra planeri* are present in the river as well as a significant population of otter *Lutra lutra* and water vole *Arvicola terrestris*.	Habitats and species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from land take and water pollution, and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Afon Seiont	This site is designated solely for its geological interest. Stratigraphically, this is the most extensive, graptolite-rich, Lower Ordovician locality in North Wales which is of national importance because of the succession demonstrated. There is great potential for future research at this site.	The geological features present within the site are not considered to be sensitive to Overhead lines but are potentially highly sensitive to construction of pylons due to land take and/or pollution.
Arfordir Gogleddol Penmon	The site is of special interest for its wet heath, calcareous dry heath, neutral grassland, maritime grassland and base-rich flushes, as well as for a large population of lesser butterfly orchid *Platanthera bifolia* and breeding colonies of cormorant *Phalacrocorax carbo*. The shore is the best example of marine communities typical of limestone shores exposed to moderate degrees of wave exposure in the area between Bardsey Island and Great Orme's Head. It is also of special interest for the presence of diverse rockpool and rock overhang communities, extensive rocky shore community zonation patterns and for the presence of two communities of restricted national distribution.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Waterfowl, seabird and terrestrial bird species present at the site may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from land take and water pollution, and disturbance.
Baron Hill Park	This site is parkland containing ancient trees which support a diverse and interesting epiphytic lichen flora. A total of 118 lichen species have been recorded from all substrata in the Park. Lichen species of particular note include: *Parmelia soredians*, *Arthonia impolita*, *Caloplaca luteoalba*, *Parmelia reticulata*, *Rinodina riboris* and *Schismatomma decolorans*. *Anaptychia fusca*, which normally grow on maritime rocks, is found here on the bark of an oak tree.	The parkland habitat would be potentially highly sensitive to Overhead lines if the positioning of pylons resulted in the need for trees to be cleared underneath the Overhead lines. Other habitats and other species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Beddmanarch-Cymyran	There are large areas of sandbank, mudflat and saltmarsh, as well as two stands of dune heath. A wide range of water-birds, both on passage and in winter, are attracted to the area. A number of coastal bird species also breed in the area. The uncommon golden samphire *Inula crithmoides* occurs in both saltmarsh communities and on parts of the rocky shoreline. The coastal dune heath at both Traeth y Gribin and Cymyran are interesting examples of this locally uncommon habitat type.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Seabird, waterfowl and terrestrial bird species present at the site may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from land take and water pollution, and disturbance. However it is highly unlikely that pylons will be constructed on any habitat within the site (intertidal) in which case habitat loss would not be applicable.
Bwrdd Arthur	Bwrdd Arthur, a small flat-topped Carboniferous Limestone hill reaching an altitude of 160m, is designated for its botanical interest. The limestone exposures support the nationally rare species, hoary rockrose *Helianthemum canum* and ivy broomrape *Orobanche hederae*, whilst a number of uncommon bryophyte species occur on its south-facing slopes including *Bryum canariense*, *B.elegans* and *Isothecium striatulum*.	Habitats and species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from land take and water pollution, and disturbance.
Cadnant Dingle	This site is a *Brachypodium sylvaticum – Quercus/Fraxinus* (slender falsebrome - oak/ash) broadleaved woodland, with canopy forming tree species including ash *Fraxinus excelsior*, wych elm *Ulmus glabra*, sessile oak *Quercus petraea* and birch *Betula*. Hazel *Corylus avellana* with hawthorn *Crataegus monogyna* and elder *Sambucus nigra* are also present. The ground flora is notably rich in bryophytes amongst which there are a number of locally uncommon species such as *Lophocolea fragrans*, *Marchesinia mackaii* and *Fissidens celticus*. Red squirrel *Sciurus vulgaris* has been recorded frequently at the site.	The woodland and squirrel habitat would be potentially highly sensitive to Overhead lines if the positioning of pylons resulted in the need for a ride to be created underneath the Overhead lines. Birds using the woodland habitats such as raptors and corvids are initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Cae Gwyn	The main features of interest at Cae Gwyn are two wetland areas, separated by an area of heathland with outcropping rock. The flora is distinguished by an abundance of royal fern *Osmunda regalis* which varies from very large old plants to young plants; other notable species are bog sedge *Carex limosa* and cranberry *Vaccinium oxycoccus*. The northern wetland differs in having denser areas of willow and common reed *Phragmites communis*, but is similar in having numerous plants of *Osmunda*.	Habitats and species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Caeau Talwrn	Caeau Talwrn is of special interest for its neutral grassland and mire vegetation. The vegetation of this site is of particular interest as it includes not only dry neutral grasslands and various types of mire especially rich-fen, fen-meadow and rush pasture, but also shows the transitions between the various types particularly well.	Habitats and species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Carmel Head	This site is designated solely for its geological interest. The ancient rocks of the Mona Complex have been pushed over younger rocks to form the famous "Carmel Head Thrust". This locality provides the best exposures of these Precambrian gneisses, which are almost certainly the oldest rocks in Wales.	The geological features present within the site are not considered to be sensitive to Overhead lines but are potentially highly sensitive to construction of pylons due to land take and/or pollution.
Cemlyn Bay	At Cemlyn Bay, a shingle storm beach forms a bar between a tidal lagoon and the open shore. The shingle habitats, together with saltmarsh developing around the lagoon and brackish pools further inland are an unusual combination of habitats. The site forms part of the Cemlyn Bay SAC. The SSSI feature for the site is spiral tasselweed *Ruppia cirrhosa*	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Clegir Mawr	This site is designated for its botanical interest. The most noteworthy feature is the presence of a large population of the nationally rare annual rockrose *Tuberaria Guttata* growing in one of its nine known British localities. This is the only extant site on the main island of Anglesey, seven of the remainder being on Holy Island with one in the Lleŷn Peninsula. *Tuberaria guttata* is associated with thin acidic soils on rocky ridgelines or steep slopes. Other notable plant species present include the nationally uncommon golden-samphire *Inula Crithmoides* on the sea cliffs, and the locally uncommon prickly sedge *Carex Muricata subsp. Lamprocarpa* and dodder *Cuscuta Epithymum*.	Habitats and species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from land take and water pollution, and disturbance.
Coed Y Gell And Morfa Dulas	Coed y Gell falls within the *Hedera helix - Quercus/ Fraxinus* (ivy - oak/ ash) group of woodlands but has been principally selected because of the unusual environmental conditions in this locality. There is a varied ground flora including a number of uncommon bryophyte species of which the liverworts *Marchesinia mackaii*, *Cololejeunea rossettiana* and *Plagiochila britannica* are most noteworthy. Morfa Dulas consists of a spit supporting interesting dune grassland and saltmarsh communities.	The woodland habitat would be potentially highly sensitive to Overhead lines if the positioning of pylons resulted in the need for a ride to be created underneath the Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Coedydd Afon Menai	This site comprises a *Hedera Helix - Quercus/ Fraxinus* woodland comprising narrow strips of broadleaved woodland along sections of the southern shore of the Menai Strait. Wild service tree *Sorbus Torminalis*, a rarity in Gwynedd, occurs here. Various whitebeams are present, including the nationally rare *Sorbus Porrigentiformis*. Other locally uncommon species present include yellow-wort *Blackstonia Perfoliata*, wild madder *Rubia Peregrina* and spindle *Euonymus Europaeus*.	The woodland habitat would be potentially highly sensitive to Overhead lines if the positioning of pylons resulted in the need for a ride to be created underneath the Overhead lines. Other habitats and species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Cors Bodeilio	Cors Bodeilio is a nationally important calcareous mire. A notable feature of Cors Bodeilio is its rich orchid flora which includes the uncommon narrow-leaved marsh orchid *Dactylorchis traunsteineri* and fly orchid *Ophrys insectifera* growing here in *Schoenus* communities. The fen also supports a diverse invertebrate fauna with a variety of rare and uncommon species. The site is particularly rich in Diptera (true flies), aquatic Coleoptera (beetles) and Lepidoptera (moths). CCW manages part of this site as a National Nature Reserve.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Cors Bodwrog	Cors Bodwrog is a mesotrophic mire with areas of fen meadow. A number of uncommon plants are recorded including greater spearwort *Ranunculus lingua* and lesser bulrush *Typha angustifolia*. Eight species of Odonata have been recorded including the nationally scarce variable damselfly *Coenagrion pulchellum* and the scarce blue-tailed damselfly *Ischnura pumilio*. The breeding bird community which is of local importance includes teal *Anas crecca*, grasshopper warbler *Locustella naevia* and curlew *Numenius arquata.*	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Breeding bird species present at the site may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Cors Erddreiniog	Cors Erddreiniog is a large calcareous valley mire of national importance. There are three fen basins interconnected by the drainage system. Base-rich springs are associated with a rich flora of black bog rush *Schoenus nigricans*; narrow-leaved marsh orchid *Dactylorchis traunsteineri*, which has been the subject of taxonomic research; fly orchid *Ophrys insectifera* - here growing in a most unusual habitat; and columbine *Aquilegia vulgaris*. This orchid-rich vegetation type, found at a few sites in Anglesey and Lleyn, is not found elsewhere in Great Britain. The site also has a rich insect fauna, particularly of Lepidoptera and Odonata. CCW manages part of the site as a National Nature Reserve.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Cors Goch	Cors Goch features a nationally important valley mire, with acidic heaths and limestone grassland in close proximity. In addition to the rich plant species diversity the fen has a rich insect fauna, the Lepidoptera and Odonata being well represented.	Habitats and species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Cors Y Farl	Cors y Farl is probably the most intact of the nationally important calcareous fens in north Wales. In addition to the range of vegetation communities present, including *Cladium mariscus* dominated swamp vegetation; the site is also noted for its rich insect fauna which includes several rare and uncommon species.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Craig Wen / Cors Castell	Craig Wen / Cors Castell is a lowland acidic heathland habitat and base rich fen. Two uncommon heathland plant species, marsh gentian *Gentiana pneumonanthe* and pale heath violet *Viola lactea*, both of which have declined over recent years in Britain, are present.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Eithinog	Eithinog is of special interest for the fungi supported at the site. The site is the only location in Wales to support the Red Data List species fairy club fungus *Ramariopsis crocea*. The site also boasts a diverse assemblage of grassland fungi, including 21 species of pinkgill *Entoloma spp.*, making it one of the best sites in Wales for this group, 10 species of fairy club *Clavaria* spp., also present are species of waxcap *Hygrocybe* spp. and earthtongue *Geoglossum* spp.. At the western end of the site, the nationally scarce greater broomrape *Orobanche rapum-genistae* is associated with an area of gorse.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Fferam Uchaf	Fferam-uchaf is of special interest for its exposures of Llanvirn (Ordovician) rocks. This is the best locality for Llanvirn rocks in Anglesey, a series that is otherwise poorly represented in north Wales. This is an important site for an understanding of Lower Ordovician palaeogeography and the distribution of its faunas and sediments.	The geological features present within the site are not considered to be sensitive to Overhead lines but are potentially highly sensitive to construction of pylons due to land take.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Glannau Penmon-Biwmares	The site is of special interest for its intertidal communities of animals and plants typical of mixed sediment and of muddy gravel shores; four intertidal communities of restricted national distribution and two species-rich intertidal communities of marine plants and animals. In addition, the cliffs of glacial till to the east of Beaumaris are of local significance for invertebrates, supporting one of few populations of the ground beetle *Bembidion saxatile* in north Wales and this shore also provides an important high tide roosting area for waders that feed on Traeth Lafan.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Seabird, waterfowl and terrestrial bird species present at the site may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from land take and water pollution, and disturbance. However it is highly unlikely that pylons will be constructed on any habitat within the site (intertidal) in which case habitat loss would not be applicable.
Glannau Porthaethwy	The site extends along 4 km of the shore of Menai Bridge/ Porthaethwy in the Menai Strait and includes the shores of the ten associated islands. The shore supports the greatest diversity of marine plant and animal communities on this type of shore within this area. The shore is also important for the presence of five marine communities of restricted national distribution, five diverse rockpool and overhang communities, and for exhibiting the most comprehensive community zonation characteristic of sheltered rocky shores. Owing to its close proximity to Traeth Lafan, an internationally important site for wading birds and wildfowl, relatively undisturbed parts of this shore provide important high tide roost areas for waders that feed at Traeth Lafan and elsewhere in the Menai Strait. For example Ynys y Bîg provides an important roost site for oystercatchers. Additionally, otters have been recorded in and around the Afon Cadnant.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Seabird, waterfowl and terrestrial bird species such as raptors and corvids present at the site may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance. However it is highly unlikely that pylons will be constructed on any habitat within the site (intertidal). Intertidal habitat loss would not be applicable.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Glannau Rhoscolyn	The majority of habitat within Glannau Rhoscolyn SSSI consists of lowland and coastal heathland together with several rush pasture and mire communities associated with the habitat. This site supports the following Annex 1 habitat types: Dry heaths Vegetated sea cliffs of the Atlantic and Baltic coasts; and Northern Atlantic wet heaths with *Erica tetralix* The Red Data Book species spotted rock rose *Tuberaria guttata* is present at the site. Two Annex 1 bird species breed at the site, the chough *Pyrrhocorax pyrrhocorax*, for which the site is also selected, and the peregrine *Falco peregrinus*. The site is of marine biological interest for its diverse algal communities and the presence of specialised communities such as bedrock overhangs.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Waterfowl and terrestrial bird species such as raptors and corvids present at the site may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from land take and water pollution, and disturbance.
Glannau Ynys Gybi: Holy Island Coast	The coastal cliffs and the associated grassland and heaths are of major botanical interest. The South Stack fleawort *Tephroseris integrifolia subsp. maritima* is found nowhere else in the world and the nationally rare spotted rock-rose *Tuberaria guttata* occurs within the mosaic of heath and grassland communities above the cliffs, together with pale heath violet *Viola lactea*. Other nationally scarce plant species on the cliffs include golden samphire, *Inula crithmoides* and the endemic rock sea-lavender *Limonium britannicum subsp. celticum* and *L. procerum subsp. procerum*. Juniper *Juniperus communis*, a locally uncommon plant, occurs on the cliffs. The cliffs support important seabird colonies; guillemots *Uria aalge*, razorbills *Alca torda* and puffins *Fratercula arctica* combine to create one of the largest colonies of breeding auks in North Wales. Fulmar *Fulmarus glacialis*, kittiwake *Rissa tridactyla*, peregrine *Falco peregrinus* and chough *Pyrrhocorax pyrrhocorax* also nest on these cliffs. Within the heathland stonechat *Saxicola torquata*, skylark *Alauda arvensis*, linnet *Carduelis cannabina* and whitethroat *Sylvia communis* all breed regularly. The site supports a good range of invertebrates including the silver studded blue *Plebejus argus* and marsh fritillary *Eurodryas aurinia* has been recorded here in the past.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Seabirds and terrestrial birds commuting or foraging overland are potentially initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Glan-Traeth	The shallow pools at Glan-traeth, which were created by the extraction of sand, supported a large and significant population of great crested newt *Triturus cristatus*. The pools are also the breeding site for significant numbers of palmate newt *Lissotriton helveticus*, common frog *Rana temporaria* and toad *Bufo bufo*. The early sand grass *Mibora minima*, a rarity in Britain (restricted to a few areas in Anglesey and the Gower Peninsula) occurs in the grazed dune grassland, particularly near the edge of bare or eroded sand patches. Meadow saxifrage *Saxifraga granulata*, which is uncommon in Gwynedd, occurs in the grassland, whilst variegated horsetail *Equisetum variegatum* and round-leaved wintergreen *Pyrola rotundifolia* occur in the damp depressions	Habitats and species present within the site are not considered to be sensitive to Overhead lines Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from water pollution, and disturbance.
Gwenfro And Rhos Y Gad	A rich-fen mire habitat, which supports certain nationally uncommon vegetation types. There are also populations of three nationally uncommon plant species: narrow-leaved marsh orchid *Dactylorhiza traunsteineri*, fen pondweed *Potamogeton coloratus* and a dandelion *Taraxacum palustre*.	Habitats and species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Henborth	This site is selected solely for its geomorphological interest as it provides a rare and excellent exposure through the long axis of a drumlin, clearly revealing the internal structure and composition of the feature.	The geological features present within the site are not considered to be sensitive to Overhead lines but are potentially highly sensitive to construction of pylons due to land take and/or pollution.
Llanbadrig-Dinas Gynfor	This site is designated solely for its geological interest and is justly famous for the well exposed contact between the ancient Mona Complex and its younger cover of fossiliferous rocks (which are of "Lower Ordovician" age - about 490 million years old). This contact is a fine example of what is known as a geological unconformity and demonstrates the passing of an enormous period of time between the formation of the Mona Complex and the deposition of the over-lying Ordovician rocks.	The geological features present within the site are not considered to be sensitive to Overhead lines but are potentially highly sensitive to construction of pylons due to land take and/or pollution.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Llyn Alaw	Llyn Alaw is the largest mesotrophic open water in West Gwynedd. It has considerable ornithological interest especially for overwintering wildfowl and the number of teal *Anas crecca*, shoveler *Anas clypeata* and whooper swans *Cygnus cygnus* at times are around 1% of the British population. Other wildfowl species which occur include mallard *Anas platyrhynchos*, wigeon *Anas penelope*, goldeneye *Bucephala clangula*, pochard *Aythya ferina*, tufted duck *Aythya fuligula*, ruddy duck *Oxyura jamaicensis* and sometimes pink-footed geese *Anser brachyrhynchus*. In autumn large flocks of waders, in particular curlew *Numenius arquata*, lapwing *Vanellus vanellus* and golden plover *Pluvialis apricaria*, visit the exposed mud areas. The uncommon slender spike-rush *Eleocharis acicularis* occurs in the reservoir margins.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Waterfowl and terrestrial bird species such as raptors and corvids present at the site may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from water pollution, and disturbance. However it is highly unlikely that pylons will be constructed on any open water and fringe vegetation in which case habitat loss would not be applicable.
Llyn Bodgylched	This site comprises fen habitat with much of the open water covered by common reed *Phragmites australis* and tall fen vegetation. Locally uncommon species present include Lesser water-plantain *Baldeliia ranunculoides*, greater spearwort *Ranunculus lingua* and lesser tussock-sedge *Carex diandra*. The breeding bird community is of particular importance including such species as mute swan *Cygnus olor*, tufted duck *Aythya fuligula*, shoveler *Anas clypeata*, teal *Anas crecca*, water rail *Rallus aquaticus* and reed warbler *Acrocephalus scirpaceus* which regularly breed. Overwintering wildfowl occur in small numbers although this site is of local importance for shoveler. A relict flock of European white fronted geese *Anser albifrons* is of interest, occurring at this locality isolated from the major overwintering grounds in the south.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Waterfowl and terrestrial bird species present at the site may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Llyn Garreg-Lwyd	Llyn Garreg-lwyd is selected as an example of tall fen dominated by common reed *Phragmites australis*. Greater spearwort Ranunculus lingua, a locally uncommon species, is abundant in the south of the site. This wetland is also of ornithological interest supporting a range of breeding birds. Bittern *Botaurus stellaris* has bred here in the past.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines Waterfowl and terrestrial bird species present at the site may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from water pollution, and disturbance.
Llyn Hafodol And Cors Clegyrog	This site comprises two wetland basins featuring lowland mire habitat. Cors Clegyrog is an acidic basin mire with a mosaic of different vegetation types. At Llyn Hafodol mesotrophic mire or poor fen vegetation is particularly well-represented and characterised by the presence of species such as water horsetail *Equisetum fluviatile*, bog-bean *Menyanthes trifoliata*, marsh cinquefoil *Potentilla palustris* and bottle sedge *Carex rostrata* with a wide range of associated species including the uncommon greater spearwort *Ranunculus lingua*. There is also a small area of open water where the nationally rare waterwort *Elatine hydropiper* grows in the muddy shallows.	Habitats and species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Llyn Llygeirian	Llyn Llygeirian, a moderately base rich lake, features a range of aquatic macrophyte species including the regionally rare frogbit *Hydrocharis morsusranae*. Llyn Llygeirian is additionally important for the occurrence of several nationally uncommon aquatic species: the two waterworts *Elatine hydropiper* and *E. hexandra* needle spike-rush *Eleocharis acicularis*, spring quillwort *Isoetes echinospora* and pillwort *Pilularia globulifera*. Although this lake is not of major significance for wildfowl, it does support a number of overwintering species, notably gadwall *Anas strepera* and whooper swan *Cygnus cygnus*.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Waterfowl and terrestrial bird species present at the site may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from water pollution, and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Llyn Llywenan	Llyn Llywenan is a moderately base-rich lowland lake which features a range of submerged, floating and emergent macrophyte species. A number of rare and uncommon species are present, e.g. eight-stamened waterwort *Elatine hydropiper*, spring quillwort *Isoetes echinospora*, and needle spikerush *Eleocharis acicularis* which grow on parts of the more exposed stony shoreline. A variety of overwintering wildfowl species frequent Llyn Llywenan and it also supports an interesting breeding bird community.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Waterfowl and terrestrial bird species such as raptors and corvids present at the site may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from water pollution, and disturbance.
Llyn Maelog	Llyn Maelog has been selected for its biological interest as an example of an eutrophic (nutrient rich) lake. Llyn Maelog supports an aquatic vegetation characteristic of a nutrient rich water body with species such as spiked water-milfoil *Myriophyllun spicatum*, horned pondweed *Zannichellia palustris* and rigid hornwort *Seratophyllum demersum*. The shallow water margins, the main zone of plant growth, support both widespread plants such as shoreweed *Littorella uniflora* and the nationally scarce species, needle spike-rush *Eleocharis cicularis* and autumnal waterstartwort *Callitriche hermaphroditica*. Llyn Maelog is of local interest for its wintering wildfowl particularly pochard *Aythya ferina*, and for its breeding bird community.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines Waterfowl and terrestrial bird species such as raptors and corvids present at the site may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from water pollution, and disturbance.
Llyn Padrig	Llyn Padrig is a mesotrophic basin mire. Mire development appears to have been relatively undisturbed by artificial drainage at this locality and various swamp and poor-fen vegetation communities are well represented. A number of uncommon species are present at the site including greater spearwort *Ranunculus lingua* and autumnal water-starwort *Callitriche hermaphroditica*.	Habitats and species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Llyn Traffwll	Llyn Traffwll is a moderately base rich lake featuring rare and uncommon species including the eight-stamened waterwort *Elatine hydropiper* and flowering rush *Butomus umbellatus*. This lake is also important for overwintering wildfowl, notably shoveler *Anas clypeata* whose numbers frequently represent more than 1% of the British total. A variety of other wildfowl species also occur.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Waterfowl and terrestrial bird species present at the site may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from water pollution, and disturbance.
Llynnau Y Fali - Valley Lakes	Llynnau y Fali consists of a mosaic of open water areas including two lakes, Llyn Penrhyn and Llyn Dinam, with associated mesotrophic marshland and damp grassland habitats. Less common aquatic plant species present include eight-stamened waterwort *Elatine hydropiper* and floating water-plantain *Luronium natans*. The Valley lakes are also of interest for breeding and overwintering wildfowl including shoveler *Anas clypeata,* gadwall *Anas strepera*, pochard *Aythya ferina* and tufted duck *Aythya fuligula.*	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Waterfowl present at the site may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from land take and water pollution, and disturbance.
Maen Gwyn	Maen Gwyn is of Special Interest for its Geology. The site records the original intrusive relationship between two components of the Coedana Complex.	The geological features present within the site are not considered to be sensitive to Overhead lines but are potentially highly sensitive to construction of pylons due to land take and/or pollution.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Malltraeth Marsh/ Cors Ddyga	This site is especially important for its lowland damp grassland breeding bird community, threatened wet meadows habitat, and the botanical interest of its ditches and watercourses. The botanical interest of the marsh lies in the freshwater and brackish ditches, relict meanders of the old River Cefni, ponds and lakes. Amongst the species of importance in wales are reed sweet-grass *Glyceria maxima*, horned pondweed *Zannichellia palustris*, flowering-rush *Butomus umbellatus*, water-violet *Hottonia palustris*, mare's tail *Hippuris vulgaris* and marsh stitchwort *Stellaria palustris*. Two nationally scarce species, Pillwort *Pilularia globulifera* and autumnal starwort *Callitriche hermaphroditica* occur. There is a small heronry on the site. Bittern *Botaurus stellaris* have been heard booming in recent years and marsh harrier *Circus aeruginosus*, black-tailed godwit *Limosa limosa* and ruff Philomachus pugnax, all potential breeders, have been recorded in the spring or early summer. The marsh provides feeding grounds for migrating and wintering waders and wildfowl including at times the important pintail *Anas acuta* population present in the Cefni sanctuary. Amongst the eleven species of dragonfly recorded, three are nationally scarce: the hairy dragonfly *Brachytron pratense*, the variable damselfly *Coengarion pulchellum* and the scarce blue-tailed damselfly *Ischnura pumilio*. Some notable water beetles occur such as *Laccobius sinuatus* and *Rhantus grapii*.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Waterfowl and bird species present at the site may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from land take and water pollution, and disturbance.
Mariandyrys	This site is of special interest for its heathland and grassland communities as well as for its vascular plants. Mariandyrys supports a rare example of heather *Calluna vulgaris* - western gorse *Ulex gallii* heath of the salad burnet *Sanguisorba minor* sub-community. This is the main site in Anglesey for the nationally scarce spring cinquefoil *Potentilla tabernaemontani*. The site also supports a diverse range of invertebrates including molluscs and a number of uncommon insects such as the weevil *Otiorhynchus desertus*, Ashworth's rustic moth *Xestia ashworthii* and the fly *Cnemacantha muscaria*.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from water pollution, and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Moel Tryfan	This site is designated for its geological interest. It features exposures of the lower Cambrian succession, stretching from the siltstones of the Tryfan Grit Group, through the Gilgwyn Conglomerate to the Striped Blue Slate of the Llanberis Slates. The site is unrivalled in its exposure of the succession at these lower Cambrian horizons.	The geological features present within the site are not considered to be sensitive to Overhead lines but are potentially highly sensitive to construction of pylons due to land take and/or pollution.
Morfa Dinlle	The site is important for the succession between bare shingle, vegetated shingle, foredune, shingle-dune transition and other dune communities which reflect the changes in both sediment substrate and exposure. Plant species of interest include the uncommon sand sedge *Carex arenaria*, lichen-dominated sand dune community described as the *Carex arenaria-Cornicularia aculeate* dune community, also known as 'grey dune' or 'lichen heath'. Morfa Dinlle is the best example of only two sites in Wales for this type of community. The shingle beach also supports one of the largest populations of breeding ringed plovers *Charadrius hiaticula* in Gwynedd whilst chough *Pyrrhocorax pyrrhocorax* feed on the dune grasslands.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Seabird, waterfowl and terrestrial bird species present at the site may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from land take and water pollution, and disturbance.
Mynydd Parys	Mynydd Parys, a hill rising to 147 metres in north-west Anglesey is selected for its biological and geological interest. Formerly the largest copper mine in Wales, the old workings are now an important site for the study and understanding of mineralogy. The mineralised rocks are rich in metals such as copper and zinc and a metallophyte (metal tolerant) lichen community has developed associated with these rocks. Lichens found on Mynydd Parys include unusual and scarce species able to tolerate the high levels of normally toxic metals such as copper, zinc and bismuth, which are found at the site as a result of historic mining works. More than 125 lichen species have been recorded from the mineralised substrates alone; a number of these are very scarce in Wales, being restricted to metal rich substrates and at least one species is new to Britain and possibly new to science - a *Lecidea* species.	Habitats and species present within the site are not considered to be sensitive to Overhead lines. Habitats and qualifying/notable species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Nantanog	Nantanog Ravine is of special interest for its geology. The site contains excellent exposures, illustrative of the sedimentation and stratigraphy of Anglesey in the Lower Ordovician	The geological features present within the site are not considered to be sensitive to Overhead lines but are potentially highly sensitive to construction of pylons due to land take and/or pollution.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Newborough Warren / Ynys Llanddwyn	This site exhibits an extensive sand dune system featuring the full development from strandline and shingle flora, dune ridges, wet and dry slacks to dune grassland and scrub development along with a dune-dammed lake, freshwater fen, saltmarsh and mudflats. There is an outstanding vascular plant assemblage, including the endemic dune helleborine *Epipactius leptochila ssp. dunensis*, dwarf adder's tongue *Ophioglossum azoricum* and shore dock *Rumex rupestris* along with interesting lichen and moss communities. The nationally scarce liverwort *Petalophyllum ralphsii* occurs in some dune slacks and the nationally rare golden hair lichen *Teloschistes flavicans* has recently been found on Llanddwyn Island which also supports an interesting rocky cliff flora including golden samphire *Inula crithmoides*. The area supports a very rich invertebrate fauna particularly of Diptera and such scarce species as the small red damselfly *Ceriagrion tenellum* and the hairy dragonfly *Brachytron pratense*, whilst rare species include the hoverfly *Eumerus sabulonum*, the mining bee *Colletes cunicularius* and the medicinal leech *Hirudo medicinalis*. There is also a small population of great crested newt *Triturus cristatus*. Intertidal mudflats and saltmarshes adjoining the dunes at Traeth Abermenai and Malltraeth Sands are important wintering grounds for wading birds and wildfowl, regularly supporting over 1% of the British population of pintail *Anas acuta*.	The woodland habitat would be potentially highly sensitive to Overhead lines if the positioning of pylons resulted in the need for a ride to be created underneath the Overhead lines. Seabird, waterfowl and terrestrial bird species are initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Other habitats and other species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Penrhos Lligwy	This site is selected as an inland example of lowland heathland habitat associated with an area of Carboniferous Sandstone.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from water pollution, and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Penrhynoedd Llangadwaladr	The area comprises a complex mosaic of exposed rocky coast, sub-maritime grassland, sand dune and dune grassland, the latter unusual in occurring on a mantle of wind blown sand over the underlying rocky headland. A number of rare plants occur on the shore, dunes and dune grassland, including dune fescue *Vulpia fasciculata*, sea stork's-bill *Erodium maritimum*, golden samphire *Inula crithmoides*, sea spurge *Euphorbia paralias* and Portland spurge *E. portlandica*. Sea wormwood *Artemisia maritima* grows here in one of its few North Wales locations. The site provides mainland nesting by shag *Phalacrocorax aristotelis*, whilst the wetland on Cwningar Bodowain supports a large breeding colony of lesser black-backed gulls *Larus fuscus* and herring gulls *Larus marinus*.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Seabird, waterfowl and terrestrial bird species that forage/commute over land within this site may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from land take and water pollution, and disturbance.
Porth Diana	A nationally important coastal heath developed on a rocky escarpment and which is very exposed to westerly winds. The locally rare, dyer's greenweed *Genista tinctoria* occurs in its only extant Anglesey site here. Annual rockrose *Tuberaria guttata ssp. breweri* occurs in great abundance here. *Tuberaria* occurs in only eight localities in Britain, seven of the others being in Anglesey and one in the Lleyn. Of the seven Anglesey sites, six are on Holy Island. The population of *Tuberaria* at Porth Diana appears to be the largest of any of the sites.	Habitats and species present within the site are not considered to be sensitive to Overhead lines Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Rhoscolyn Reedbed	Rhoscolyn Reedbed has been selected for its biological interest as an example of tall fen dominated by common reed *Phragmites australis.* Rhoscolyn Reedbed is of ornithological interest supporting a range of breeding birds, including warblers.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines Waterfowl and terrestrial bird species present at the site may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from water pollution, and disturbance.
Rhosneigr	This site is of importance solely for its geological interest. This locality provides an excellent example of small-scale, non-cylindrical folding in an Ordovician greywacke sequence.	The geological features present within the site are not considered to be sensitive to Overhead lines but are potentially highly sensitive to construction of pylons due to land take and/or pollution.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Rhosneigr Reefs	The site is a classic area for the research and educational study of marine algae. It is of particular importance for the abundance and variety of rock pools present, formed by the combination of extensive bedrock outcrops with the shallow-sloping sandy beach. In addition to a high diversity of littoral and shallow sublittoral algae present in these pools several less common or rare species such as the red algae *Laurencia obtusa* occur. Faunal communities are similarly well developed and include the spider crab *Pisa tetraodon* near its northern limit in the British Isles.	Habitats and species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance. However it is highly unlikely that pylons will be constructed the site, in which case this would not be applicable.
Rhosydd Llanddona	The site comprises two areas of lowland heathland. The dry heathland is dominated by heather *Calluna vulgaris*, western gorse *Ulex gallii* and bell heather *Erica cinerea,* with occasional purple moor-grass *Molinia caerulea*. Small areas along the eastern edge of Tyn y Mynydd are more species-rich and include heath bedstraw *Galium saxatile*, tormentil *Potentilla erecta* and marsh lousewort *Pedicularis palustris*. Areas of wet heath support abundant cross-leaved heath *Erica tetralix*, heather and western gorse, together with purple moor grass and creeping willow *Salix repens*. A large depression in the middle of Tyn y Mynydd supports a series of mire and rush pasture communities.	Habitats and species present within the site are not considered to be sensitive to Overhead lines Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Salbri	The acidic basin mire at Salbri is exceptionally intact and remains waterlogged throughout the year. Two nationally uncommon bryophytes *Sphagnum platyphyllum* and *Cephalozia pleniceps* have been recorded, and there are populations of locally uncommon flowering plants including the mud sedge *Carex limosa*.	Habitats and species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from land take and water pollution, and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Sgistau Glas Ynys Môn	This site is designated for its geological features. The site comprises the Marquess of Anglesey's Column, a roadside cutting on the A55 and a series of crags at Castellior Farm. The exposures around the base of the Marquess of Anglesey's Column provided the first known examples of blue glaucophanic amphibole in the British Isles and these continue to be a key research locality. The selected road cutting on the A55 at Llanfair P.G. provides the only exposures of unweathered blueschists in Britain, whilst the crags at Castellior Farm show particularly fine exposures of intensely foliated and tightly folded dark blueschists.	The geological features present within the site are not considered to be sensitive to Overhead lines but are potentially highly sensitive to construction of pylons due to land take and/or pollution.
Traeth Lafan	Traeth Lafan is a large intertidal area contains a range of habitats. The abundant invertebrate fauna attracts large flocks of birds and for wintering waders this is the third most important ground in Wales, with an annual peak of 10,000-14,000 waders of ten species. In addition, there are up to 1,500 wintering duck. The sands are of national importance for their assemblages of moulting great-crested grebes *Podiceps cristatus* and red-breasted mergansers *Mergus serrator*, and are regionally important for shelduck *Tadorna tadorna*.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Seabird, waterfowl and terrestrial bird species such as raptors and corvids commuting or foraging overland may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from land take and water pollution, and disturbance. However it is highly unlikely that pylons will be constructed on any habitat within the site (intertidal) in which case habitat loss would not be applicable.
Traeth Lligwy	The site has been designated solely for its geological interest. At Traeth yr Ora and Trwyn Porth y Mor. the rocks reveal ancient meandering river deposits in the Old Red Sandstone. Lligwy Bay contains a very rare example of deformed Old Red Sandstone rocks north of The Hercynian Front.	The geological features present within the site are not considered to be sensitive to Overhead lines but are potentially highly sensitive to construction of pylons due to land take and/or pollution.
Tre Wilmot	This is a large area of acidic, lowland heath including wet heath with a range of heathland vegetation communities. Of particular note is a very large population of marsh gentian *Gentiana pneumonanthe* and, in small open water areas, pillwort *Pilularia globulifera*; both these species have decreased markedly over the country as a whole with progressive reclamation of their habitats. Three lobed water crowfoot *Ranunculus trilobata* also occurs here.	Habitats and species present within the site are not considered to be sensitive to Overhead lines Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from water pollution, and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Tre'r Gof	This site supports a mosaic of rich-fen and associated communities. A wide range of wetland plant species occur in the various communities and of particular interest is the presence of a population of the marsh fern *Thelypteris thelypteroides* which is a scarce fen plant in Britain where it appears to be declining over much of its range.	Habitats and species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from land take and water pollution, and disturbance.
Trwyn Dwlban	The site is designated solely for geological interest. The rock platform, cliffs and quarry faces of Trwyn Dwlban and Castell-mawr provide important exposures of Carboniferous Limestone strata.	The geological features present within the site are not considered to be sensitive to Overhead lines but are potentially highly sensitive to construction of pylons due to land take and/or pollution.
Ty Croes	Ty Croes is of special interest for its coastal heathland, grassland and associated rock and flush habitats and also the marsh fritillary butterfly. The heath is notable for the abundance of petty whin *Genista anglica* and allseed *Radiola linoides*. The nationally uncommon golden-samphire *Inula crithmoides* occurs on these cliffs. Chough *Pyrrhocorax pyrrhocorax*, which nest nearby, feed on invertebrates found in the soil and short vegetation.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Seabirds and terrestrial birds commuting or foraging overland are potentially initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Tyddyn Gyrfer	Tyddyn Gyrfer is of special interest for its geology. The site contains exposures of Precambrian gneiss (a coarse grained, banded metamorphic rock) and in particular provides representative exposures of rocks metamorphosed within the upper amphibolite facies (facies relate to particular temperatures and pressures).	The geological features present within the site are not considered to be sensitive to Overhead lines but are potentially highly sensitive to construction of pylons due to land take and/or pollution.
Tyddyn Y Waen	Tyddyn y Waen comprises fen meadow habitat with associated soligenous mire. The locally uncommon forb species fen bedstraw *Galium uliginosum* and a number of infrequent plants, including broad-leaved cottongrass *Eriophorum latifolium* and the liverwort *Leiocolea bantriensis* are present.	Habitats and species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from land take and water pollution, and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Tywyn Aberffraw	A large and intact calcareous dune system with dune ridges (both mobile and consolidated) damp slacks and dune grassland together with a shallow lake and its outflow stream. A range of different terrestrial vegetation communities, many of which are floristically rich. A number of rare and uncommon plant species are present, e.g. early sand-grass *Mibora minima*, and the damp calcareous slacks are particularly noted for their interesting bryophyte assemblages which include both northern e.g. *Catascopium nigritum* and Mediterranean e.g. *Southbya tophacea* floristic elements. Llyn Coron is a base-rich lake with an interesting aquatic macrophyte community and several uncommon species, e.g. eight-stamened waterwort *Elatine hydropiper* and hairlike pondweed *Potamogeton trichoides*, are present as well as a diverse invertebrate fauna. The Afon Ffraw, flowing from the lake, is tidal in its lower reaches, and its flora includes a water crowfoot *Ranunculus fluitans*, which is extremely uncommon in North Wales.	Habitats and species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from land take and water pollution, and disturbance.
Waun Eurad	This site is selected as a habitat example of lowland rich fen. This springfed wetland has formed in a shallow basin in boulder clay overlying Carboniferous limestone. This lowland rich fen vegetation features vegetation dominated by black bog-rush *Schoenus nigricans* and blunt-flowered rush and includes the nationally scarce species narrow-leaved marsh-orchid *Dactylorhiza traunsteineri*, fen pondweed *Potamogeton coloratus* and narrow-leaved marsh dandelion *Taraxacum palustre.* The site supports seven species of dragonfly including the notable scarce blue- tailed damselfly Ischnura pumilio.	Habitats and species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from land take and water pollution, and disturbance.
Y Foryd	The site is of importance for its ornithological and marine biological features, comprising dwarf eelgrass *Zostera noltei* beds and their associated intertidal species and a nationally important over-wintering population of wigeon *Anas penelope*. The site is a very shallow barbuilt estuary consisting of mudflats, sandflats, saltmarsh and reedbeds, with a shingle strandline along the eastern margin. The Afon Gwyrfai, Afon Foryd and the Afon Carrog drain into Y Foryd. Pastoral farmland and dunes surround the bay, and a dune-covered shingle spit constricts its entrance.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Waterfowl, seabirds and terrestrial bird species are initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Y Werthyr	Y Werthyr is a mesotrophic valley mire or 'poor fen' featuring Vegetation communities characteristic of this type of habitat and including the less common species greater spearwort *Ranunculus lingua*.	Habitats and species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from land take and water pollution, and disturbance.
Ynys Feurig	The largest tern colony in Wales breeds on Ynys Feurig. In recent years the island has supported between 500 and 900 pairs of terns of four species during the breeding season. The tern species involved are roseate tern *Sterna dougallii,* common tern *Sterna hirundo*, Arctic tern *Sterna paradisaea*, Sandwich tern *Sterna sandvicencis.* The roseate tern colony is important in a European context, as it contains a significant proportion (around one quarter) of the N.W. Europe breeding population of this species. Ynys Feurig is made up of a series of islands forming a low ridge of almost vertically inclined rock strata extending almost half a mile out to sea and connected to the beach at its landward end for a period around each low tide. The outer island which is slightly higher than the others is partly vegetated, mainly with marram grass *Ammophila arenaria*, red fescue *Festuca rubra* and thrift *Armeria maritima* and many of the terns nest here.	Terns and other seabirds that migrate/court overland, along with terrestrial bird species are potentially initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and other species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance. However it is highly unlikely that pylons will be constructed any habitat present within the site in which case habitat loss would not be applicable.
National Nature Reserve (NNR)		
Cors Bodeilio	Cors Bodeilio is a nationally important calcareous mire. A notable feature of Cors Bodeilio is its rich orchid flora which includes the uncommon narrow-leaved marsh orchid *Dactylorchis traunsteineri* and fly orchid *Ophrys insectifera* growing here in *Schoenus* communities. The fen also supports a diverse invertebrate fauna with a variety of rare and uncommon species. The site is particularly rich in Diptera (true flies), aquatic Coleoptera (beetles) and Lepidoptera (moths).	Habitats and species present within the site are not considered to be sensitive to Overhead lines Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from water pollution, and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Cors Erddreiniog	Cors Erddreiniog is the largest of the Anglesey fens and supports orchid rich vegetation, which other than within a few sites on Anglesey, and on the Llŷn peninsula, is found nowhere else in Britain. Species of particular interest include Northern marsh orchid *Dactylorhiza purpurella*, Fen orchid *Liparis loeselii* and Marsh helleborine *Epipactis palustris.*	Habitats and species present within the site are not considered to be sensitive to Overhead lines Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from water pollution, and disturbance.
Cors Goch	Cors Goch comprises lowland fen habitat, areas of open water, heath and grassland. A diverse range of orchids, including green-winged orchid *Anacamptis morio,* thrive in the grassland. Additional rare plants include marsh dandelion *Taraxacum palustre*, narrow leaved marsh orchid *Dactylorhiza traunsteineroides* (nationally scarce) and fen pondweed *Potamogeton coloratus* (nationally scarce). The rare dwarf stonewort *Nitella tenuissima* can be found in areas of open water. It is also an important site for both breeding and overwintering bird species.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines Waterfowl and terrestrial bird species present at the site may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from water pollution, and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Newborough Warren / Ynys Llanddwyn	This site exhibits an extensive sand dune system featuring the full development from strandline and shingle flora, dune ridges, wet and dry slacks to dune grassland and scrub development along with a dune-dammed lake, freshwater fen, saltmarsh and mudflats. There is an outstanding vascular plant assemblage, including the endemic dune helleborine *Epipactius leptochila ssp. dunensis*, dwarf adder's tongue *Ophioglossum azoricum* and shore dock *Rumex rupestris* along with interesting lichen and moss communities. The nationally scarce liverwort *Petalophyllum ralphsii* occurs in some dune slacks and the nationally rare golden hair lichen *Teloschistes flavicans* has recently been found on Llanddwyn Island which also supports an interesting rocky cliff flora including golden samphire *Inula crithmoides*. The area supports a very rich invertebrate fauna particularly of Diptera and such scarce species as the small red damselfly *Ceriagrion tenellum* and the hairy dragonfly *Brachytron pratense*, whilst rare species include the hoverfly *Eumerus sabulonum*, the mining bee *Colletes cunicularius* and the medicinal leech *Hirudo medicinalis*. There is also a small population of great crested newt *Triturus cristatus*. Intertidal mudflats and saltmarshes adjoining the dunes at Traeth Abermenai and Malltraeth Sands are important wintering grounds for wading birds and wildfowl, regularly supporting over 1% of the British population of pintail *Anas acuta*.	The woodland habitat would be potentially highly sensitive to Overhead lines if the positioning of pylons resulted in the need for a ride to be created underneath the Overhead lines. Seabird, waterfowl and terrestrial bird species are initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss, water pollution and disturbance.
Local Nature Reserve (LNR)		
Coed Cyrnol	An area of mixed woodland and foreshore with shelduck *Tadorna tadorna*, redshank *Tringa totanus*, dunlin *Calidris alpine* and oystercatcher *Haematopus ostralegus* are often evident on the adjacent shore. Red squirrel *Sciurus vulgaris* have been recorded at the site.	The woodland habitat would be potentially highly sensitive to Overhead lines if the positioning of pylons resulted in the need for a ride to be created underneath the Overhead lines. Seabird, waterfowl and terrestrial bird species are initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Cytir Mawr	An area of broadleaved woodland and marshy grassland habitats.	The woodland habitat would be potentially highly sensitive to Overhead lines if the positioning of pylons resulted in the need for a ride to be created underneath the Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Foryd Bay	A partially enclosed bay on the Menai Straits comprising approximately 250 hectares of exposed intertidal sand and mud habitats at low tide. The site is an important feeding place for many native and migratory birds. During the winter a wide variety of ducks and waders are present.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Waterfowl, seabirds and terrestrial bird species such as raptors and corvids are initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance. However it is highly unlikely that pylons will be constructed on any habitat within the site (intertidal) in which case habitat loss would not be applicable.
Llanddona Common	The LNR comprises 11 ha of prime lowland heath adjacent to Llanddona village (Llaniestyn Common) and about 4 ha distributed in patches throughout the village (Llanddona Common). Grazing is not possible on this common, which is managed by mechanical scrub control and burning.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Llangoed Common	This is a linear wet woodland of alder and willow and damp herb meadow situated along the valley of the Afon Lleiniog	The woodland habitat would be potentially highly sensitive to Overhead lines if the positioning of pylons resulted in the need for a ride to be created underneath the Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Nant Y Pandy (The Dingle)	An area of mixed woodland along the steep sided valley of the Afon Cefni, with marshland and river habitat. Records of protected faunal species include otter *Lutra lutra*, eight bat species, common lizard *Zootoca vivipara* and adder *Vipera berus*.	The woodland and bat habitat would be potentially highly sensitive to Overhead lines if the positioning of pylons resulted in the need for a ride to be created underneath the Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Traeth Lafan	The Local Nature Reserve includes a mix of shoreline habitats, and approximately 2,500 hectares of intertidal sand and mud flats which are exposed at low tide, the flats and surrounding lands are important areas for a number of bird species. During the autumn and winter months, the sands are home to the largest known population of moulting great crested grebes *Podiceps cristatus* in Britain, as well as large flocks of oystercatchers *Haematopus ostralegus*, red breasted mergansers *Mergus serrator* and goldeneye *Bucephala clangula*.	Seabird, waterfowl and terrestrial bird species such as raptors and corvids commuting or foraging overland may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from land take and water pollution, and disturbance.
Trwyn Yr Wylfa / Wylfa Head	The site consists of a mosaic of coastal grassland and heath. It is designated for its flora and choughs for which it is an important foraging resource.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from land take and disturbance.
Important Bird Area (IBA)		
Glannau Ynys Gybi (Holy Island Coast)	The IBA comprises the cliffs on the western side of Holy Island, which are formed from geologically complex and impressive folded strata rising to 120 m. There are also many offshore stacks and islets.	Terrestrial bird species such as raptors and corvids along with seabirds which commute and forage over land and rivers e.g. gulls and cormorants are initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site including chough (SAC qualifying feature) are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Traeth Lafan, Conwy Bay	Large intertidal area contains a range of habitats including exposed and sheltered sands and mudflats diversified by freshwater streams. The area is important for breeding great cormorant *Phalacrocorax carbo* and wintering and passage wildfowl. It is also nationally important for wintering greenshank *Tringa nebularia* and for summer moulting assemblages of great crested grebe *Podiceps cristatus*.	Habitats and most species present within the site are not considered to be sensitive to Overhead lines. Seabird, waterfowl and terrestrial bird species commuting or foraging overland may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from land take and water pollution, and disturbance. However it is highly unlikely that pylons will be constructed on any habitat within the site (intertidal) in which case habitat loss would not be applicable.
Ynys Feurig, Cemlyn Bay And The Skerries	The IBA comprises three separate areas and is a site of importance for four species of breeding terns (roseate tern *Sterna dougallii*, common tern *Sterna hirundo*, Arctic tern *Sterna paradisaea* and Sandwich tern *Sterna sandvicencis)*. The three separate areas are treated as a single site as a consequence of regular movement by birds between the component parts. Ynys Feurig consists of a series of sparsely vegetated low-lying islands extending about 1 km out to sea from a sandy shore. At Cemlyn Bay, a shingle storm beach forms a bar between a tidal lagoon and the open shore. The shingle habitats, together with saltmarsh developing around the lagoon and brackish pools further inland are an unusual combination of habitats. The Skerries are a group of sparsely vegetated islets, 17 ha in extent. They are protected by strong currents but are very exposed to strong westerly and northerly winds.	Terns and other seabirds that migrate/court overland, along with terrestrial bird species such as raptors and corvids are potentially initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance. However it is highly unlikely that pylons will be constructed on any habitat present within the IBA, in which case habitat loss would not be applicable.
Royal Society for the Protection of Birds (RSPB)		
Malltraeth Marsh	The site comprises reedbeds, marshes, wet grassland, ditches and small pools/ lakes. The site offers important habitat for a large range of breeding bird species and overwintering habitat for bitterns *Botaurus stellaris*. It is the aim of the RSPB to manage to site to provide breeding habitat for bitterns.	Waterfowl and terrestrial bird species such as raptors and corvids present at the site may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from water pollution, and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
South Stack Cliffs	The cliffs support important seabird colonies; guillemots *Uria aalge*, razorbills *Alca torda* and puffins *Fratercula arctica* combine to create one of the largest colonies of breeding auks in North Wales. Fulmar *Fulmarus glacialis*, kittiwake *Rissa tridactyla*, peregrine *Falco peregrinus* and chough *Pyrrhocorax pyrrhocorax* also nest on these cliffs. Within the heathland stonechat *Saxicola torquata*, skylark *Alauda arvensis*, linnet *Carduelis cannabina* and whitethroat *Sylvia communis* all breed regularly. The site supports a good range of invertebrates including the silver studded blue *Plebejus argus*. Marsh fritillary *Eurodryas aurinia* has been recorded here in the past.	Terrestrial bird species (including chough) along with seabirds which commute and forage over land and rivers e.g. gulls and cormorants are initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site including chough (SAC qualifying feature) are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Valley Wetlands	Reed fringed lakes providing breeding habitat for tufted ducks *Aythya fuligula*, pochards *Aythya ferina*, shovelers *Anas clypeata,* gadwalls Anas strepera and grebes. The reserver provides overwintering habitats for wigeons *Anas penelope* and goldeneyes *Bucephala clangula*. Reedbed birds including water rails *Rallus aquaticus* , marsh harriers *Circus aeruginosus* and Cetti's warblers *Cettia cetti* have also been recorded at the site.	Waterfowl and terrestrial bird species present at the site may be initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from water pollution, and disturbance.
North Wales Wildlife Trust (NWWT)		
Caeau Pen y Clip	Caeau Pen y Clip comprises wet grassland with diverse hedgerows and a wide variety of trees, many of which are relatively mature.	The hedgerows and wooded habitat would be potentially highly sensitive to Overhead lines if the positioning of pylons resulted in the need for a ride to be created underneath the Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Cemlyn	Cemlyn is one of North Wales Wildlife Trust's star reserves and regarded by the Anglesey County Council as the "jewel in the crown" of its Area of Outstanding Natural Beauty. The reserve includes a large lagoon, separated from the sea by a spectacular, naturally-created shingle ridge. The ridge, known as Esgair Gemlyn, is formed by the process of longshore drift, its profile changing with the action of tide and weather. This unique geographical feature also provides a habitat for interesting coastal plants. Clustered on islands in the brackish water is a large and internationally important seabird colony, including breeding common tern *Sterna hirundo*, Arctic tern *Sterna paradisaea* and one of the U.K.'s largest nesting populations of Sandwich terns *Sterna sandvicensis.*	Terns and other seabirds that migrate/court overland along with terrestrial bird species such as raptors and corvids are potentially initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Coed Porthamel	Coed Porthamel reserve is in two sections around Porthamel Farm; Coed Chwarel to the East and Coed Brain to the North. It is owned by Isle of Anglesey County Council and managed by NWWT. Coed Chwarel is dominated by mature woodland although there are also areas dominated by bramble alongside open glades. Here a wide variety of plants can be found in shallow soils on limestone. Coed Brain was dominated by sycamore *Acer pseudoplatanus* but recent felling is allowing the growth of ash *Fraxinus excelsior* saplings.	The woodland habitat would be potentially highly sensitive to Overhead lines if the positioning of pylons resulted in the need for a ride to be created underneath the Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Cors Goch	Cors Goch is famous for its calcareous fenland and acidic heathland which both support many rare plant species. Cors Goch is a valuable base rich fen.	Habitats and species present within the site are not considered to be sensitive to Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Mariandyrys	Mariandyrys comprises a limestone grassland with patches of gorse scrub. The limestone is important because it provides the soil conditions for a characteristic group of plants which includes spring squill *Scilla verna*, saw-wort *Serratoula tincoria*, common rockrose *Helianthemum nummularium*, common heather *Calluna vulgaris*, bell heather *Erica cinerea*, western gorse *Ulex gallii*, salad burnet *Sanguisorba minor* and dropwort *Filipendula vulgaris*.	Habitats and species present within the site are not considered to be sensitive to Overhead lines Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss possibly arising from water pollution, and disturbance.

Site Name	Description	Sensitivity to Overhead Electricity Transmission Lines (OHL) and Pylons if routed through the site
Nant porth	Nant Porth is a coastal limestone woodland with areas of grassland and old quarries. The reserve lies alongside the Menai Straits between Bangor and the Menai Suspension Bridge. The five hectare site has been leased by the NWWT from the University College of North Wales and Arfon Borough Council since 1969. The main habitat on the reserve is ash *Fraxinus excelsior* woodland on limestone with open areas of calcareous grassland. Coastal ash woodland is a rare habitat outside Scotland and limestone woodland and grassland are both rare habitats in Gwynedd. At the eastern end, where the clay soil dips below shale deposits, oak *Quercus* sp. woodland replaces the ash.	The woodland habitat would be potentially highly sensitive to Overhead lines if the positioning of pylons resulted in the need for a ride to be created underneath the Overhead lines. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Port Diana	Porth Diana became a nature reserve in 1979, primarily to ensure the protection of spotted rock rose *Tuberaria guttata*, Anglesey's county flower. The reserve is part of the nationally important coastal heath on the west coast of Holy Island. Characteristic plants include common heather *Calluna vulgaris*, bell heather *Erica cinerea* and western gorse *Ulex gallii*. In the open patches of grassland, you can see wildflowers such as spring squill *Scilla verna*, english stonecrop *Sedum anglicum* and common birds'-foot trefoil *Lotus corniculatus* as well as spotted rock rose.	Habitats and species present within the site are not considered to be sensitive to Overhead lines Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.
Spinnies	Spinnies is comprises a 4ha coastal lagoon and a large variety of other habitats, including woodland, scrub, grassland, reedbeds and ponds. It is located next to the River Ogwen, where it joins the Menai Strait. Over 185 species of birds have been recorded on the site which includes large numbers of waders.	The woodland habitat would be potentially highly sensitive to Overhead lines if the positioning of pylons resulted in the need for a ride to be created underneath the Overhead lines. Waterfowl and terrestrial bird species such as raptors and corvids are initially sensitive to Overhead lines due to the risk of collision, although this risk should reduce over time. Habitats and certain species present on site are potentially highly sensitive to construction of pylons due to habitat loss and disturbance.

Appendix L:
Cultural Heritage Designations and Sensitivities

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World Heritage Sites

Name	Council	Summary description	Sensitivity to Overhead electricity transmission lines and pylons affecting the setting of a World Heritage Site
Beaumaris Castle and Town Walls as part of *The Castles and Town Walls of Edward I in Gwynedd*	Isle of Anglesey (Ynys Môn).	Beaumaris Castle was inscribed as a World Heritage Site in 1986 as part of *The Castles and Town Walls of Edward I in Gwynedd (UNESCO, The Castles and Town Walls of Edward I in Gwynedd Inscription,* 1986). Beaumaris was partly designed to dominate the Menai Straits and contains Significant Views and Arcs of View encompassing views to the north east and southwest along the straits. The castles of Beaumaris and Harlech and the fortified complexes of Caernarfon and Conwy are: *extremely well-preserved monuments are examples of the colonization and defence works carried out throughout the reign of Edward I (1272–1307) and the military architecture of the time (UNESCO, The Castles and Town Walls of Edward I in Gwynedd* – Statement of Significance). The UNESCO Statement of Significance for inscription for the *The Castles and Town Walls of Edward I in Gwynedd* states: Criterion (i): Beaumaris and Harlech represent a unique achievement in that they combine the double-wall structure which is characteristic of late 13th century military architecture with a highly concerted central plan and in terms of the beauty of their proportions and masonry. Criterion (iii): The royal castles of the ancient principality of Gwynedd bear a unique testimony to construction in the Middle Ages in so far as this royal commission is fully documented. Criterion (iv): The castles and fortifications of Gwynedd are the finest examples of late 13th century and early 14th century military architecture in Europe. Beaumaris retains much of its medieval street pattern. Its setting, diversity of architectural styles and periods, differing scale, open spaces, varying roofs, and overall quality all contribute to the town's character. Whilst several of the town's buildings are individually listed it is the overall streetscape and open spaces that make the major contribution to the qualities of the area. Beaumaris Conservation Area is located at the centre of the WHS within the historic area of	High

Name	Council	Summary description	Sensitivity to Overhead electricity transmission lines and pylons affecting the setting of a World Heritage Site
		the town and includes Beaumaris Castle which forms part of a Scheduled Monument.	
Caernarfon Castle and Town Walls as part of *The Castles and Town Walls of Edward I in Gwynedd*	Gwynedd Council	Caernarfon Castle was inscribed as a World Heritage Site in 1986 as part of *The Castles and Town Walls of Edward I in Gwynedd* (UNESCO, *(UNESCO, The Castles and Town Walls of Edward I in Gwynedd Inscription,* 1986). Caenarfon was partly designed to dominate the Menai Straits and contains Significant Views and Arcs of View encompassing views to the north east and southwest along the straits. The castles of Beaumaris and Harlech and the fortified complexes of Caernarfon and Conwy are: *extremely well-preserved monuments are examples of the colonization and defence works carried out throughout the reign of Edward I (1272–1307) and the military architecture of the time (UNESCO, The Castles and Town Walls of Edward I in Gwynedd* – Statement of Significance). The UNESCO Statement of Significance for inscription for *The Castles and Town Walls of Edward I in Gwynedd* states: Criterion (i): Beaumaris and Harlech represent a unique achievement in that they combine the double-wall structure which is characteristic of late 13th century military architecture with a highly concerted central plan and in terms of the beauty of their proportions and masonry. Criterion (iii): The royal castles of the ancient principality of Gwynedd bear a unique testimony to construction in the Middle Ages in so far as this royal commission is fully documented. Criterion (iv): The castles and fortifications of Gwynedd are the finest examples of late 13th century and early 14th century military architecture in Europe. Caernarfon Conservation Area is located at the centre of the WHS within the historic area of the town and includes Caernarfon Castle which forms part of a Scheduled Monument.	High

Register of Historic Parks and Gardens

The Register of Historic Parks and Gardens of special interest is a non-statutory designation but the impact of development on them is a 'material consideration' in the planning process. The historic core of the parks and gardens can be associated with a park boundary, setting as well as important views.

Garden Reference Number and Grade	Site Name and Description	Designations	Site Type	Overhead electricity transmission lines and Pylons if routed through the site
GD38 Grade II	Caernarfon: Morfa Common Park *Small public park designed around artificial lake; tree and shrub plantings on sloping and level grassy areas. Purpose-designed nineteenth-century public park which has remained much as laid out; original planting and path layout (Cadw, PGW (Gd) 38 GWY).*	None	Small public park designed around artificial lake; tree and shrub plantings on sloping and level grassy areas. Nineteenth century.	Medium
GD40 Grade II*	Penrhyn Castle Landscape park, woodland, terraced garden, walled kitchen gardens and lawns. *The park retains much of its nineteenth-century character and the gardens, which have an exceptional collection of woody plants, are well preserved. The setting, and relationship of the house with the park and landscape, is outstanding (Cadw, PGW(Gd)40 GWY) .*	Listed buildings: House Grade I, chapel Grade II, Grand Lodge, Port Lodge and Tal-y-Cafn Lodge Grade II, flower garden walls Grade II, Capel Ogwen Grade II, Port House and cottage (Port Penrhyn) Grade II.	Landscape park, woodland, terraced garden, walled kitchen gardens and lawns. Nineteenth century.	High
GD42 Grade II*	Plas Berw Deer park Other park areas; small courtyard garden; other garden areas around house. *Well preserved early seventeenth-century complex of house with courtyard garden, adjoining ruins of older house. Other features may be contemporary or nearly so. Deer park of fifteenth century at least with much of its original wall still standing (Cadw, PGW(Gd)42 ANG)*	Listed buildings: House with courtyard and walls and barn [which barn not clear] Grade II*, remains of older house Grade II; Scheduled Ancient Monument (ruined house and courtyard garden). Environmentally sensitive area.	Deer park; other park areas; small courtyard garden; other garden areas around house. Seventeenth century; early nineteenth century.	High

Garden Reference Number and Grade	Site Name and Description	Designations	Site Type	Overhead electricity transmission lines and Pylons if routed through the site
GD43 Grade II*	Carreglwyd Lawn and lake surrounded by woodland, with garden buildings of interest; walled kitchen garden; some parkland including silted up lake. *Good survival, almost unchanged, of nineteenth-century layout of ornamental wooded grounds focused on an informal lake, incorporating earlier elements; good planting of woodlands for practical and aesthetic reasons (Cadw, PGW(Gd)43 ANG)*	Listed Buildings: house Grade II*, laundry, stables, garden wall and old telegraph station Grade II; Area of Outstanding Natural Beauty; SSSI (Llyn Garreglwyd). Environmentally sensitive area.	Lawn and lake surrounded by woodland, with garden buildings of interest; walled kitchen garden; some parkland including silted up lake. Eighteenth century; nineteenth century.	High
GD44 Grade II*	Bodorgan Formal terraced garden, deer park, walled kitchen gardens, informal lawn/shrubbery areas, woodland. *A site in a magnificent coastal position, which retains many of its original characteristics, having well preserved formal terraces; deer park still in use; substantial remains of extensive and once well known walled kitchen gardens; other, less formal (Cadw, PGW(Gd)44 ANG)*	Listed buildings (house Grade II; dovecote Grade II; barn Grade II). Area of Outstanding Natural Beauty. Environmentally Sensitive Area.	Formal terraced garden, deer park, walled kitchen gardens, informal lawn/shrubbery areas, woodland. 1779-82; mid nineteenth century.	High

Garden Reference Number and Grade	Site Name and Description	Designations	Site Type	Overhead electricity transmission lines and Pylons if routed through the site
GD45 Grade II	Cestyll A small garden exploiting a particular site - the sheltered valley of a small stream, leading down to the sea - with interesting plantings and an intimate atmosphere. *Unusual, small and intimate 1920s garden informally planted with tender plants, well suited to its rocky seaside site, which is of great natural beauty'; good survival of original planting. Princess Victoria, a close friend of the garden's owner (Cadw, PGW (Gd) 38 GWY).*	Heritage coast	A small garden exploiting a particular site - the sheltered valley of a small stream, leading down to the sea - with 'interesting plantings and an intimate atmosphere' (Cadw, PGW (Gd) 38 GWY). 1920s	Medium to Low
GD46 Grade II*	Llanidan Landscape park, pleasure grounds, walled garden, churchyard with yews. *An ancient site incorporating a circular churchyard with yew trees and a holy well. Early seventeenth-century features remaining include the walls of a walled garden and traces of a formal park (Cadw PGW(Gd)46 ANG).*	Listed Buildings: house Grade II*, garden walls Grade II, ha-ha wall Grade II, lodge and old house Grade II; St Nidan's church Grade I; Area of Outstanding Natural Beauty.	Landscape park, pleasure grounds, walled garden, churchyard with yews. 1606-52; 1772-1802; 1802-82; c.1937; 1984 onwards.	High
GD47 Grade II	Plas Gwyn *Terrace and lawn with shrubbery, woodland walk, walled garden, set in parkland with woods. Eighteenth-century site with nineteenth-century alterations which retains much of its original style and atmosphere (Cadw (Gd)47 ANG).*	Listed buildings: House II*, rear wing II. Environmentally sensitive area.	Terrace and lawn with shrubbery, woodland walk, walled garden, set in parkland with woods. Eighteenth century; nineteenth century.	Medium

Garden Reference Number and Grade	Site Name and Description	Designations	Site Type	Overhead electricity transmission lines and Pylons if routed through the site
GD48 Grade I	Plas Newydd Estate: Landscaped park, woodland, waterside features, terraced garden, extensive kitchen garden. *Outstanding park landscaped at turn of eighteenth and nineteenth centuries with input from Humphry Repton (Red Book extant), extensive waterside site in superb location with panoramic views (Cadw, PGW (Gd) 33 ANG).*	Listed buildings: house Grade I, stable block Grade II*, dairy, boat house, farm buildings, main lodge and entrance arch, garden walls and apple store all Grade II; Scheduled Ancient Monuments: Plas Newydd burial chamber AN 005 and Bryn yr Hen Bobl burial chamber.	Landscaped park, woodland, waterside features, terraced garden, extensive kitchen garden. 1798-1810; early twentieth century	High
GD49 Grade II	Plas Rhianfa *Terraced seaside Victorian garden offering sheltered environment, views; planting, which has to some extent survived, in a luxuriant style reminiscent of the Mediterranean (Cadw, PGW (Gd) 49 ANG).* *Well documented Victorian terraced garden, overlooking the Menai Strait, with fine views to Snowdonia beyond, the surviving part of which has been little altered; interesting garden buildings; enough of planting survives to give an idea of the original (Cadw, PGW (Gd) 49 ANG)..*	Area of Outstanding Natural Beauty. Environmentally sensitive area.	Terraced seaside Victorian garden offering sheltered environment, views; planting, which has to some extent survived, in a luxuriant style reminiscent of the Mediterranean. 1850s	Medium

Garden Reference Number and Grade	Site Name and Description	Designations	Site Type	Overhead electricity transmission lines and Pylons if routed through the site
GD52 Grade I	Vaynol Estate A National Trust property. Landscape park; formal gardens; kitchen gardens. *A well preserved walled and terraced Elizabethan garden survives at the centre of a superb, walled, coastal landscape park, with recently restored lake, laid out in the 1820s. The setting is outstanding, with the Menai Strait on one side and Snowdonia on the other (Cadw PGW(Gd)52 GWY).* In 1809, the Vaynol Estate followed the lead set by the Penrhyn Estate in the Ogwen valley and developed the Dinorwig quarries of Nant Peris. Here, the main outlet for the slate was Port Dinorwig on the Menai Strait, which had had an artificial harbour since 1793.	Listed buildings: There are 43 separate items, including Old Hall, old chapel, main house all Grade I; stables south of Old Hall, Old Hall garden walls and terraces, main barn and Bryntirion all Grade II*; the rest of the stables and other outbuildings, estate cottages. Related to Dinorwig quarry workshop complex and Vivian slate quarry; Conservation Areas at Aberpwll (Port Dinorwig).	Landscape park; formal gardens; kitchen gardens. The Registered Historic Park and Garden of the Vaynol estate which dates back to the 16th century and was developed by the Williams family. It passed to the Crown in 1696 and was taken over by the Assheton Smith family in 1756 who profited from slate quarrying through ownership of the extensive Dinorwic slate quarry.	High

Scheduled Monuments

The sensitivity of Scheduled Monuments (SM) to development depends on a number of factors. Where a SM is a wholly below-ground feature, the impact of new overhead electricity transmission lines on the features of archaeological interest would come primarily from the impact of the pylons footprint. However, SMs which consist largely of above-ground remains, such as buildings, will also generally have a more sensitive setting but often also have associated below-ground remains. On this basis, the following sensitivity assessment has differentiated between the sensitivity of a SM to the visual impact of an overhead line on its setting and the direct impact of constructing pylons on below-ground features.

SM Number	Site Name	Type	Period	Sensitivity to Pylons if constructed within the site / site boundary	Sensitivity to Overhead electricity transmission lines if routed above the site
AN001	Beaumaris Castle	Castle	Medieval	High	High
AN002	Bryn-Celli-Ddu Burial Chamber	Burial Chamber	Prehistoric	High	High
AN003	Henblas Burial Chamber	Chambered tomb	Prehistoric	High	High
AN004	Pant-y-Saer Burial Chamber	Chambered tomb	Prehistoric	High	High
AN005	Plas Newydd Burial Chambers	Chambered tomb	Prehistoric	High	High
AN006	Bryn-yr-Hen-Bobl Burial Chamber	Chambered round tomb	Prehistoric	High	High
AN007	Bodowyr Burial Chamber	Chambered tomb	Prehistoric	High	High
AN008	Din Dryfol Burial Chamber	Chambered long tomb	Prehistoric	High	High
AN009	Lligwy Burial Chamber	Chambered tomb	Prehistoric	High	High
AN010	Presaddfed Burial Chamber	Chambered tomb	Prehistoric	High	High
AN011	Trefignath Burial Chamber	Chambered round tomb	Prehistoric	High	High
AN012	Ty-Mawr Standing Stone	Standing stone	Prehistoric	High	High

SM Number	Site Name	Type	Period	Sensitivity to Pylons if constructed within the site / site boundary	Sensitivity to Overhead electricity transmission lines if routed above the site
AN013	Ty-Newydd Burial Chamber	Chambered tomb	Prehistoric	High	High
AN014	Caer Leb	Enclosure	Roman	High	Medium
AN015	Castell Bryn-Gwyn	Henge	Prehistoric	High	Medium
AN016	Holyhead Mountain Hut Circles	Unenclosed hut circle	Prehistoric	High	Medium
AN017	Penrhos Feilw Standing Stones	Standing stone	Prehistoric	High	High
AN018	Tregwehelydd Standing Stone	Standing stone	Prehistoric	High	High
AN019	Caer y Twr	Hillfort	Prehistoric	High	High
AN020	Aberlleiniog Castle	Motte	Medieval	High	High
AN021	Bodfeddan Inscribed Stone	Inscribed stone	Early Medieval	High	High
AN022	Bryngwyn Standing Stones	Standing stone	Prehistoric	High	High
AN023	Din Lligwy Ancient Village	Enclosed hut circle	Prehistoric	High	Medium
AN024	Din Sylwy	Hillfort	Prehistoric	High	High
AN025	Hendrefor Burial Chambers	Chambered tomb	Prehistoric	High	High
AN027	Penmon Priory	Priory	Medieval	High	High
AN029	Castell Crwn	Ringwork	Medieval	High	Medium
AN030	Standing Stones	Standing stone	Prehistoric	High	High

SM Number	Site Name	Type	Period	Sensitivity to Pylons if constructed within the site / site boundary	Sensitivity to Overhead electricity transmission lines if routed above the site
AN031	Roman Wall Surrounding St Cybi's Churchyard	Fort	Roman	High	High
AN032	Barclodiad-y-Gawres Burial Chamber	Chambered tomb	Prehistoric	High	High
AN033	Plas Meilw Hut Circles	Unenclosed hut circle	Prehistoric	High	Medium
AN034	Porth Dafarch Hut Circles	Round barrow	Prehistoric	High	High
AN035	Ynys Leurad Hut Circles	Hut circle set	Prehistoric	High	Medium
AN036	Parciau Dovecot	Dovecote	Post-Medieval/Modern	High	High
AN037	Burial Chamber 180m NE of Pen-y-Berth	Chambered tomb	Prehistoric	High	High
AN038	Dinas Gynfor Hill Fort	Hillfort	Prehistoric	High	High
AN039	Bodafon Mountain Early Medieval Homestead	Settlement	Post	High	Low
AN040	Bodafon Mountain Hut Groups	Enclosed hut circle	Roman	High	Medium
AN041	Parciau Hill Fort	Hillfort	Roman	High	High
AN042	Y Werthyr Hill Fort	Hillfort	Prehistoric	High	High
AN043	Pant-y-Saer Hut Circles	Enclosed hut circle	Prehistoric	High	Medium
AN044	Penmon Deer Park Hut Groups & Terraces	Enclosed hut circle	Prehistoric	High	Medium
AN046	St Dwynwen's Church	Church	Medieval	High	High
AN047	Tre-Garnedd Moated Site	Moated Site	Medieval	High	High

SM Number	Site Name	Type	Period	Sensitivity to Pylons if constructed within the site / site boundary	Sensitivity to Overhead electricity transmission lines if routed above the site
AN048	Dinas Cadnant Hill Fort	Hillfort	Prehistoric	High	High
AN049	Tywyn-y-Parc Promontory Fort	Promontory Fort	Prehistoric	High	High
AN051	Caer Idris Hillfort	Hillfort	Prehistoric	High	High
AN052	Old Parish Church & Churchyard	Church	Medieval	High	High
AN053	Early Gravestones & Shaft in Churchyard	Cross shaft	Early Medieval	High	High
AN054	Old Parish Church	Church	Medieval	High	High
AN055	Ffynnon Gwenfaen	Holy Well	Medieval	High	Medium
AN056	Capel Lligwy	Chapel	Medieval	High	High
AN057	Plas Berw	House (domestic)	Medieval	High	High
AN058	Pen-Sieri Inscribed Stone	Inscribed stone	Early Medieval	High	High
AN059	Perthi-Duon Burial Chamber	Chambered tomb	Prehistoric	High	High
AN060	Round Barrow East of Brynsiencyn	Round barrow	Prehistoric	High	High
AN061	Penmon Dovecot	Dovecote	Post-Medieval/Modern	High	High
AN062	St Seiriol's Well, Penmon	Holy Well	Early Medieval	High	High
AN063	Cross in Penmon Priory	Cross	Early Medieval	High	High
AN065	Mynwent y Llwyn	Mound	Prehistoric	High	High

SM Number	Site Name	Type	Period	Sensitivity to Pylons if constructed within the site / site boundary	Sensitivity to Overhead electricity transmission lines if routed above the site
AN067	Carreg Leidr	Standing stone	Prehistoric	High	High
AN068	Ffynnon Allgo	Holy Well	Medieval	High	Medium
AN069	Maen Addwyn	Standing stone	Prehistoric	High	High
AN070	Llech Golman	Standing stone	Prehistoric	High	High
AN071	Llanddyfnan Standing Stone	Standing stone	Prehistoric	High	High
AN072	Pen-y-Maen Standing Stone	Standing stone	Prehistoric	High	High
AN073	Ty-Wyn Standing Stone	Standing stone	Prehistoric	High	High
AN074	Cremlyn Standing Stones	Standing stone	Prehistoric	High	High
AN075	Hendrefor Earthwork	Enclosure	Roman	High	Medium
AN076	Maen Chwyf	Chambered tomb	Prehistoric	High	High
AN077	Llys Einion Standing Stone	Standing stone	Prehistoric	High	High
AN078	Bodewryd Standing Stone	Standing stone	Prehistoric	High	High
AN079	Llifad, Carreglefn	Enclosure	Prehistoric	High	Medium
AN080	Standing Stone 410m North of Church	Standing stone	Prehistoric	High	High
AN081	Pen-yr-Orsedd Standing Stones	Standing stone	Prehistoric	High	High
AN082	Castell Near Tre-Fadog	Promontory Fort	Prehistoric	High	High

SM Number	Site Name	Type	Period	Sensitivity to Pylons if constructed within the site / site boundary	Sensitivity to Overhead electricity transmission lines if routed above the site
AN083	Capel Soar Standing Stone	Standing stone	Prehistoric	High	High
AN084	Tyddyn-Bach Standing Stone	Standing stone	Prehistoric	High	High
AN085	Bryn-Celli-Ddu Standing Stone	Standing stone	Prehistoric	High	High
AN086	Trefwri Standing Stone	Standing stone	Prehistoric	High	High
AN087	Pont Sarn-Las Hut Group	Unenclosed hut circle	Prehistoric	High	Medium
AN088	Castellor Hut Group	Unenclosed hut circle	Prehistoric	High	Medium
AN089	Malltraeth Yard Standing Stone	Standing stone	Prehistoric	High	High
AN090	Glan-Alaw Standing Stone	Standing stone	Prehistoric	High	High
AN091	Cors-y-Bol Round Barrow	Round barrow	Prehistoric	High	High
AN092	Tre-Arddur Hut Group	Enclosed hut	Prehistoric	High	Medium
AN093	Marian Glas Hut Group	Unenclosed hut circle	Prehistoric	High	Medium
AN094	Benllech Megalith: Goosehouse	Unclassified stone	Prehistoric	High	High
AN095	Hut Group N of Glan'r Afron	Unenclosed hut circle	Prehistoric	High	Medium
AN096	North Weir and Smoke Tower, Ynys Gorad Goch	Fish weir	Post-Medieval/Modern	High	Low
AN097	Hafoty Old Farm House	House (domestic)	Medieval	High	High
AN098	Bedd Branwen Round Cairn	Round barrow	Prehistoric	High	High

SM Number	Site Name	Type	Period	Sensitivity to Pylons if constructed within the site / site boundary	Sensitivity to Overhead electricity transmission lines if routed above the site
AN099	Bodedern Early Christian Cemetery	Cemetery	Early Medieval	High	High
AN100	Bryn Eryr Rectangular Earthwork	Enclosure	Roman	High	Medium
AN101	Pont Aberffraw	Bridge	Post-Medieval/Modern	High	High
AN102	Parc Salmon Hut Group	Unenclosed hut circle	Prehistoric	High	Medium
AN103	Coed Newydd Boiling Mounds & Smelting Hearth	Burnt mound	Prehistoric	High	Medium
AN104	Bwlch-y-Dafarn Enclosed Hut Group	Enclosed hut circle	Prehistoric	High	Medium
AN105	Caerhoslligwy Enclosed Hut Groups	Enclosed hut circle	Prehistoric	High	Medium
AN106	Ogof Arian Cave	Cave	Prehistoric	High	High
AN108	Hendai Medieval Farmstead	Farmstead	Post-Medieval/Modern	High	Medium
AN109	Porth Wen Brickworks	Brickworks	Post	High	Low
AN110	Pen-y-Morwyd Round Barrow	Round barrow	Prehistoric	High	High
AN111	Parys Mountain: Windmill, Engine House, Precipi	Tower	Post-Medieval/Modern	High	Low
AN112	Graiglas Barrow	Round barrow	Prehistoric	High	High
AN120	Capel Eithin (site of) and Cemetery	Chapel	Prehistoric	High	High
AN121	Dinas Porth Ruffydd	Hillfort	Prehistoric	High	High

SM Number	Site Name	Type	Period	Sensitivity to Pylons if constructed within the site / site boundary	Sensitivity to Overhead electricity transmission lines if routed above the site
AN122	Tyddyn Sadler Hut Group	Enclosed hut circle	Prehistoric	High	Medium
AN123	Beaumaris Town Wall	Town Wall	Medieval	High	High
AN124	Pen-y-Fynwent Enclosure	Enclosure	Medieval	High	Medium
AN125	Pen-y-Fynwent Barrow	Round barrow	Prehistoric	High	High
AN126	Enclosed Hut Group West of Mariandyrys	Enclosed hut	Prehistoric	High	Medium
AN127	Hut Group S of Bwlch, Benllech	Enclosed hut circle	Prehistoric	High	Medium
AN128	Hut Circle W of Buarth Cyttir	Unenclosed hut circle	Prehistoric	High	Medium
AN129	Llys Rhosyr	Manor	Medieval	High	Medium
AN130	Felin Wen Tide Mill	Tidemill	Post	High	Medium
AN131	Felin Carnau Tide Mill	Tidemill	Post-Medieval/Modern	High	Medium
AN132	Bodior Tide Mill	Tidemill	Post-Medieval/Modern	High	Medium
AN133	Enclosed Hut Circle Settlement at Capel Llochwy	Enclosed hut circle	Prehistoric	High	Medium
AN134	Site of Friary at Llanfaes	Friary	Medieval	High	High
AN135	Dyffryn Adda Copper Furnace and Precipitation P	Copper mine	Post-Medieval/Modern	High	Low
AN136	Mona Mine Kilns and Sublimation Chambers, Mynyd	Copper mine	Post-	High	Low

SM Number	Site Name	Type	Period	Sensitivity to Pylons if constructed within the site / site boundary	Sensitivity to Overhead electricity transmission lines if routed above the site
			Medieval/Modern		
AN137	Llanddona Fish Weir	Fish weir	Post-Medieval/ Modern	High	Low
AN138	Coed Môish Fish Weir	Fish weir	Post-Medieval/ Modern	High	Low
AN139	Gorad Ddu Fish Weir	Fish weir	Post-Medieval/ Modern	High	Low
AN140	Gorad Friars Bach Fish Weir	Fish weir	Post-Medieval/ Modern	High	Low
AN141	Trecastell Fish Weir	Fish weir	Post-Medieval/ Modern	High	Low
AN142	Aberlleiniog Fish Weir I	Fish weir	Post-Medieval/ Modern	High	Low
AN143	Aberlleiniog Fish Weir II	Fish weir	Post-Medieval/ Modern	High	Low
AN144	Traeth Lligwy Fish Weir	Fish weir	Medieval	High	Low
AN145	Newlands Fish Weir	Fish weir	Post-Medieval/ Modern	High	Low
AN146	The Holyhead Road: quay on the Stanley Embankment	Quay	Post-Medieval/Modern	High	Medium
AN147	Gogarth Bay round cairn	Round cairn	Prehistoric	High	Medium

SM Number	Site Name	Type	Period	Sensitivity to Pylons if constructed within the site / site boundary	Sensitivity to Overhead electricity transmission lines if routed above the site
AN148	Trwyn Du round cairn	Round cairn	Prehistoric	High	Medium
AN149	Mynydd Bach round cairn	Round barrow	Prehistoric	High	High
AN150	Werthyr standing stone	Standing stone	Prehistoric	High	High
AN151	Plas Bodafon, standing stone to WNW of	Standing stone	Prehistoric	High	High
AN152	Berw Colliery	Colliery	Post	High	Low
AN153	Llanddona Standing Stone	Standing stone	Prehistoric	High	High
AN154	Glyn, Burial Chamber 450m N of	Burial Chamber	Prehistoric	High	High
AN155	Hirdre-Faig Standing Stone	Standing stone	Prehistoric	High	High
AN158	Y Werthyr Hillfort (Anglesey)	Hillfort	Prehistoric	High	Medium
CN006	Segontium Roman Site	Fort	Roman	High	High
CN017	Dinas Dinorwic Camp	Hillfort	Prehistoric	High	Medium
CN034	Caernarfon Town Wall	Town Wall	Medieval	High	High
CN047	Dinas Camp	Promontory Fort	Prehistoric	High	High
CN060	Glascoed Ancient Village	Enclosed hut circle	Prehistoric	High	Medium
CN073	Pier Camp	Earthwork (unclosed)	Unknown	High	Medium
CN079	Caernarfon Castle	Castle	Medieval	High	High

SM Number	Site Name	Type	Period	Sensitivity to Pylons if constructed within the site / site boundary	Sensitivity to Overhead electricity transmission lines if routed above the site
CN080	Ancient Village 270m West of Bod Angharad	Enclosed hut circle	Prehistoric	High	Medium
CN094	Lower Roman Fort	Fort	Roman	High	High
CN149	Pen-y-Gaer Camp	Hillfort	Prehistoric	High	High
CN150	Glascoed Round Cairn	Round cairn	Prehistoric	High	Medium
CN153	Henge Monument and Cursus	Cursus	Prehistoric	High	High
CN156	Rectangular Earthwork 110m NW of Coed Ty Mawr	Moated Site	Medieval	High	Medium
CN168	Cae Metta Hut Group	Enclosed hut circle	Prehistoric	High	Medium
CN175	Fodol Ganol Enclosed Hut Group	Enclosed hut circle	Prehistoric	High	Medium
CN188	Bryn-Glas Roman Signal Station	Signal station	Roman	High	High
CN197	Castell Llanddeiniolen	Motte	Medieval	High	High
CN200	Cefn Mawr Hut Group	Hut circle set	Prehistoric	High	Medium
CN203	Gors y Brithdir Enclosed Hut Group & Ancient Fields	Enclosed hut circle	Prehistoric	High	Medium
CN224	Settlement NW of Waen Rhythallt	Enclosed hut circle	Prehistoric	High	Medium
CN229	Hut Circle South of Rhyd y Galen, Pont-Rug	Unenclosed hut circle	Prehistoric	High	Medium
CN232	Hut Group Near Tan-y-Coed Pont Rhythallt	Hut group	Prehistoric	High	Medium
CN252	Hut Circle Settlement NW of Tan-y-Marian	Hut circle set	Prehistoric	High	Medium

SM Number	Site Name	Type	Period	Sensitivity to Pylons if constructed within the site / site boundary	Sensitivity to Overhead electricity transmission lines if routed above the site
CN267	Enclosed Hut Circle Settlement in Coed Glan-yr-	Enclosed hut circle	Prehistoric	High	Medium
CN334	Cored Gwyrfai Fish Weir	Fish weir	Medieval	High	Low
CN335	Ogwen Fish Weir	Fish weir	Post-Medieval/Modern	High	Low
CN375	Coed Nant-y-garth, standing stone to N of	Standing stone	Prehistoric	High	High
CN376	Goetre Uchaf barrow	Round barrow	Prehistoric	High	High
CN380	Cegin Viaduct (Penrhyn Railroad)	Viaduct	Post-Medieval/ Modern	High	High
CN400	Caerlan Tibot Defended Enclosure	Enclosure - Defensive	Prehistoric	High	Medium

Conservation Areas

Conservation Areas are areas of special architectural and historic interest which can also have their own settings. The Conservation Area descriptions have been taken from Anglesey Council and Gwynedd Council Conservation Area Character Appraisal where available. Conservation Areas are considered to be particularly sensitive to visual impacts which may affect the character and appearance of the area.
* Indicates no Conservation Area Character Appraisal available.

Name	Council	Summary description	Sensitivity to Overhead electricity transmission lines and pylons if routed through the Conservation Area
Aberffraw	Isle of Anglesey (Ynys Môn).	* The township of Aberffaw and associated hamlets exhinit a medieval landscape pattern. Part of the settlement is designated as a Conservation Area and includes the Pont Aberffraw Scheduled Monument.	High
Amlwch	Isle of Anglesey (Ynys Môn).	* Amlwch Conservation Area is located within the Parrys Mountain Registered Historic Landscape. The area is important for its industrial heritage associated with the mining and export of minerals from Parrys Mountain.	High
Amlwch Port	Isle of Anglesey (Ynys Môn).	The harbour's industrial heritage remains largely intact and provides a rare insight into the industrial activities of the port during the eighteenth and nineteenth centuries. The industrial and residential development to the south of the port also provides a historic streetscape (including varying roofscape and open spaces). Amlwch Port is within the Parrys Mountain Registered Historic Landscape.	High

Name	Council	Summary description	Sensitivity to Overhead electricity transmission lines and pylons if routed through the Conservation Area
Beaumaris	Isle of Anglesey (Ynys Môn).	Beaumaris retains much of its medieval street pattern. Its setting, diversity of architectural styles and periods, differing scale, open spaces, varying roofs, and overall quality all contribute to the town's character. Whilst several of the town's buildings are individually listed it is the overall streetscape and open spaces that make the major contribution to the qualities of the area. Beaumaris Castle forms part of the Beaumaris Castle and Town Wall World Heritage Site.	High
Bodedern	Isle of Anglesey (Ynys Môn).	The area has a uniformity of character, building age (approx. 200 years), and style that has remained in form relatively unchanged. Presaddfed Burial Chamber and Bodedern early Christain cemetery are two Scheduled Monuments at Bodedern.	High
Cemaes	Isle of Anglesey (Ynys Môn).	* Cemaes Bay was originally an ancient fishing village and during the 18th and 19th Centuries, Cemaes Bay developed into a thriving port.	High
Holyhead Central	Isle of Anglesey (Ynys Môn).	The majority of the area was developed in a period of rapid expansion of the town in the mid C19th and has a uniformity and integrity of character and scale. Whilst several of the buildings are individually listed it is the overall streetscape that makes the major contribution to the qualities of the area.	High
Holyhead Mountain	Isle of Anglesey (Ynys Môn).	The majority of the present Mountain Village was built between 1848 and 1850 to provide housing for the work force employed in the construction of Holyhead Breakwater. A system of enclosures evolved where householders were allowed to build a stone wall enclosing a piece of land. The enclosures and quarry village are unique to this part of Anglesey. Most of the village has retained its character with the enclosures, together with connecting winding lanes, presenting a strong pattern.	High

Name	Council	Summary description	Sensitivity to Overhead electricity transmission lines and pylons if routed through the Conservation Area
Holyhead/Newry Beach	Isle of Anglesey (Ynys Môn).	Most of Newry Beach evolved from agricultural land to an enclosed working area established during the construction period of the Great Breakwater. Later after completion of the Breakwater the central area was transformed by the construction of a two tier promenade and landscaping to create a vast green public open space.	High
Llanfechell	Isle of Anglesey (Ynys Môn).	The area has a prehistoric and medeival history. During the C19th the village continued to extend with the ribbon development to the SW (Mountain Road). The historic part of Llanfechell is enclosed to the north and west by Afon Meddanen with the historic core of the village clustered around the church. Vernacular architecture is the dominant architectural style within the conservation area.	High
Llangefni	Isle of Anglesey (Ynys Môn).	The town's setting, general uniformity of Victorian architectural styles, differing scale, open spaces, varying roofscape, and overall quality all contribute greatly to the town's character. Whilst a number of the town's more notable buildings are individually listed it is the overall streetscape and open spaces that make the major contribution to the qualities of the area.	High
Menai Bridge	Isle of Anglesey (Ynys Môn).	* The Conservation Area covers a settlement which developed around the Menai Suspension Bridge, a Grade 1 Listed Building.	High
Aberpwll	Gwynedd Council	* A small cluster of properties form the Conservation Area to the north east of Aberpwll.	High
Bangor	Gwynedd Council	* To the north of the Conservation Area is Pier Camp Schedule Monument.	High
Bontnewydd	Gwynedd Council	* The Conservation Area covers the southern section of Bontnewydd, a roadside settlement on the main road between Caernarfon and Porthmadog that developed up by the Afon Gwyrfai.	High
Caernarfon	Gwynedd Council	* The Caernarfon Conservation Area centres on the historic area of the town and includes Caernarfon Castle which forms part of the Caernarfon Castle and Town Walls World Heritage Site.	High

Name	Council	Summary description	Sensitivity to Overhead electricity transmission lines and pylons if routed through the Conservation Area
Llandegai	Gwynedd Council	Llandegai is an estate village and although there has been a settlement here from at least the medieval period onwards, owes its present form and character to the late 1840s when it was built as a 'model' village at the gate to Penrhyn Castle.	High
Y Faenol (Vaynol).	Gwynedd Council	* The Conservation Area is concentrated around Vaynol Hall. The area is within Vaynol Registered Historic Park and Garden and includes numerous Listed Buildings including Old Hall, old chapel, main house all Grade I; stables south of Old Hall, Old Hall garden walls and terraces, main barn and Bryntirion all Grade II*.	High

Grade I Listed Buildings

Note on Listed Building Sensitivities

Grade I listed buildings tend to be surrounded by their own grounds and therefore their setting can extend to encompass a wide area which will be sensitive to development which may affect it visually. The impact of a development on the setting of a listed building is a material consideration determining a planning application.

Listed Building Number	Name	Community
18572	Menai Suspension Bridge	Menai Bridge
18619	Church of St Baglan	Bontnewydd
26764	Refectory at Penmon Priory	Llangoed
3653	Cochwillan	Llanllechid
3659	Penrhyn Castle	Llandygai
3810	Fort Belan	Llandwrog
3814	Caernarfon Castle	Caernarfon
3815	Caernarfon Town Wall	Caernarfon
3827	Police Station, including forecourt	Caernarfon
3828	County Court (former County Hall)	Caernarfon
3857	Church of St Mary	Caernarfon
3861	Royal Welsh Yacht Club	Caernarfon
3881	Church of St Peblig	Caernarfon
3963	Road University College Of North Wall	Bangor
4027	Cathedral Church Of St Deiniol	Bangor
4049	Menai Suspension Bridge (Crown Property)	Bangor
4166	Vaynol Old Hall	Pentir
4172	Chapel of St Mary to N of Vaynol Old	Pentir
4173	Vaynol Hall	Pentir
5275	Chapel of St. Mary (Tal-y-llyn)	Aberffraw
5363	Church of St Eilian	Llaneilian

Listed Building Number	Name	Community
5380	Church of St Mary	Cylch y Garn
5413	St Cybi's Church	Holyhead
5415	Walls Of Upper Churchyard, Market Sq	Holyhead
5437	The Holy Well and Cellar	Llangoed
5462	Plas Newydd	Llandaniel Fa
5505	Church of St.Cadwaladr	Bodorgan
5525	Priory Church of St Seiriol	Llangoed
5574	Beaumaris Castle	Beaumaris
5579	Beaumaris Gaol	Beaumaris
5580	Perimeter walls of Beaumaris Gaol	Beaumaris
5588	The Bulkeley Hotel including screen	Beaumaris
5620	Church of SS Mary and Nicholas	Beaumaris
5633	Remains of medieval town wall	Beaumaris
5636	1 Victoria Terrace, including short	Beaumaris
81136	Hafotty	Cwm Cadnant
84680	10 Victoria Terrace	Beaumaris
84683	12 Victoria Terrace	Beaumaris
84684	13 Victoria Terrace	Beaumaris
84686	14 Victoria Terrace	Beaumaris
84689	15 Victoria Terrace	Beaumaris
84691	16 Victoria Terrace	Beaumaris
84693	17 Victoria Terrace	Beaumaris
84696	18 Victoria Terrace	Beaumaris
84698	19 Victoria Terrace	Beaumaris
84703	2 Victoria Terrace	Beaumaris
84708	20 Victoria Terrace	Beaumaris
84719	3 Victoria Terrace	Beaumaris

Listed Building Number	Name	Community
84727	4 Victoria Terrace	Beaumaris
84735	5 Victoria Terrace	Beaumaris
84743	6 Victoria Terrace	Beaumaris
84747	7 Victoria Terrace	Beaumaris
84750	8 Victoria Terrace	Beaumaris
84752	9 Victoria Terrace	Beaumaris

NB: Due to the quantity of data for the Study Area this Appendix covers only the main cultural heritage designations. The Grade II* and Grade II Listed Buildings and Historic Environment Record (HER) assets are not included, however they are illustrated on the Cultural Heritage Figures 9-1, 9-1a, 9-1b, 9-1c, 9-1d in Appendix H.

Register of Landscapes of Historic Interest in Wales

The Register of Landscapes of Historic Interest in Wales is a non-statutory desgination but the impact of development on them is a 'material consideration' in the planning process. The Register recognises that the landscape is in a permenent state of flux and is not used to prevent required change or development but to help planners and developers introduce changes and new developments in ways that will cause the least harm to the historic character of the land.

Register Reference	Name	Grade	Summary description
HLW (Gw) 1	Amlwch and Parys Mountain	Landscape of Outstanding Historic Interest	The Amlwch and Parys Mountain landscape is situated on Parys Mountain in north east Anglesey and includes of small areas adjacent to the coast. The area includes the Scheduled Ancient Monuments and the Conservation Areas of Amlwch and Amlwch Port. *An unparalleled, internationally important and visually highly striking landscape situated on Parys Mountain in north east* *Anglesey, comprising huge, mainly hand-dug, opencast, 18th to 19th centuries copper mines and waste tips, with an extensive attendant complex of processing features and structures superimposed on earlier workings dating from the prehistoric and possibly Roman and medieval periods. The area also includes the remains of an associated transport system, settlements,Amlwch town, port and ore processing works. (Cadw, Register of Historic Landscapes in Wales - HLW (Gw) 1).*

Register Reference	Name	Grade	Summary description
HLW (Gw) 6	Dinorwig	Landscape of Outstanding Historic Interest	Dinorwig in Gwynedd is located on the mainland and part of the landscape is in the Snowdonia National Park. *A low coastal plateau and adjoining glaciated valley situated on the north west side of Snowdon, containing evidence* *of land use and settlement from the prehistoric period onwards, superimposed by recent extensive and outstanding remains of the 19th and 20th centuries slate industry. The area includes: Iron Age hillforts, settlements and fields; Dolbadarn Castle; medieval settlements; recent quarries, waste tips, settlements, transport systems and port,Vaynol* *Hall and Park; the underground, Dinorwig hydro-electric pumped storage scheme; historic literary and artistic associations (Cadw, Register of Historic Landscapes in Wales - HLW (Gw) 6).* The evidence for late prehistoric landscape organisation is not as well-preserved as in other areas because of later agricultural improvements. Superimposed over these earlier patterns, and dominating the present landscape, are the extensive remains of 19th and 20th centuries slate quarries, their associated settlements and transport infrastructure. These developments were made possible by, and were linked to, the Vaynol Estate, one of the most significant and powerful post-medieval landholdings in North West Wales. As the economic potential of slate quarrying became evident, the industrial resources of the estate were also developed. In 1809, the Vaynol Estate followed the lead set by the Penrhyn Estate in the Ogwen valley and developed the Dinorwig quarries of Nant Peris. Here, the main outlet for the slate was Port Dinorwig on the Menai Strait, which had had an artificial harbour since 1793. The main designations include the Scheduled Monuments of Dolbadarn Castle, the Dinorwig quarry workshop complex and Vivian slate quarry; Conservation Areas at Aberpwll (Port Dinorwig) and Nant Peris; and Grades I and II * Listed Buildings at Vaynol Hall.

Register Reference	Name	Grade	Summary description
HLW (Gw) 10	Ogwen Valley	Landscape of Outstanding Historic Interest	The Ogwen Valley landscape in Gwynedd incorporates Nant Ffrancon, in north Snowdonia, which is a deeply glaciated valley of classic Alpine proportions, with its flat floor bounded on both sides by steep slopes that rise to hanging valleys and cirques below ice-worn peaks along the watershed ridges. *On the north west side, outside the main valley, the area includes Moel y Ci, Moel Faban, parts of the coastal strip east of Aber-Ogwen and the north east end of the Arfonian plateau as far as the mouth of the River Cegin on the Menai Strait.The area contains extensive and very well-preserved, relict remains of prehistoric and later land use, and in sharp visual contrast, the immense and diverse remains relating directly and indirectly to the industrial extraction of slate in the last and present centuries. As well as Penrhyn quarry itself, which is one of the few still working in Gwynedd, the contrasting style and scale of the settlements of quarry owner and workers echo the powerful social and economic forces which shaped, and still underlie, this landscape (Cadw, Register of Historic Landscapes in Wales - HLW (Gw) 10)* . *The area includes Neolithic and Bronze Age funerary and ritual monuments; Iron Age hillforts and concentrations of relict settlements and field systems; medieval settlements; large and extensive remains of 19th and 20th centuries slate quarries, tips, attendant settlements and transport systems; Penrhyn Castle and Park; Telford's Holyhead Road; historic literary and social associations (Cadw, Register of Historic Landscapes in Wales - HLW (Gw) 10) ..* Penrhyn Castle, seat of the Pennant family, was built by Thomas Hopper between 1827-37 for George Dawkins Pennant on a site which had been occupied since at least the 15th century. Built in Neo-Norman style, it is one of the most potent and enduring reminders of the social and economic forces that have shaped this area. The principal designations in the area includes early fields and dwellings east of Llanllechid, huts and enclosures in Cwm Caseg, and the settlements and enclosures on the south and east side of Moel Faban which are Scheduled Ancient Monuments; Bethesda (various), Llandegai, Llanllechid, Mynydd Llandegai (various) Conservation Areas. Penrhyn Castle is a Grade I Listed Building.
HLW (Gw) 12	North Arllechwedd	Landscape of Outstanding Historic Interest	North Arllechwedd in Gwynedd/Conwy is largely within the Snowdonia National Park. The area includes the area of the Penmaenmawr stone circle Scheduled Monument and the Conservation Area at Aber. *A dissected, mainly upland, area situated on the northern flanks of the Carneddau ridge in north Snowdonia, containing well-preserved relict evidence of recurrent land use and settlement from the prehistoric to medieval and later periods.The area includes: a Neolithic axe factory site; dense and remarkable concentrations of Bronze Age funerary and ritual monuments; Iron Age hillforts, settlements, field systems; prehistoric trackways; a Roman road; medieval settlements, field systems, a motte and commotal centre at Abergwyngregyn; recent mining and quarrying remains (Cadw, Register of Historic Landscapes in Wales - HLW (Gw) 12).*

Register Reference	Name	Grade	Summary description
HLW (Gw) 15	Penmon	Landscape of Outstanding Historic Interest	Penmon landscape on Anglesey includes the Beaumaris Castle World Heritage Site, Penmon Priory, St Seiriol's well and dovecot Guardianship Sites as well as the Conservation Area of Beaumaris. *A coastal plateau, promontory and small island situated in south east Anglesey, showing continuity of land use and activity from the late prehistoric period to the recent past. The area includes: a large Iron Age hillfort, hut settlements and fields; Early Christian monastic sites and Viking influences; medieval settlements, defensive and religious sites, Beaumaris Castle and town; the Baron Hill Estate and walled deer park; large 19th and 20th centuries, coastal limestone and marble quarries. Beaumaris Castle is a World Heritage Site (Cadw, Register of Historic Landscapes in Wales - HLW (Gw) 15).*

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Appendix M:
Landscape and Visual Sensitivity

Landscape Sensitivity Evaluation Wylfa-Pentir

Landscape Sensitivity Evaluation:

For the purpose of this exercise, the overall landscape sensitivity of each Visual and Sensory Aspect Area within the LANDMAP Assessment has been identified. While there may be localised variations in sensitivity across each area, the overall sensitivity is taken even though an aspect area may extend out with the Landscape Character Area boundary.

Guidelines for Landscape and Visual Impact Assessment (Second Edition; Landscape Institute and Institute for Environmental Management and Assessment, 2002) defines landscape character as '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. It creates the particular sense of place of different areas of the landscape.' The pattern of elements influences the ability of the landscape to accept change of a particular type without unacceptable adverse effects. The following key factors have been considered in the evaluation of landscape sensitivity to 400kV overhead lines and their contribution to overall sensitivity assessed:

Scale - Pylons and overhead lines are likely to be more easily integrated into a landscape comprising broad valleys or flat or gently sloping landscapes with large-scale field patterns, where the scale of pylons would be in proportion to the landscape, than an intimate landscape with, for example, small fields, hedges, walls, traditional buildings and varied terrain where the pylons may dominate the local landform and land cover elements. The Holford Rules (Appendix G) recognise that large scale hill landforms can reduce sensitivity by diminishing the perceived height of pylons.

Enclosure – Enclosure provided by topography or tree cover assists in integrating a line of pylons into the landscape. Although sensitive woodland can be a constraint to development, it can also provide screening and a backdrop to views of development. The Holford Rules recognise the importance of woodland both in reducing the apparent scale of pylons and providing a backdrop to views.

Landform - A landscape with smooth flowing, or relatively uniform landform is likely to be less susceptible to adverse effects as a result of overhead line development than dramatic or rugged terrain because it is more compatible with uniform nature of overhead lines than the latter, requiring fewer changes in direction and level changes. The Holford Rules recommends utilising hills as a background to a route and crossing ridgelines in natural dips to limit visibility on skylines.

The grain or trend of the landform of the landscape to be crossed by linear development such as overhead lines is an important factor affecting susceptibility. A landscape that comprises prominent ridges with open skylines that would require crossing would be particularly susceptible to adverse impacts from overhead lines whereas a landscape that allows the line to be retained within valleys thus providing a backdrop to views of the pylons and overhead lines would allow for better integration.

Pattern - Simple, regular landscapes with consistent patterns of vegetation cover are likely to be less sensitive to overhead line development than areas of more complex or irregular landscape patterns. The latter are likely to be more sensitive to disturbance which may affect their integrity and are likely to require more direction changes.

A landscape with emphasis on its horizontal lines e.g. flat open landscapes (without the vertical interruption offered by e.g. tree cover) may be more sensitive to the presence of pylons which interrupt those lines than a landscape containing more vertical elements. The Holford Rules recognises the value of using blocks of woodland in open areas to reduce the apparent height of towers and break up views of overhead lines.

Detractors – Where the landscape contains features which detract from the landscape character, for example major road corridors, existing overhead power lines, industry or quarrying, this may reduce susceptibility to new development, although in some cases cumulative impacts caused by the addition of further development can lead to an unacceptable level of change to the landscape. The existing presence or absence of detractors is reflected in the evaluation below. For example, a landscape character area with few or no detractors would be assessed as having a 'High' contribution to the overall sensitivity as this particular landscape would be highly sensitive to the introduction of a visual detractor, in this case an overhead power line. A landscape character with many visual detractors would be assessed as having a 'Low' contribution to sensitivity as this landscape would be less sensitive to the introduction of an additional visual detractor.

H=high contribution to sensitivity, M= medium contribution to sensitivity, L=low contribution to sensitivity

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
North West Anglesey	Open Rolling Lowland	North West Drumlins	This extensive area, covering most of eastern part of north Anglesey, stretches from Cemaes and Llyn Alaw in the east to the north-west coast and the A55 in the west. The basket of eggs glacial landscape of smooth oval hillocks and damp hollows is typically covered with regular medium-sized fields with hedges, mainly pasture for sheep and cattle, with some arable land. There are numerous small villages, hamlets and scattered farms, linked with small roads, giving a settled character to this quiet, unremarkable but pleasant landscape, seen from the busy A55.	M	M	M	M	M	Medium

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
	Mosaic Rolling Lowland	Mynydd Mechell	In the centre of the northern part of Anglesey, this area has a rocky upland character, with small irregular fields bounded by stone walls, areas of bare rock and gorse, and numerous small ponds. Although only rising to a maximum of 92m. This is in contrast to the smooth surrounding lowland drumlins. There are small twisting lanes and scattered houses and farms, with the spread out villages of Mynydd Mechell and Carreglefn. From within the area, views are mainly limited by the nearby rocky terrain, whilst from the surrounding land the area is apparent by its craggy skyline. It is generally an attractive varied small scale rural landscape.	H	H	H	H	M	Medium to High
	Hillside and Scarp Slopes Moorland	Mynydd y Garn	This area of upland is on the north-west tip of Anglesey, rising from the coast to 170m. It is distinctly more craggy than the adjacent lowland and has scattered outcrops of rocks, with gorse and stone walls, plus an area of forestry. Small winding roads give access to scattered farms and the small linear village of Llanfairynghornwy the eastern edge. From the high points there are 360 degree views, including to the Skerries off Carmel Head. Its coastal location adds to its interest	M	H	H	M-H	H	Medium to High

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
	Mosaic Rolling Lowland	North Coast Hinterland	To the east and west of Amlwch, extending from the coast 2km inland, this is an intricate small scale landscape with winding lanes, glimpses of the coast, small craggy hillocks and damp valleys. There are scattered houses and small fields. Within the area is the settlement of Bull Bay dominated by bungalows and holiday accommodation, and an adjacent golf course. These detract from the integrity of the nearby landscape, as do views glimpsed to Wylfa power station. Otherwise, this is an attractive varied landscape.	H	L	M-H	H	H	Medium to High
	Open Rolling Lowland	Drumlins With Windfarms	Groups of wind turbines dominate the landscape in the north part of Anglesey, south of the A5025 and Amlwch, to Llyn Alaw, and west to around Mynydd Mechell. The basket of eggs glacial landscape of smooth oval hillocks and damp hollows is typically covered with regular large fields with hedges, mainly pasture for sheep and cattle, with some arable land. There are scattered farms, linked with small roads, all within close sight of wind turbines which appear incongruous on this lowland farmland.	M	M	M	M	M	Medium
	Intertidal	Cemlyn	On the northern coast, west of Cemaes, this is a brackish lagoon, impounded by a crescent-shaped shingle beach. It is a nature reserve, owned by the National Trust and managed by NWWT primarily for its sea bird interest. It is a popular spot for bird watching and is served by two car parks, one at either end.	M	H	H	M	H	High

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
	Intertidal	North Coast	From Carmel Point in the west to Point Lynas, east of Amlwch, this is a convoluted area of north-facing coastline. For most of its length it is rocky or with shingle beaches, with the only sandy bathing beach being at Cemaes. Considerable lengths are owned and managed by the National Trust. A series of headlands project, and there are either low shallow cliffs behind, or steep slopes up to higher land. For much of its length the coastal footpath runs alongside providing a series of changing views along the wild rugged coast and out to the Skerries. Although much of it feels remote now, there are remains of past industry, with quarries and brickworks and lime kilns. Wylfa power station, set on its headland, is a conspicuous intrusion for several miles in both directions, as is the old chemical works at Amlwch. At the eastern end of this stretch of coast is the lighthouse on Point Lynas, reaching out into the sea. It forms an attractive landmark and there are fine views along the coast in both directions from it.	M	H	H	H	M	High

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
	Intertidal	North west Coast	From the Alaw Estuary northward to Carmel Point, this length of coast faces west. It consists mainly of sandy bays and coves interspersed with stretches of rocky coast and small headlands, backed by shallow low slopes. Along the northern third, where the land is higher, there are only rocks with steeply rising slopes behind, giving a wild feeling to this part. For much of its length the coastal footpath runs alongside and there are a few access points for bathing. On the whole it is a quiet unspoilt stretch of coastline with fine views west to Holy Island and along the rugged coast itself.	M	H	H	H	H	High
	Road Corridor	A55 corridor	The A55 dual-carriageway crosses Anglesey diagonally, between the Britannia Bridge and Holyhead. Where it follows a similar alignment to the A5 and the railway, the whole transport corridor is included in the aspect area. There are six interchanges, with intrusive raised roundabouts, signs and lighting. On the whole the corridor fits well into the gently undulating topography and is not particularly conspicuous. It has shallow cuttings and embankments, with mainly hedges alongside. From the road there are views across the pleasant countryside and more dramatic views of the coast towards Holyhead. Small areas of agricultural and/or wild land are included where they form an important part of the setting of the road.	L	L	L-M	L	L	Low

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
	Lake	Llyn Alaw	This is a shallow reservoir among the hillocks in the north central part of Anglesey. It was formed in 1966 and is the largest stretch of inland water on Anglesey. From the visitor centre at the southern end the dam can be reached and the ugly pumping station on a knoll is prominent. Pasture fields slope gently down to the water's edge and the view is generally not very interesting and limited to the nearby hillocks. The northern end is more varied, with some marshy areas and a hide for watching the wildfowl. It is also used for fishing, but there are no paths around it.	M	H	H	M	H	Medium to High
	Estuary	Alaw Estuary	This lies immediately north of the Holy Island straits where for the last mile of its length the west-flowing Alaw River forms an estuary. It consists of sand dunes at the seaward end, salt marshes at the edges and areas of shingle and mud at low tide. It is tucked away, hidden from view by low hills and dunes, with only the coastal footpath giving access to the northern side.	M	L	H	H	H	High

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
	Intertidal	Penrhos Beach	This area of beach, rocks and wide sands lies on the north coast of Holy Island, adjacent to Penrhos Coastal Park, stretching from the South Pier of Holyhead Harbour eastward across the straits to Newlands. Being near Holyhead, much of the area is popular for walking, but the eastern part, beyond the straits, is not very accessible and provides a feeding ground for geese and waders at low tide. There are extensive very attractive views northwards along the north-west coast of Anglesey, but inland the aluminium works dominate.	M	H	M	H	M	Medium to High
	Open Rolling Lowland	Caergeiliog craggy lowlands	This area of low-lying land is south of the A55, east of Four Mile Bridge. The small scale of the fields and twisting lanes is in contrast to the A55 and to RAF Valley, both of which substantially intrude and detract from the overall landscape, with movement and extreme noise.	M	L	L-M	M	L-M	Low to Medium
Amlwch and Environs	Mosaic Rolling Lowland	North Coast Hinterland	To the east and west of Amlwch, extending from the coast 2km. Inland, this is an intricate small scale landscape with winding lanes, glimpses of the coast, small craggy hillocks and damp valleys. There are scattered houses and small fields. Within the area is the settlement of Bull Bay dominated by bungalows and holiday accommodation, and an adjacent golf course. These detract from the integrity of the nearby landscape, as do views glimpsed to Wylfa power station. Otherwise, this is an attractive varied landscape.	H	L	M-H	H	H	Medium to High

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
	Open Rolling Lowland	Drumlins With Windfarms	Groups of wind turbines dominate the landscape in the north part of Anglesey, south of the A5025 and Amlwch, to Llyn Alaw, and west to around Mynydd Mechell. The basket of eggs glacial landscape of smooth oval hillocks and damp hollows is typically covered with regular large fields with hedges, mainly pasture for sheep and cattle, with some arable land. There are scattered farms, linked with small roads, all within close sight of wind turbines which appear incongruous on this lowland farmland.	M	M	M	M	M	Medium
	Intertidal	North Coast	From Carmel Point in the west to Point Lynas, east of Amlwch, this is a convoluted area of north-facing coastline. For most of its length it is rocky or with shingle beaches, with the only sandy bathing beach being at Cemaes. Considerable lengths are owned and managed by the National Trust. A series of headlands project, and there are either low shallow cliffs behind, or steep slopes up to higher land. For much of its length the coastal footpath runs alongside providing a series of changing views along the wild rugged coast and out to the Skerries. Although much of it feels remote now, there are remains of past industry, with quarries and brickworks and lime kilns. Wylfa power station, set on its headland, is a conspicuous intrusion for several miles in both directions, as is the old chemical works at Amlwch. At the eastern end of this stretch of coast is the lighthouse on Point Lynas, reaching out into the sea. It forms an attractive landmark and there are fine views along the coast in both directions from it.	M	H	H	H	M	High

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
	Hillside and Scarp Slopes Moorland	Mynydd Eilan	Rising from the north-east coast, south of Point Lynas, this rounded double hill is up to 177m high. The higher hilltop is rocky, with small fields and the scattered settlement of Pengorffwysfa on its northern slopes. The lower hilltop has a smooth profile with large fields and hedges, and conspicuous radio masts on the summit. From the small lanes that cross the hill there are fine views, including to Parys Mountain, and to Amlwch and the coast.	M	H	H	M-H	M	High
Parys Mountain	Derelict/ Waste Ground	Parys Mountain	This is an isolated hill in the centre of north east Anglesey. It is extraordinary and unique, having been extensively quarried, and was the greatest producer of copper ore in the world in the nineteenth century. From a distance it is seen as a rugged outline, with a conspicuous old windmill tower and modern pithead in silhouette on the skyline. It is a desolate place, scarred by centuries of workings, with deep pits, settling pools, tips and quarry faces, all of the most unusual array of colours, including purples, oranges, reds and greens. Parts are becoming vegetated with heather which may eventually hide the special colours. It is all open access and from the car park at the top there are paths and tracks leading around the workings, all with a feeling of danger.	H	H	H	H	L	Medium to High

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
Dulas Bay Hinterland	Intertidal	East Coast	From Point Lynas in the north to Benllech in the south, this coastline consists mainly of rocky shores, backed by low cliffs and grassy slopes. There are also two sandy bays with parking and access for bathing. This area is divided in two by the estuary at Dulas Bay. On this stretch of coast is the fishing village of Moelfre with its shingle beach and small harbour, tucked behind its headland and small offshore island. There are wide distant views eastward across the sea and along the coast to distant headlands.	M	H	H	H	H	High
	Open Rolling Lowland	Drumlins With Windfarms	Groups of wind turbines dominate the landscape in the north part of Anglesey, south of the A5025 and Amlwch, to Llyn Alaw, and west to around Mynydd Mechell. The basket of eggs glacial landscape of smooth oval hillocks and damp hollows is typically covered with regular large fields with hedges, mainly pasture for sheep and cattle, with some arable land. There are scattered farms, linked with small roads, all within close sight of wind turbines which appear incongruous on this lowland farmland.	M	M	M	M	M	Medium

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
	Hillside and Scarp Slopes Moorland	Mynydd Eilan	Rising from the north-east coast, south of Point Lynas, this rounded double hill is up to 177m high. The higher hilltop is rocky, with small fields and the scattered settlement of Pengorffwysfa on its northern slopes. The lower hilltop has a smooth profile with large fields and hedges, and conspicuous radio masts on the summit. From the small lanes that cross the hill there are fine views, including to Parys Mountain, and to Amlwch and the coast.	M	H	H	M-H	M	High
	Open Hillside and Scarp Slopes	Mynydd Bodafon	This is a small isolated hill in the north-eastern sector of the island. The lower slopes rise gently and smoothly within the surrounding undulating farmland, but the upper part that forms this aspect area has a craggy profile. It has been described as 'a kind of Lake District surprise among the lowlands'. It is an area of rocky moorland with bracken and heather, with a glacial tarn on top and scattered houses amidst a natural amphitheatre of eroded rocks. There are fine views from the small road that crosses the hill, including a panoramic view of the windfarms to the north. From the surrounding lowlands the hill provides an attractive landmark.	H	H	H	H	H	High

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
	Estuary	Traeth Dulas	This estuary on the east coast, north of Moelfre, reaches about a mile inland. The area includes marshland at the head of the estuary and tucked behind the promontory at the entrance. At low tide there are areas of mudflats, shingle and sands with several creeks winding through to the sea. The area is peaceful and generally sheltered and there are good views out to sea where the nearby Ynys Dulas with its white tower forms a focal point. There are a few houses on the shore and to the south the steep wooded hillside provides an attractive backdrop.	M	M	M	M	H	Medium to High
	Rolling Open Lowland	Central Smooth Belt	This is a very extensive area, stretching from Moelfre on the east coast, to Aberffraw on the west coast. It appears fairly flat in the west, but more undulating and higher in the east. It is primarily pasture, with some arable land, and medium to large sized fields with hedges, some hedgebanks and stone walls. It is criss-crossed by a network of mainly small roads, with many scattered houses and farms, hamlets and small villages. Generally it feels settled and prosperous, with a quiet rural character. It is pleasant but unremarkable, with some long views to the higher parts of Anglesey, and distant views to Snowdonia, but not usually to the coast. Only in the far west can the coast be seen. The part west of the A55 suffers from disturbance from jets from RAF Valley on weekdays.	L	L	M	L	L	Low

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
	Open Rolling Lowland	North West Drumlins	This extensive area, covering most of eastern part of north Anglesey, stretches from Cemaes and Llyn Alaw in the east to the north-west coast and the A55 in the west. The basket of eggs glacial landscape of smooth oval hillocks and damp hollows is typically covered with regular medium-sized fields with hedges, mainly pasture for sheep and cattle, with some arable land. There are numerous small villages, hamlets and scattered farms, linked with small roads, giving a settled character to this quiet, unremarkable but pleasant landscape, seen from the busy A55.	M	M	M	M	M	Medium
Holy Island	Intertidal	Penrhos Beach	This area of beach, rocks and wide sands lies on the north coast of Holy Island, adjacent to Penrhos Coastal Park, stretching from the South Pier of Holyhead Harbour eastward across the straits to Newlands. Being near Holyhead, much of the area is popular for walking, but the eastern part, beyond the straits, is not very accessible and provides a feeding ground for geese and waders at low tide. There are extensive very attractive views northwards along the north-west coast of Anglesey, but inland the aluminium works dominate.	M	H	M	H	M	Medium to High

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
	Road Corridor	A55 corridor	The A55 dual-carriageway crosses Anglesey diagonally, between the Britannia Bridge and Holyhead. Where it follows a similar alignment to the A5 and the railway, the whole transport corridor is included in the aspect area. There are six interchanges, with intrusive raised roundabouts, signs and lighting. On the whole the corridor fits well into the gently undulating topography and is not particularly conspicuous. It has shallow cuttings and embankments, with mainly hedges alongside. From the road there are views across the pleasant countryside and more dramatic views of the coast towards Holyhead. Small areas of agricultural and/or wild land are included where they form an important part of the setting of the road.	L	L	L-M	L	L	Low

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
	Mosaic Rolling Lowland	Holy Island	This consists of three parts, separated by areas of development, forming most of the island. It is low-lying with a pattern of low craggy ridges and marshy bottoms. The small roads also follow these alignments along the sides of the ridges, serving the scattered houses and farms and giving access to the popular beaches of the west coast. There are small fields with sheep, stone walls and gorsey hedges. The few trees are wind-pruned. There is limited tourist development, with a few caravan/camping sites, but it remains unspoilt, with good views to the coast and to Holyhead Mountain, with a feeling of maritime openness. Overall it has a character and feeling similar to most parts of westernmost peninsula Britain, including the western part of Lleyn. The quiet atmosphere of this landscape is shattered during weekdays by jets from nearby RAF Valley.	M	H	M	M	H	Medium to High

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
	Hillside and Scarp Slopes Moorland	Holyhead Mountain	On the north-west end of Holy Island, this is the highest hill on Anglesey, at 220m rising steeply from the sea. It has a distinctive rounded profile seen from many parts of western Anglesey and as a landmark on approaching Holyhead from Ireland. Most of the mountain is open rocky moorland, with wildlife and historic interest. At the base of the eastern slopes is the Breakwater Quarry, now a country park, and Gorlan, its associated quarry village with scattered houses and smallholdings. Considering its close proximity to Holyhead there is surprisingly little access, making it feel remote. There are fine panoramic views across Anglesey and the sea to Lleŷn peninsula and Snowdonia in the distance. On a clear day the Lake District, Isle of Man and Ireland can also be seen.	M	H	H	H	H	High
	Cliffs and Cliff Tops	South Stack/ North Stack	This is the wildest part of the coastline, on the north-westernmost tip of Holy Island, where Holyhead Mountain comes down to the sea. It includes the rocky shore and the cliffs and steep slopes immediately behind. These are the only high sea-cliffs on Anglesey and some of the best in Europe for rock climbing. The tall white South Stack lighthouse on its own island, reached by many steps and a little bridge, is the focal point of this area. Both this and the RSPB Seabird Centre in the crenellated Ellyn's Tower on the nearby cliffs are popular places to visit. The area is noisy with the sound of the sea and sea birds. There are dizzying views from the coastal path along the top of the cliffs between North and South Stack.	M	H	H	H	H	High

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				Scale	Enclosure	Landform	Pattern	Detractors	
	Intertidal	Holy Island Coast	This is the low-lying parts of the coast of Holy Island, formed of most of the length along the south west of the island, on either side of Trearddur and a small section on the north, between Holyhead Mountain and the town. It is a very convoluted coastline with numerous headlands and rocky coves, backed by low cliffs or grassy slopes. It is wild, varied and very attractive. Throughout its length the coastal path runs nearby, providing ever-changing views along the coast, to Holyhead Mountain and across the sea to the hills of Lleŷn Peninsula.	M	M	H	M	H	Medium to High
	Intertidal	Holy Island Straits	The southern two-thirds of the straits that separate Holy Island from the main island of Anglesey are convoluted and in places narrow. This area is similar to an estuary and at low tide there are expanses of sand and mud, with the sea forming only a narrow channel twisting through. There is little access to the area except by foot, and when the jets from adjacent RAF Valley are not flying, the area is quiet and peaceful. From Four Mile Bridge that crosses these straits, there are views in both directions to the attractive winding water and creeks.	H	L	H	H	H	High

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				Scale	Enclosure	Landform	Pattern	Detractors	
	Intertidal	Inland Sea/Stanley Embankment	This area is the wide part of the Holy Island straits, impounded by the Stanley Embankment, originally built by Telford to carry the A5. This causeway, now widened to also carry the railway and A55, brings movement and noise into the area. The tidal currents make the "Inland Sea" popular for kayaking. There are no views out to sea beyond the embankment from here.	M	H	H	M	M-H	Medium to High
	Urban	Aluminium Works	This large factory and adjacent industrial estate is on the outskirts of Holyhead, between the A5 and the railway. Its single tall chimney is a landmark seen from much of north west Anglesey, and presumably also from approaching ferries. Dense screening woodland along the A5 edge means that the works are hidden from view from the east side. From the A55 and railway, however, there are open unattractive views into the site.	L	M	L	L	L	Low
	Amenity Land	Penrhos Coastal Park	This area lies immediately east of Holyhead, between the A5 and the sea. It is part of the former estate of the Stanleys and has a central farm complex and plantation woodlands. It is popular for walking in the woodland and enjoying the views along the coast. Its entrance is marked by the white-painted tollhouse on the A5. It is managed as a country park and has various paths leading from the car parks.	M	H	H	M	H	Medium to High

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				Scale	Enclosure	Landform	Pattern	Detractors	
	Dispersed Settlement	Trearddur	This dispersed settlement is located on the narrowest part of Holy Island. It consists of various housing estates, areas of bungalow development, caravan parks and holiday accommodation with fields in-between. It straggles along the western coast and thrives as a holiday resort in the summer. In the winter it looks rather sorry for itself. It is centred on the attractive sheltered Trearddur Bay and, being near Holyhead, is popular for water sports and bathing. Most of the buildings are poor quality and the settlement has a haphazard appearance.	M	H	M	M	M	Medium
West Central Anglesey	Rolling Open Lowland	Central Smooth Belt	This is a very extensive area, stretching from Moelfre on the east coast, to Aberffraw on the west coast. It appears fairly flat in the west, but more undulating and higher in the east. It is primarily pasture, with some arable land, and medium to large sized fields with hedges, some hedgebanks and stone walls. It is criss-crossed by a network of mainly small roads, with many scattered houses and farms, hamlets and small villages. Generally it feels settled and prosperous, with a quiet rural character. It is pleasant but unremarkable, with some long views to the higher parts of Anglesey, and distant views to Snowdonia, but not usually to the coast. Only in the far west can the coast be seen. The part west of the A55 suffers from disturbance from jets from RAF Valley on weekdays.	L	L	M	L	L	Low

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
	Mosaic Rolling Lowland	Central South West Craggy Belt	This large area extends from the west coast north of Malltraeth to Llangefni and northwards. North-east to south-west aligned rocky ridges are discernable, giving a series of craggy skylines, with marshier land in-between. There are large hedges with hawthorn and gorse and ash trees, enclosing fields of mixed sizes, mainly small on the ridges and larger in the valleys. The roads tend to follow the ridges, giving longer views across farmland. There are scattered farms, small villages and hamlets throughout. Altogether this is an attractive mix of textures and colours in generally quiet farmland. The western part in particular, however, is disturbed by jets from RAF Valley during weekdays. The western part of the Bodorgan Estate has a more maritime character due to views over adjacent dunes and estuary and to the rocky coast, with wind-pruned shelter belts.	M	L	M	L	L	Low to Medium

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	Lake	Cefni Reservoir	This reservoir and surrounding forestry is north of Llangefni, in the centre of Anglesey. It was built in the 1940s and the ugly pumping station and associated buildings stand on the southern side, adjacent to the dam over which water flows into the Dingle. The overgrown track of the Central Anglesey Railway crosses the centre of the reservoir on a causeway with just a narrow gap linking the two parts where a bridge formerly stood. Although there are footpaths through the surrounding coniferous woodland and scrub, the reservoir is mainly hidden away. Only little glimpses of the water are visible from the nearby main road, whilst from the adjacent car park there is no indication of the reservoir and access to the water's edge is very limited and unmanaged.	M	M	H	H	H	Medium to High

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				Scale	Enclosure	Landform	Pattern	Detractors	
	Wooded Lowland Valley	Llangefni Dingle	This small V-shaped winding valley leads from Cefni Reservoir south-east into the heart of Llangefni. The sides are steep and craggy, clothed with oak and beech trees. The small River Cefni flows through marshy areas and through little rocky gorges. It is a local nature reserve and has recently been developed for better public access with paths, boardwalks, bridges, seating and sculpture. Altogether this creates a delightful hidden away place, its total contrast to the town adding to its appeal. Its long history of use is apparent from the ancient parish church with holy well below at the south east end, and old weirs and fish ladder as well as the dismantled Anglesey Central Railway winding through from the old station yard, now a car park.	H	M	H	H	H	High
	Open Lowland Valley	Pentraeth Valleys	From Benllech and Red Wharf Bay stretching south-westward, this area is a series of low gently rounded ridges with wide flat-bottomed valleys in between. It is all lower than the land to north and south, and meets with Malltraeth Marsh in the south west. There are fens in the valleys, notably the Cors Bodeilo Nature Reserve, and pasture fields bounded by low hedges with few trees on the ridges. From the lower parts views are limited to the surrounding slopes, giving a secluded rather enclosed character to much of the area. Towards the north there are some views to Red Wharf Bay but generally the coast is not dominant.	M	M-H	L-M	L-M	H	Medium

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				Scale	Enclosure	Landform	Pattern	Detractors	
Red Wharf Bay	Mosaic Rolling Lowland	Benllech Hinterland	This extends a few miles inland from the east coast north of Benllech. It has small fields, rocky limestone outcrops, gorse and stone walls, and much rough land. There are old quarries, numerous caravan/camping sites, a golf course and a marshy nature reserve. Altogether this has produced an attractively varied and intricate landscape in which the small tourist developments do not appear intrusive	H	M	M	M-H	M-H	Medium to High
	Intertidal	Red Wharf Bay	This is a large semi-circular bay on the east coast, including Benllech Sands at its west end. The tide goes out for more than a mile, revealing 10 square miles of sands, and comes in rapidly through a maze of channels, giving, therefore, an ever-changing view across the bay. Both Benllech Sands and the northern side, around the village of Red Wharf Bay, are popular and get crowded in the summer. From here there are very fine views across to Pentraeth Forest and Mynydd Llwydiarth, whilst from these hillsides there are spectacular panoramic views of all the bay and the coastline beyond. Along the edges of the quieter western part of the bay there are marshy areas and small dunes.	M	H	M	M	H	Medium to High

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				Scale	Enclosure	Landform	Pattern	Detractors	
	Open Lowland Valley	Pentraeth Valleys	From Benllech and Red Wharf Bay stretching south-westward, this area is a series of low gently rounded ridges with wide flat-bottomed valleys in between. It is all lower than the land to north and south, and meets with Malltraeth Marsh in the south west. There are fens in the valleys, notably the Cors Bodeilo Nature Reserve, and pasture fields bounded by low hedges with few trees on the ridges. From the lower parts views are limited to the surrounding slopes, giving a secluded rather enclosed character to much of the area. Towards the north there are some views to Red Wharf Bay but generally the coast is not dominant.	M	M-H	L-M	L-M	H	Medium
	Hillside and Scarp Slopes Mosaic	Mynydd Llwydiarth	Rising steeply from Red Wharf Bay to 157m, this hillside provides a fine backdrop to the coast and offers a grand view across the bay. When seen from inland, this area is noticeably craggy, with gorse-covered knolls interspersed with marshy hollows, but is not much higher than the adjacent farmland plateau. Within this area, the settlement of Llanddona is spread out around a series of small greens. From Llanddona steep lanes lead down the hillside, passed scattered houses overlooking the bay. Altogether this is an attractive landscape.	M	H	M-H	M-H	H	High

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	Wooded Hillside and Scarp Slopes	Pentraeth Forest	This area of mainly privately-owned coniferous forest covers the western part of Mynydd Llwydiarth and forms part of the backdrop to Red Wharf Bay. Within the forest are rocky ridges, a small lake and some enclosed fields. There is little public access and the forest remains a stronghold of the red squirrel, adding to its feeling of special wildness.	M	M	H	M	H	Medium to High
	Intertidal	East Coast	From Point Lynas in the north to Benllech in the south, this coastline consists mainly of rocky shores, backed by low cliffs and grassy slopes. There are also two sandy bays with parking and access for bathing. This area is divided in two by the estuary at Dulas Bay. On this stretch of coast is the fishing village of Moelfre with its shingle beach and small harbour, tucked behind its headland and small offshore island. There are wide distant views eastward across the sea and along the coast to distant headlands.	M	H	M	M	H	High

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Penmon	Mosaic Rolling lowland	Penmon Plateau	This is the easternmost area, inland from the coast between Puffin Island and Red Wharf Bay. It is limestone, with several former quarries along the coast including the large Dinmor Quarry, used to construct A55, now containing a fish farm. Boundary walls of pale limestone, including the old deer park wall, add to the area's distinctive character. It's high point, the hillfort Bwrdd Arthur at 164m overlooks Red Wharf Bay and forms a feature on the skyline. The eastern half has prospects over the sea. The area's inland edge is marked by a minor scarp with woodland and a meandering little lane along the top, overlooking the Llangoed vale. There are scattered houses and the hamlets of Penmon and Caim in the south east of the area. There is little access to the coast except at the eastern tip, beyond the beautiful Penmon Priory, to where there are views to Puffin Island and the Great Orme in the distance. The lime kilns and quays at Porth Penmon form a prominent interesting feature seen	M	M-H	M-H	M-H	H	Medium to High
	Mosaic Rolling lowland	Llangoed Vale	North of Beaumaris, to Penmon, this is an area of gently rolling farmland, enclosed by scarps to north and west, and looking out across the Straits to the east. Medium sized fields with well-treed hedges, twisting lanes and numerous scattered houses form a generally attractive landscape with a well settled sheltered character. Groups of bungalows along the roads and the derelict factory at Fryers Bay detract from the overall quality.	M	M-H	M	M-H	M-H	Medium to High

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	Intertidal	Penmon Limestone Coast	This is the most easterly area of coast, from the edge of Red Wharf Bay, round Trwyn Du to the northern reaches of the Menai Straits. The limestone of this coastline has been extensively quarried in the past and there are various remains of these workings. There is very little access to the north-facing coast, and the limestone plateau rises steeply behind the narrow shingle and rock shoreline. At Trwyn Du, the easternmost point, however, a road gives access to the fine viewpoint, with the black and white striped lighthouse on the rocky point and views across to Puffin Island and Great Orme beyond.	M	H	M	M	H	High
	Hillside and Scarp Slopes Mosaic	Mynydd Llwydiarth	Rising steeply from Red Wharf Bay to 157m, this hillside provides a fine backdrop to the coast and offers a grand view across the bay. When seen from inland, this area is noticeably craggy, with gorse-covered knolls interspersed with marshy hollows, but is not much higher than the adjacent farmland plateau. Within this area, the settlement of Llanddona is spread out around a series of small greens. From Llanddona steep lanes lead down the hillside, passed scattered houses overlooking the bay. Altogether this is an attractive landscape.	M	H	M-H	M-H	H	High

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	Intertidal	Menai Straits North	This area is the coastline from Penmon to Beaumaris. At low tide it is mainly mud and sand with rocky shingle. Backing the shoreline, there are banks of loose sandy soil, rather than cliffs, where the lowland vale meets the straits, giving an open feeling to the coastline. There are a few groynes and old jetties projecting onto the shore and in two places the road runs immediately alongside, allowing good wide views along the straits and across the extensive Lavan Sands to Snowdonia.	M	H	M	M	H	High
	Wooded Lowland Valleys	Beaumaris Wooded Slopes	This long sinuous east-facing small scarp runs from Beaumaris northward. It is almost entirely wooded and forms an important backdrop to Beaumaris and the Llangoed vale, clearly separating it from the plateau farmland above. From the slopes there are fine views across the Menai Straits to northern Snowdonia. The grand houses of Barons Hill (now derelict) and Henllys (now apartments) at the base of the scarp, developed various drives and paths through the woods, with some exotic tree planting. Some of these walks are still accessible.	H	M	H	H	H	High
	Open Rolling Lowland	Eastern Smooth Belt	This area extends north of the A55 towards Red Wharf Bay. It consists of rolling plateau with large regular fields bounded by hedges, mixed woodland plantations and shelterbelts, and less marshy land than elsewhere. Snowdonia appears very close, but the Menai Straits are hidden from view. Altogether it is a pleasant but rather featureless unremarkable landscape.	M	M	L-M	L-M	H	Medium

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				Scale	Enclosure	Landform	Pattern	Detractors	
East Central Anglesey	Open Rolling Lowland	Eastern Smooth Belt	This area extends north of the A55 towards Red Wharf Bay. It consists of rolling plateau with large regular fields bounded by hedges, mixed woodland plantations and shelterbelts, and less marshy land than elsewhere. Snowdonia appears very close, but the Menai Straits are hidden from view. Altogether it is a pleasant but rather featureless unremarkable landscape.	M	M	L-M	L-M	H	Medium
	Open Lowland Valley	Pentraeth Valleys	From Benllech and Red Wharf Bay stretching south-westward, this area is a series of low gently rounded ridges with wide flat-bottomed valleys in between. It is all lower than the land to north and south, and meets with Malltraeth Marsh in the south west. There are fens in the valleys, notably the Cors Bodeilo Nature Reserve, and pasture fields bounded by low hedges with few trees on the ridges. From the lower parts views are limited to the surrounding slopes, giving a secluded rather enclosed character to much of the area. Towards the north there are some views to Red Wharf Bay but generally the coast is not dominant.	M	M-H	L-M	L-M	H	Medium

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	Open Rolling Lowland	South West Ridges	From the A55 corridor at Llanfair Pwllgwyngyll south-west towards Newborough there is a clear pattern of gentle ridges and valleys on a north-east/south-west alignment. Roads run along the ridges, and at right angles across the valleys, linking the ridgetop villages. The fields are generally regular and medium to large in size, with well-treed hedges. From within the valleys the views to Snowdonia are hidden. There are several important prehistoric monuments within this area.	L	L	M	M	M	Low to Medium
	Dispersed Settlement	Gaerwen	Gaerwen is a large village spread out along the A5, a few miles west of Llanfairpwllgwyngyll. The main part of the village is on the plateau, with scattered develop on the slopes down to Pentre Berw on the edge of Malltraeth Marsh. It is not a particularly attractive village, on the straight main road, with housing and industrial estates behind. Various fields and other undeveloped land link the various parts of the settlement. Small areas of agricultural and/or wild land are included where they form an important part of the setting of the settlement.	L-M	M	L-M	M	L	Low

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	Road Corridor	A55 corridor	The A55 dual-carriageway crosses Anglesey diagonally, between the Britannia Bridge and Holyhead. Where it follows a similar alignment to the A5 and the railway, the whole transport corridor is included in the aspect area. There are six interchanges, with intrusive raised roundabouts, signs and lighting. On the whole the corridor fits well into the gently undulating topography and is not particularly conspicuous. It has shallow cuttings and embankments, with mainly hedges alongside. From the road there are views across the pleasant countryside and more dramatic views of the coast towards Holyhead. Small areas of agricultural and/or wild land are included where they form an important part of the setting of the road.	L	L	L-M	L	L	Low

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Rhosneigr-Gwalchmai	Mosaic Rolling Lowland	Central South West Craggy Belt	This large area extends from the west coast north of Malltraeth to Llangefni and northwards. North-east to south-west aligned rocky ridges are discernable, giving a series of craggy skylines, with marshier land in-between. There are large hedges with hawthorn and gorse and ash trees, enclosing fields of mixed sizes, mainly small on the ridges and larger in the valleys. The roads tend to follow the ridges, giving longer views across farmland. There are scattered farms, small villages and hamlets throughout. Altogether this is an attractive mix of textures and colours in generally quiet farmland. The western part in particular, however, is disturbed by jets from RAF Valley during weekdays. The western part of the Bodorgan Estate has a more maritime character due to views over adjacent dunes and estuary and to the rocky coast, with wind-pruned shelter belts.	M	L	M	L	L	Low to Medium

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				Scale	Enclosure	Landform	Pattern	Detractors	
	Rolling Open Lowland	Central Smooth Belt	This is a very extensive area, stretching from Moelfre on the east coast, to Aberffraw on the west coast. It appears fairly flat in the west, but more undulating and higher in the east. It is primarily pasture, with some arable land, and medium to large sized fields with hedges, some hedgebanks and stone walls. It is criss-crossed by a network of mainly small roads, with many scattered houses and farms, hamlets and small villages. Generally it feels settled and prosperous, with a quiet rural character. It is pleasant but unremarkable, with some long views to the higher parts of Anglesey, and distant views to Snowdonia, but not usually to the coast. Only in the far west can the coast be seen. The part west of the A55 suffers from disturbance from jets from RAF Valley on weekdays.	L	L	M	L	L	Low

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	Road Corridor	A55 corridor	The A55 dual-carriageway crosses Anglesey diagonally, between the Britannia Bridge and Holyhead. Where it follows a similar alignment to the A5 and the railway, the whole transport corridor is included in the aspect area. There are six interchanges, with intrusive raised roundabouts, signs and lighting. On the whole the corridor fits well into the gently undulating topography and is not particularly conspicuous. It has shallow cuttings and embankments, with mainly hedges alongside. From the road there are views across the pleasant countryside and more dramatic views of the coast towards Holyhead. Small areas of agricultural and/or wild land are included where they form an important part of the setting of the road.	L	L	L-M	L	L	Low
	Excavation	Caer Glaw Quarry	This working granite quarry is in the centre of Anglesey, adjacent to the A5. It is situated within an area of craggy low ridges and therefore is not particularly conspicuous. Apart from the entrance area, it is well-screened from the main road, but the rock faces, crushers and other structures can be seen from the minor road nearby. A public recycling centre in grey clad sheds is tucked away to the side of the main entrance. Inevitably it produces some dust and noise, but overall, it is not intrusive. Small areas of agricultural and/or wild land are included where they form an important part of the setting of the development.	M	L-M	L	L-M	L	Low to Medium

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	Flat lowland Mosaic	Llanfihangel lakes and dunes	Inland from RAF Valley, towards the A55, this low-lying area on either side of Llanfihangel yn Nhowyn is a mosaic of former dunes, lakes and marshy areas, interspersed with rocky patches. There is open access on much of the flattened grassy dunes, including a golf course. The lakes are used for fishing and have wildlife interest. The rest of the land is divided into small irregular fields. This area suffers from the extremely noisy jets of RAF Valley during weekdays.	M	H	L	L	M	Low to Medium
	Open Rolling Lowland	Caergeiliog craggy lowlands	This area of low-lying land is south of the A55, east of Four Mile Bridge. The small scale of the fields and twisting lanes is in contrast to the A55 and to RAF Valley, both of which substantially intrude and detract from the overall landscape, with movement and extreme noise.	M	L	L-M	M	L-M	Low to Medium
	Amenity	RAF Valley Airfield	This airfield is situated on the west coast, adjacent to the Holy Island straits, on an area of flattened dunes. It has a long runway parallel to the coast and most of the buildings, including neat office blocks, are clustered in the northern corner. It is hidden by dunes from the nearby beach, but the large hangers are seen at a distance from Rhosneigr. It is used for low-level flying of jets and the noise can be ear-shattering from nearby. The noise affects about a third of Anglesey during weekdays. It is also used by the search and rescue helicopters and a civilian plane service has recently started.	L	M	M	L	L	Low

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	Intertidal	Southwest Coast Rhosneigr	This area comprises the coastline from the headland north of Cable Bay to the northern end of Cymyran Bay. These sandy bays on either side of the holiday resort of Rhosneigr are popular accessible bathing and surfing beaches, and are also much used for windsurfing and kite-flying. The stretches of sand are broken by areas of tidal rocks and are backed mainly by dunes. There are a few scattered houses on these dunes, and recent building out from Rhosneigr is starting to suburbanise the character of them. There are fine views along the beaches and out to the Lleŷn Peninsula. With RAF Valley immediately behind the edge of the dunes, noise from jets is very disturbing during weekdays.	M	H	M	M	M	Medium to High
	Dispersed Settlement	Llanfihangel yn Nhowyn	This village is spread out along the B road between the A55 and RAF Valley. The southern part, nearer the airfield, is a typical RAF base with forces housing and expanses of neat mown grass. The northern part is mainly housing estates, with a few shops. Adjacent natural lakes help bring some character to this otherwise very ordinary settlement. Noise from jets is very intrusive in this area during weekdays.	M	H	H	M	L	Medium to High

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				Scale	Enclosure	Landform	Pattern	Detractors	
	Amenity Land	Mona airfield/show ground	The airfield is in the centre of Anglesey, adjacent to the A5, to the west of Llangefni. An industrial estate is being developed on a former military camp layout in the eastern part. This currently appears incongruously isolated and inappropriate. The airfield appears semi-derelict, with weeds growing from cracks in the concrete runways and scrub and rushes developing on the grassland, plus scattered old buildings. The main runway, with its adjacent pylon, is used for practice touchdowns by the military and is disturbing for the adjacent villages and for drivers on the A5. The Anglesey Showground occupies former camp area on the other side of the main road. There are some recently-built permanent large sheds here.	L	H	M	L	L	Low

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				Scale	Enclosure	Landform	Pattern	Detractors	
Aberffraw	Mosaic Rolling Lowland	Central South West Craggy Belt	This large area extends from the west coast north of Malltraeth to Llangefni and northwards. North-east to south-west aligned rocky ridges are discernable, giving a series of craggy skylines, with marshier land in-between. There are large hedges with hawthorn and gorse and ash trees, enclosing fields of mixed sizes, mainly small on the ridges and larger in the valleys. The roads tend to follow the ridges, giving longer views across farmland. There are scattered farms, small villages and hamlets throughout. Altogether this is an attractive mix of textures and colours in generally quiet farmland. The western part in particular, however, is disturbed by jets from RAF Valley during weekdays. The western part of the Bodorgan Estate has a more maritime character due to views over adjacent dunes and estuary and to the rocky coast, with wind-pruned shelter belts.	M	L	M	L	L	Low to Medium

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	Rolling Open Lowland	Central Smooth Belt	This is a very extensive area, stretching from Moelfre on the east coast, to Aberffraw on the west coast. It appears fairly flat in the west, but more undulating and higher in the east. It is primarily pasture, with some arable land, and medium to large sized fields with hedges, some hedgebanks and stone walls. It is criss-crossed by a network of mainly small roads, with many scattered houses and farms, hamlets and small villages. Generally it feels settled and prosperous, with a quiet rural character. It is pleasant but unremarkable, with some long views to the higher parts of Anglesey, and distant views to Snowdonia, but not usually to the coast. Only in the far west can the coast be seen. The part west of the A55 suffers from disturbance from jets from RAF Valley on weekdays.	L	L	M	L	L	Low
	Dunes and Dune Slack	Tywy Aberffraw	This is an area of dunes that extends inland for about two miles, immediately south of Aberffraw, on the south west coast. In places the dunes are hillocky, cutting off views, in other parts they are flatter with wider views across to the farmland rising on either side. They are mainly grass-covered and are grazed. There are two roads crossing the dunes and all the area has open access. At the landward end is Llyn Coron, a slack with marshy edges which is used for fishing.	M	H	M	L	H	Medium to High

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				Scale	Enclosure	Landform	Pattern	Detractors	
	Intertidal	South West Coast	From the edge of Malltraeth Sands in the south to popular little Cable Bay, south of Rhosneigr, this coast is mainly rocky, with low cliffs and off-shore islets. Apart from the sands at Aberffraw, and the small cove at Porth Cwyfan, which can be reached from the coastal path, this area is not very accessible. There are views out across the sea to the Lleŷn Peninsula, and along the rugged coast, best seen from the coastal path. Noise from the jets at RAF Valley to the north, and from the adjacent Ty Croes racing circuit, intrude at times.	M	H	L-M	M	H	Medium to High
	Amenity Land	Ty Croes racing circuit	This has an out-of-the-way cliff-top location on the south-west coast, west of Aberffraw. Formerly a Royal Artillery camp, there are remains of concrete roads, brick lookouts and various other ruined buildings in the northern part. The circuit and associated buildings are being completely re-worked, with high screen mounds around the landward side. It will still be seen and heard from the coastal path to the south. It is busy most weekends, but during the week it is eerily isolated. Small areas of agricultural and/or wild land are included where they form an important part of the setting of the development.	M	L	L-M	L	M	Low to Medium

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				Scale	Enclosure	Landform	Pattern	Detractors	
Afon Cefni	Mosaic Rolling Lowland	Central South West Craggy Belt	This large area extends from the west coast north of Malltraeth to Llangefni and northwards. North-east to south-west aligned rocky ridges are discernable, giving a series of craggy skylines, with marshier land in-between. There are large hedges with hawthorn and gorse and ash trees, enclosing fields of mixed sizes, mainly small on the ridges and larger in the valleys. The roads tend to follow the ridges, giving longer views across farmland. There are scattered farms, small villages and hamlets throughout. Altogether this is an attractive mix of textures and colours in generally quiet farmland. The western part in particular, however, is disturbed by jets from RAF Valley during weekdays. The western part of the Bodorgan Estate has a more maritime character due to views over adjacent dunes and estuary and to the rocky coast, with wind-pruned shelter belts.	M	L	M	L	L	Low to Medium

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	Flat Open lowland Farmland	Malltraeth Marsh	This belt of flat land, about one mile wide, fills the Cefni valley inland from Malltraeth Bay to Llangefni. In the south-west of Anglesey, it reaches more than half way across the island. In its present form, this is a relatively recent landscape, created when The Cob was built across the tidal marshes in order to drain the land, allowing the A5 to be built across. The river is canalised through the centre of the area, with high straight banks, and throughout this reclaimed marshland there is a regular pattern of clay-lined drainage ditches with tidal flaps to prevent flooding. There are hedges alongside the drains and most of the land is sheep pasture, with some reed bed areas managed as nature reserve by the RSPB. The A5 and A55 running parallel, sweep down to cross the marsh but are well integrated into the landscape and not particularly intrusive. The railway line crosses diagonally on a low arched viaduct that is most conspicuous. From these there are long views over the marsh. From the small roads that cross the marsh views are to the valley sides, but not over The Cob to the sea. Altogether this a distinctive landscape but not particularly attractive in itself.	L	M	L	L	L-M	Low

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				Scale	Enclosure	Landform	Pattern	Detractors	
	Estuary	Malltraeth Sands	This area is a large estuary extending two and a half miles in from Malltraeth Bay, ending where The Cob cuts it off from the drained lands behind. At low tide it is sandy, with the Cefni River meandering along the northern shore. It is not very accessible and it is the haunt of sea birds and waders. There are fine wide views of it from the path along The Cob, framed by the headland and Newborough Forest and Cefni saltmarsh.	L	H	L	M	H	Medium
	Intertidal	Llanddwyn Bay/ Malltraeth Bay	This five mile stretch of sand reaches northwest from Abermenai Point at the southern entrance to the Menai Straits. It is backed by the dunes of Newborough Warren and Forest and the estuary of Malltraeth Sands, with Llanddwyn Island linked to the beach at all but the highest of tides. It is popular for bathing and walking, with access via the Forest. There are fine views throughout to the adjacent Llanddwyn Island, and across to the Lleŷn Peninsula.	L	H	L	M	H	Medium
	Open Lowland Valleys	Malltraeth Marsh Slopes	This length of north-west facing slopes stretches from the A55 at Gaerwen to Newborough in the south, bounded by the ridge road on the top and the flat Malltraeth Marsh on the bottom. The fields are generally regular and medium in size, with well-treed hedges and some stone walls and disused small quarries. It is steeper than the adjacent ridges and valleys and is distinctive because of its views out across the marsh and to the sea and headlands to the south and to the A55 to the north.	M	M	M	L	H	Medium

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				Scale	Enclosure	Landform	Pattern	Detractors	
	Road Corridor	A55 corridor	The A55 dual-carriageway crosses Anglesey diagonally, between the Britannia Bridge and Holyhead. Where it follows a similar alignment to the A5 and the railway, the whole transport corridor is included in the aspect area. There are six interchanges, with intrusive raised roundabouts, signs and lighting. On the whole the corridor fits well into the gently undulating topography and is not particularly conspicuous. It has shallow cuttings and embankments, with mainly hedges alongside. From the road there are views across the pleasant countryside and more dramatic views of the coast towards Holyhead. Small areas of agricultural and/or wild land are included where they form an important part of the setting of the road.	L	L	L-M	L	L	Low
Newborough	Wooded Rolling Lowland	Newborough Forest	Near the south west corner of Anglesey, this forestry covers stabilised dunes. It is accessed by a toll road and is a popular place for walking and recreation and access to the beach. It is managed by the Forestry Commission and is mainly coniferous, including pines. From within the forest there are few views out. From the coast the forest appears monotonous and dark.	L	L	L	L	H	Low to Medium

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	Estuary	Malltraeth Sands	This area is a large estuary extending two and a half miles in from Malltraeth Bay, ending where The Cob cuts it off from the drained lands behind. At low tide it is sandy, with the Cefni River meandering along the northern shore. It is not very accessible and it is the haunt of sea birds and waders. There are fine wide views of it from the path along The Cob, framed by the headland and Newborough Forest and Cefni saltmarsh.	L	H	L	M	H	Medium
	Other Coastal Wild Land	Cefni saltmarsh	This area forms the southern side of Malltraeth Sands, the Cefni estuary, and is backed by Newborough Forest. It is part of a nature reserve and access is limited to the forest fringe. It is a typical area of ungrazed saltmarsh, with reeds and numerous sinuous little creeks. There are wide views from the marsh across the estuary to Malltraeth on the far side, and seaward to rocky headlands.	L-M	L-M	L-M	M	M-H	Medium
	Intertidal	Llanddwyn Bay/ Malltraeth Bay	This five mile stretch of sand reaches northwest from Abermenai Point at the southern entrance to the Menai Straits. It is backed by the dunes of Newborough Warren and Forest and the estuary of Malltraeth Sands, with Llanddwyn Island linked to the beach at all but the highest of tides. It is popular for bathing and walking, with access via the Forest. There are fine views throughout to the adjacent Llanddwyn Island, and across to the Lleŷn Peninsula.	L	H	L	M	H	Medium

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	Dunes and Dune Slack	Newborough Warren	This is an extensive area of stabilised sand dunes at the south-west tip of Anglesey. The area is a nature reserve and mainly covered with marram grass and a great variety of low-growing native vegetation. In the hollows there are slacks, some with willow round about. This is a strange disorientating landscape. From the high dunes there are wide views and the wind brings the sound of the sea, but in the hollows it is quiet and secluded. Footpaths cross the dunes, leading from car parks at the landward side towards the sea.	M	H	M	L	H	Medium to High
	Open Rolling Lowland	South West Ridges	From the A55 corridor at Llanfair Pwllgwyngyll south-west towards Newborough there is a clear pattern of gentle ridges and valleys on a north-east/south-west alignment. Roads run along the ridges, and at right angles across the valleys, linking the ridgetop villages. The fields are generally regular and medium to large in size, with well-treed hedges. From within the valleys the views to Snowdonia are hidden. There are several important prehistoric monuments within this area.	L	L	M	M	M	Low to Medium

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				Scale	Enclosure	Landform	Pattern	Detractors	
	Flat Open lowland Farmland	Malltraeth Marsh	This belt of flat land, about one mile wide, fills the Cefni valley inland from Malltraeth Bay to Llangefni. In the south-west of Anglesey, it reaches more than half way across the island. In its present form, this is a relatively recent landscape, created when The Cob was built across the tidal marshes in order to drain the land, allowing the A5 to be built across. The river is canalised through the centre of the area, with high straight banks, and throughout this reclaimed marshland there is a regular pattern of clay-lined drainage ditches with tidal flaps to prevent flooding. There are hedges alongside the drains and most of the land is sheep pasture, with some reed bed areas managed as nature reserve by the RSPB. The A5 and A55, running parallel, sweep down to cross the marsh but are well integrated into the landscape and not particularly intrusive. The railway line crosses diagonally on a low arched viaduct that is most conspicuous. From these there are long views over the marsh. From the small roads that cross the marsh views are to the valley sides, but not over The Cob to the sea. Altogether this a distinctive landscape but not particularly attractive in itself.	L	M	L	L	L-M	Low

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				Scale	Enclosure	Landform	Pattern	Detractors	
	Open Lowland Valleys	Malltraeth Marsh Slopes	This length of north-west facing slopes stretches from the A55 at Gaerwen to Newborough in the south, bounded by the ridge road on the top and the flat Malltraeth Marsh on the bottom. The fields are generally regular and medium in size, with well-treed hedges and some stone walls and disused small quarries. It is steeper than the adjacent ridges and valleys and is distinctive because of its views out across the marsh and to the sea and headlands to the south and to the A55 to the north.	M	M	M	L	H	Medium
	Intertidal	Traeth Abermenai	This area is the coast at the southern end of the Menai Straits where they open out and expose wide sandbanks at low tide. This includes the estuary of the small River Briant, protected by the dunes and sand spit of Abermenai Point. The foreshore is shingle. There are wide views out across the straits to Caernarfon and southward across the sands, giving a very open and exposed character to the area.	L	H	L	M	H	Medium
	Open Rolling Lowland	Abermenai lowlands	South of Brynsiencyn and Dwyran the land slopes gently down from the minor ridge to the southern end of the Menai Straits and the estuary of the River Briant. This is a quiet, out-of-the-way part of Anglesey, with a few lanes leading down to the water's edge and wide views across the tidal sands. There are medium sized fields of pasture, with fences and some hedges giving an open feel to the landscape.	M	H	L-M	M	M-H	Medium to High

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	Other Coastal Wild Land	Llanddwyn Island	Protruding off the south west of Anglesey, this island is linked to the beach at all but the highest of tides. It has a rocky coast with sandy coves, and crags protrude through the sandy soil of the interior. There is springy turf, areas of marram grass and damp hollows, all grazed by Welsh mountain ponies. In the centre of the island is a ruined chapel, and towards the far end there is a row of low, white-painted pilots cottages and a prominent white tower lighthouse. The island is managed as part of the wider nature reserve. There are paths along the length of the island and it is a popular place to visit. There are wonderful views all round, to the Lleŷn Peninsula, Snowdonia, and back along the coast in both directions. This, combined with the island's association with Saint Dwynwen and its location beyond the edge of the land, makes for a very special sense of place.	M	H	H	L	H	Medium to High
Western Menai	Open Rolling Lowland	South West Ridges	From the A55 corridor at Llanfair Pwllgwyngyll south-west towards Newborough there is a clear pattern of gentle ridges and valleys on a north-east/south-west alignment. Roads run along the ridges, and at right angles across the valleys, linking the ridgetop villages. The fields are generally regular and medium to large in size, with well-treed hedges. From within the valleys the views to Snowdonia are hidden. There are several important prehistoric monuments within this area.	L	L	M	M	M	Low to Medium

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	Intertidal	Traeth Abermenai	This area is the coast at the southern end of the Menai Straits where they open out and expose wide sandbanks at low tide. This includes the estuary of the small River Briant, protected by the dunes and sand spit of Abermenai Point. The foreshore is shingle. There are wide views out across the straits to Caernarfon and southward across the sands, giving a very open and exposed character to the area.	L	H	L	M	H	Medium
	Mosaic Lowland Valleys	Menai Strait Slopes-south	From Menai Bridge southwards, this area is bounded by the A5 and Brynsiencyn Road along the upper part of the slopes that overlook the Menai Straits. These slopes are less steep and less wooded than further north. For centuries the magnificent views of the straits and Snowdonia have been appreciated and there is a series of grand mansions along the mid slopes, surrounded by estates and parkland. These include the National Trust's Plas Newydd with Repton gardens which look across to the Vaynol estate near Bangor. There are lanes leading down from the top road to former ferry points where slates were imported, accounting for the old slate fences in the area. This is a peaceful rural area, contrasting with the busier mainland side of the straits.	M	M	M	L-M	H	Medium

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	Intertidal	Menai Straits south	From Britannia Bridge southward to where the straits widen out at Traeth Gwyllt, this area of coast is rural in character. It is backed by low sandy banks and the shoreline and intertidal area is mainly rocky shingle and mud. A few lanes come down to the shore and there are a few jetties, piers and other remains of former activities, including the ferry at Moel-y-Don. From all along this coast there are views across to the busier mainland coast, and vice versa.	M	M	L-M	M	M	Medium
	Open Rolling Lowland	Abermenai lowlands	South of Brynsiencyn and Dwyran the land slopes gently down from the minor ridge to the southern end of the Menai Straits and the estuary of the River Briant. This is a quiet, out-of-the-way part of Anglesey, with a few lanes leading down to the water's edge and wide views across the tidal sands. There are medium sized fields of pasture, with fences and some hedges giving an open feel to the landscape.	M	H	L-M	M	M-H	Medium to High
Eastern Menai	Open Rolling Lowland	Eastern Smooth Belt	This area extends north of the A55 towards Red Wharf Bay. It consists of rolling plateau with large regular fields bounded by hedges, mixed woodland plantations and shelterbelts, and less marshy land than elsewhere. Snowdonia appears very close, but the Menai Straits are hidden from view. Altogether it is a pleasant but rather featureless unremarkable landscape.	M	M	L-M	L-M	H	Medium

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	Mosaic Rolling lowland	Llangoed Vale	This is the easternmost area, inland from the coast between Puffin Island and Red Wharf Bay. It is limestone, with several former quarries along the coast including the large Dinmor Quarry, used to construct A55, now containing a fish farm. Boundary walls of pale limestone, including the old deer park wall, add to the area's distinctive character. Its high point, the hillfort Bwrdd Arthur at 164m overlooks Red Wharf Bay and forms a feature on the skyline. The eastern half has prospects over the sea. The area's inland edge is marked by a minor scarp with woodland and a meandering little lane along the top, overlooking the Llangoed vale. There are scattered houses and the hamlets of Penmon and Caim in the south east of the area. There is little access to the coast except at the eastern tip, beyond the beautiful Penmon Priory, to where there are views to Puffin Island and the Great Orme in the distance. The lime kilns and quays at Porth Penmon form a prominent interesting feature seen	M	M-H	M	M-H	M-H	Medium to High

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	Wooded Lowland Valleys	Menai Straits slopes - north	This area is between Beaumaris and Menai Bridge, from the road along the top of the slopes, down to the shore. It is generally steep and well-wooded. The coast road runs along the base of the slope, with various large houses and hotels on the shoreline and set on the sides. Towards the top of the slopes there are numerous scattered houses, linked by steep little lanes, taking advantage of the wonderful views to the Straits, to Bangor and Snowdonia beyond. This area is prominent from parts of Bangor and appears as attractively wooded, with a particularly ugly prominent block of flats near the water's edge.	H	M	H	M-H	H	High
	Intertidal	Menai Straits-north	This area is the coastline from Penmon to Beaumaris. At low tide it is mainly mud and sand with rocky shingle. Backing the shoreline, there are banks of loose sandy soil, rather than cliffs, where the lowland vale meets the straits, giving an open feeling to the coastline. There are a few groynes and old jetties projecting onto the shore and in two places the road runs immediately alongside, allowing good wide views along the straits and across the extensive Lavan Sands to Snowdonia.	M	H	M	M	H	High
	Wooded Lowland Valleys	Cwm Cadnant	This is a small wooded gorge to the north east of Menai Bridge, carrying the Cadnant down to the Straits. It is hidden away and dark and almost inaccessible. There are views into it, however, from the attractive old stone bridge on the loop of road than has now been superseded by the straight main road on its ugly concrete bridge.	H	H	H	H	H	High

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	Wooded Lowland Valleys	Beaumaris Wooded Slopes	This long sinuous east-facing small scarp runs from Beaumaris northward. It is almost entirely wooded and forms an important backdrop to Beaumaris and the Llangoed vale, clearly separating it from the plateau farmland above. From the slopes there are fine views across the Menai Straits to northern Snowdonia. The grand houses of Barons Hill (now derelict) and Henllys (now apartments) at the base of the scarp, developed various drives and paths through the woods, with some exotic tree planting. Some of these walks are still accessible.	H	M	H	H	H	High
	Intertidal	Menai Straits Mid section	This section of the coast of the Menai Straits stretches from Beaumaris to Britannia Bridge. Compared to the shores of the Straits to north and south, this section is busy, with piers and jetties, backed by the main road and numerous buildings. It includes several little islands, each connected to the shore by a causeway. These have houses on them, with trees and gardens. Seen from the coast road, they give an intricate, sheltered, small scale character to the area. In contrast to this, the iconic Menai Suspension Bridge and the Britannia Bridge soar overhead, giving the best views of the Straits on either side.	H	M	H	H	H	High

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	Road Corridor	A55 corridor	The A55 dual-carriageway crosses Anglesey diagonally, between the Britannia Bridge and Holyhead. Where it follows a similar alignment to the A5 and the railway, the whole transport corridor is included in the aspect area. There are six interchanges, with intrusive raised roundabouts, signs and lighting. On the whole the corridor fits well into the gently undulating topography and is not particularly conspicuous. It has shallow cuttings and embankments, with mainly hedges alongside. From the road there are views across the pleasant countryside and more dramatic views of the coast towards Holyhead. Small areas of agricultural and/or wild land are included where they form an important part of the setting of the road.	L	L	L-M	L	L	Low
Menai Coast	Intertidal	Sandy Beaches	Three areas of wide expanses of sandy beach with coastal views with a strong coastal feel derived in part from the sea- air smell and sound of waves. Hell's Mouth on south coast of Lleŷn Peninsula which has south-west aspect and means that it catches all the winds, generally not very accessible, but popular with surfers. On either side of Abersoch are beaches popular with holiday makers as they are easily accessed. Also at Dinas Minelle to the south of the Menai Straits. Here the aspect is westerly, and the several car parks, caravan park, etc. means that it gets busy.	L	H	M	M	H	Medium to High

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	Dunes and Dune Slack	Beach and Dunes	Area of sand dunes extending into southern entrance of Menai Straits, with Fort Belan as remote landmark at northern point. Wild unspoilt area, away from rest of world, almost like an island at high tide. There are attractive views across Menai Straits to Anglesey and distant views south along coast to Lleŷn peninsula, giving dominant maritime character to all the area. Very little access, important to retain this remoteness.	L	H	M	M	H	Medium to High
	Intertidal	Fford Bay	Foryd Bay, at southern entrance to Menai Straits. Sandy and muddy broad inlet with marshy and shingle areas giving variety, plus tidal interest. Little access and no man-made features. Strong coastal character with views of Menai Straits, Anglesey and Snowdonia add to strong sense of place. Plenty of bird life adds visual and aural interest. Slight detractor is noise/movement of occasional airplane at adjacent airfield.	L	H	M	M	M	Medium

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	Flat Open Lowland Farmland	Morfa Dinlle	Two areas of coastal strip, divided by Foryd Bay at southern entrance to Menai Straits. Flat and low lying predominantly agricultural land between 5m to 40m AO. Parts nearest coast tend to be marshy, or drained marshland, plus caravan parks. Inland there is more intricate pattern of irregular fields and small farms. Coastal views dominate, across Caernarfon Bay to Lleŷn peninsula in southern area, and across Menai Straits in northern area. Strong visual and smell/exposure association with coast provides sense of place. Some local detractors relating to airfield noise/movement, and rather tacky tourist developments. Attractive features include unusual prominent coastal hillfort, and inland small-scale farmland. Caravans and tourist related developments should not be allowed to spoil these areas.	L	H	M	M	M	Medium
	Intertidal	Mud/Shingle	Two areas of mud/shingle flats with views across Menai Straits. Southern one is south of Caernarfon, with minor road alongside and therefore accessible. Northern one is alongside Vaynol Park (National Trust) and inaccessible, forms part of view from Pont Britannia. Not special in themselves but integral part of coast of Menai Straits.	H	H	M	M	M	Medium to High

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
	Open Low Valley	Caernarfon estuary	A narrow enclosed river valley of Afon Seiont adjacent to urban edge of Caernarfon. Steep sides with dense vegetation, particularly to south. Castle provides a focal point from western reaches of river valley. Traffic noise from A487 bridge slight visual and sensory detractor. Generally important to setting of historic town and must retain its rural character.	H	L	H	H	L	High
	Dispersed Settlement	Plas Menai	Incongruous patchwork mix of large-scale retail/industry, farms and pasture with some hedgerows, on flat 'coastal strip' between Caernarvon and Felinheli, ranging from approximately 5m and 15mAOD. Classified as urban, but much remains undeveloped. Recreational use along coast and with cycle route along old railway adds to general 'busy-ness' of area. A487 is a strong linear element that forms the boundary to the landward side. Attractive views across Menai Strait, plus some interest relating to sailing and Outdoor Pursuits Centre. Area much in need of careful planning and visual improvements to prevent urban sprawl along this stretch of Menai Straits.	M	M	M	L	L	Low to Medium

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
	Intertidal	Traeth Lafen	Extensive area of intertidal mud flats and sand in north-east of county, continuing into Conwy. Inaccessible part of the Menai Straits, with good views (from edges) across to Anglesey and along the coast to Great Orme. In southern part, views to Bangor and Porth Penrhyn and Penrhyn Castle add interest. Strong coastal sense of place with great tidal changes, tranquillity and additional interest of bird life. Any changes or development would detract.	M	M	H	M	H	Medium to High
	Rolling Wooded Estate Farmland or Parkland	Vaynol Estate	Vaynol Estate on shores of Menai Straits to south of Bangor, plus smaller similar area at Upper Bangor. Undulating woodland and mature parkland, very important designed landscape, bounded by impressive stone wall in parts. Other land uses include golf, caravans, university playing fields as well as farmland. Parts owned by National Trust, University, WDA. Vaynol Hall provides focal point but generally rundown air. Britannia Bridge approach crosses the area and forms detractor. Other detractors include edge of business park (light pollution) and traffic noise/movement from main roads. Area appears to be in need of overall strategy of conservation of estate to ensure no further deterioration of important landscape.	M	L-M	M	H	M-H	Medium to High

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
Caernarfon - Coast and Plateau	Flat Open Lowland Farmland	Morfa Dinlle	Two areas of coastal strip, divided by Foryd Bay at southern entrance to Menai Straits. Flat and low lying predominantly agricultural land between 5m to 40m AO. Parts nearest coast tend to be marshy, or drained marshland, plus caravan parks. Inland there is more intricate pattern of irregular fields and small farms. Coastal views dominate, across Caernarfon Bay to Lleŷn peninsula in southern area, and across Menai Straits in northern area. Strong visual and smell/exposure association with coast provides sense of place. Some local detractors relating to airfield noise/movement, and rather tacky tourist developments. Attractive features include unusual prominent coastal hillfort, and inland small-scale farmland. Caravans and tourist related developments should not be allowed to spoil these areas.	L	H	M	M	M	Medium
	Open Lowland Valleys	Pont Faen	Westernmost, lower Gwyrfai valley, opening out into Foryd Bay. Rural landscape in gentle low lying valley. Strong coastal sense of place at western end from views/proximity with Foryd Bay and end of Menai Straits. Meandering course of the river is dominant element. Only a few scattered farms and minor roads makes the area quiet. Moderately attractive, with sewage works are minor visual detractor. Agricultural land uses should be continued.	M	H	M	M	M	Medium

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
	Rolling Farmland	Bethel (Between Clynnog and Bangor)	From Clynnog in south to Bangor in north, between the coastal lowlands and rising land to foothills of Snowdonia, five areas of rolling pasture, generally with northerly aspect, on land lying between approximately 20m to 100m AOD, separated by shallow west-flowing valleys. Gradual transition to upland in east, so boundary of area is not clear-cut. Field boundaries consist of mix of stone walls (tend to be more with elevation to east) and hedges in varied state of repair, with scattered clumps of woodland and plantation. Settlement mainly scattered farms, with few small villages. Visual detractors include electricity pylons, major north/south roads (A499, A487, and A5). Views to Snowdonia and across Menai Straits to Anglesey. Slight upland feel, particularly in eastern parts where stone walls dominate and views out are more extensive.	M	M	L	M	M	Medium
	Mosaic Lowland Valley	Afon Seiont	Shallow valley of Afon Seiont upstream from Caernarfon to Llanrug. Pleasant pasture with stone walls and riparian woodland. Enclosed, relatively narrow valley, with meandering river and many small islands, with some areas of steep sides, e.g. near Pont Rug. Seen from nearby roads but not very accessible. Some views to Snowdonia hills from upper valley sides. Relatively intact farmland, although some lengths of stone wall require repair to maintain overall feeling of integrity.	M	M	M	M-H	M	Medium

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
	Wooded Mosaic Lowland Valleys	Afon Gwyfai	Middle section of floor of Afon Gwyfai valley, from Bontnewydd in west to Waun Fawr in east. Enclosed valley with rural character and much riparian woodland. Dominant mosaic pattern along valley, although this borders on mainly wooded character for much of this reach of the valley with the river itself mainly hidden. Very few views out, but where afforded often attractive to uplands of Snowdonia to southeast. This part of the valley is away from roads and settlements and very quiet and pretty, seen from tourist railway.	H	L	M	H	H	Medium to High
	Enclosed Hill and Scarp Grazing	Waen-Pentir	Four separate areas of extensive tracts of rising land which form a transition from lowland to upland along edges of Snowdonia. Characterised by network of small/medium sized pasture fields on sloping/undulating ground with a north-westerly aspect, with dry stone walls and scattered tree/scrub. Overhead powerlines/pylons visual detractor. Some attractive views to Menai Strait/Anglesey/coast and Lleyn from selected viewpoints. Stone walls, sense of exposure/elevation and the accessibility of views all contribute to an upland sense of place.	M	M	M	M	L-M	Medium

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
Llanberis-Bethesda	Enclosed Hill and Scarp Grazing	Waen-Pentir	Four separate areas of extensive tracts of rising land which form a transition from lowland to upland along edges of Snowdonia. Characterised by network of small/medium sized pasture fields on sloping/undulating ground with a north-westerly aspect, with dry stone walls and scattered tree/scrub. Overhead powerlines/pylons visual detractor. Some attractive views to Menai Strait/Anglesey/coast and Lleyn from selected viewpoints. Stone walls, sense of exposure/elevation and the accessibility of views all contribute to an upland sense of place.	M	M	M	M	L-M	Medium
	Upland Grazing	Cefn Du	Three separate areas of rough grass/upland grazing with scattered rocky outcrops on eastern edge of north part of county adjoining National Park. Attractive views of Snowdonia inland, and Lleyn /coast to the west. Adjacent slate quarries may be considered visual detractors. Strong visual linkage with nearby mountains adjacent, slightly at odds with the proximity to the villages and farm land below.	L	H	H	M	H	Medium to High

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				Scale	Enclosure	Landform	Pattern	Detractors	
	Lake	Llyn Padarn	Llyn Padarn and Llyn Peris, divided by narrow strip of land, adjacent to Llanberis at edge of Snowdonia, with mountain character. Large scale inland waterbody in typical U-shaped glacial valley, with dramatic views of Snowdonia mountains, in particular, the reflected views distinctly add to the quality of the experience, when viewed from the western end. Dramatic Dinorwg quarry overlooking lakes, tourist railway alongside, Llanberis and important tourist route adjacent all means that these lakes are important part of Snowdonia image which needs protection especially as outside the National Park.	L	H	H	M	H	Medium to High
	Open lowland Valley	Afon Rhythallt	Flat bottom of valley of Afon Rhythallt, from Llanrug to Llyn Padarn, between approximately 105m and 110mAOD. Riparian trees and open pasture, marshy in places. Post and wire fence and hedge. Fine views to Snowdonia mountains to the south and up valley. Sinuous form of river dominant element with hillsides rising on either side in contrast to flat floor. Main road brings noise and disturbance to valley.	M	M	M	M-H	M	Medium

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
	Rolling Farmland	Bethel (Between Clynnog and Bangor)	From Clynnog in south to Bangor in north, between the coastal lowlands and rising land to foothills of Snowdonia, five areas of rolling pasture, generally with northerly aspect, on land lying between approximately 20m to 100m AOD, separated by shallow west-flowing valleys. Gradual transition to upland in east, so boundary of area is not clear-cut. Field boundaries consist of mix of stone walls (tend to be more with elevation to east) and hedges in varied state of repair, with scattered clumps of woodland and plantation. Settlement mainly scattered farms, with few small villages. Visual detractors include electricity pylons, major north/south roads (A499, A487, and A5). Views to Snowdonia and across Menai Straits to Anglesey. Slight upland feel, particularly in eastern parts where stone walls dominate and views out are more extensive.	M	M	L	M	M	Medium
Penisarwaun Plateau	Enclosed Hill and Scarp Grazing	Waen-Pentir	Four separate areas of extensive tracts of rising land which form a transition from lowland to upland along edges of Snowdonia. Characterised by network of small/medium sized pasture fields on sloping/undulating ground with a north-westerly aspect, with dry stone walls and scattered tree/scrub. Overhead powerlines/pylons visual detractor. Some attractive views to Menai Strait/Anglesey/coast and Lleyn from selected viewpoints. Stone walls, sense of exposure/elevation and the accessibility of views all contribute to an upland sense of place.	M	M	M	M	L-M	Medium

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
	Open lowland Valley	Afon Rhythallt	Flat bottom of valley of Afon Rhythallt, from Llanrug to Llyn Padarn, between approximately 105m and 110mAOD. Riparian trees and open pasture, marshy in places. Post and wire fence and hedge. Fine views to Snowdonia mountains to the south and up valley. Sinuous form of river dominant element with hillsides rising on either side in contrast to flat floor. Main road brings noise and disturbance to valley.	M	M	M	M-H	M	Medium
	Rolling Farmland	Bethel (Between Clynnog and Bangor)	From Clynnog in south to Bangor in north, between the coastal lowlands and rising land to foothills of Snowdonia, five areas of rolling pasture, generally with northerly aspect, on land lying between approximately 20m to 100m AOD, separated by shallow west-flowing valleys. Gradual transition to upland in east, so boundary of area is not clear-cut. Field boundaries consist of mix of stone walls (tend to be more with elevation to east) and hedges in varied state of repair, with scattered clumps of woodland and plantation. Settlement mainly scattered farms, with few small villages. Visual detractors include electricity pylons, major north/south roads (A499, A487, and A5). Views to Snowdonia and across Menai Straits to Anglesey. Slight upland feel, particularly in eastern parts where stone walls dominate and views out are more extensive.	M	M	L	M	M	Medium

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
Bangor Coastal Plain	Hillside and Scarp Slopes Grazing	Abergwyngregyn	Coastal hills & valleys - strong borrowed view of coast / sea. Pleasant river environment of fields with conifer & broadleaf woodland.	M	M	M	M	M	Medium
	Wooded Mosaic Low Valley	Afon Ogwen	Valley of Afon Ogwen from edge of Bangor at lower north- western end to boundary of National Park in south-east where the valley enters the high uplands. Pasture fields and riparian woodland in narrow flat valley floor. Enclosure due to valley landform augmented by some dense vegetation. The A5 is a strong 'curvy-linear' element that slightly echoes the sinuous form of the Afon Ogwen. The valley elevation drops to the north from 150m to 50m AOD over approximately 4km. There are some detractive views out to the slate tips at Penrhyn quarry, and to Bethesda, but also fine views up valley to dramatic Snowdonia mountains.	H	M	L-M	M	L-M	Medium

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
	Rolling Farmland	Bethel (Between Clynnog and Bangor)	From Clynnog in south to Bangor in north, between the coastal lowlands and rising land to foothills of Snowdonia, five areas of rolling pasture, generally with northerly aspect, on land lying between approximately 20m to 100m AOD, separated by shallow west-flowing valleys. Gradual transition to upland in east, so boundary of area is not clear-cut. Field boundaries consist of mix of stone walls (tend to be more with elevation to east) and hedges in varied state of repair, with scattered clumps of woodland and plantation. Settlement mainly scattered farms, with few small villages. Visual detractors include electricity pylons, major north/south roads (A499, A487, and A5). Views to Snowdonia and across Menai Straits to Anglesey. Slight upland feel, particularly in eastern parts where stone walls dominate and views out are more extensive.	M	M	L	M	M	Medium
	Mosaic Rolling Lowland	Penrhyn Park	Undulating parkland landscape dropping down to valleys to east and west, with views across Menai Straits. Penrhyn Castle prominent focal point attracting many visitors in summer. Main detractor is the well defined urban edge of Bangor.	M	M	M	M-H	M	Medium

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (from LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Landscape Sensitivity					Overall Landscape Sensitivity
				Scale	Enclosure	Landform	Pattern	Detractors	
	Flat Open Lowland Farmland	Wig	Northernmost coastal strip of flat farmland between busy, noisy A55 and quiet coast of Menai Straits. Mixed farmland with medium to large rectangular pasture fields with trim hedges. Only a few scattered farms and limited access except to two car parks on coast used for low-key recreation, bird watching and walking. Railway bisects the area lengthways and creates noise /movement as a minor detractor, together with the A55 along south-eastern boundary. Coastal views and sea air dominate, with views across Straits and to mountains giving great contrast in views. These add to the moderate overall sense of place in otherwise bland landscape. Its generally undeveloped character is important to conserve.	M	H	L	M	L	Low to Medium
Area within Snowdonia - LCA name TBC	Upland Grazing	Carneddau Uplands	Rough upland heath / grass / rocky outcrops / traversed by rough tracks & paths. Scattered scrub & trees, with some drystone walls. Impressive borrowed view to sea & Snowdon Massif. Overhead power corridor in northern area is major visual detractor.	L	H	H	M	M	Medium to High
	Hillside and Scarp Slopes Grazing	Abergwyngregyn	Coastal hills & valleys - strong borrowed view of coast / sea. Pleasant river environment of fields with conifer & broadleaf woodland.	M	M	M	M	M	Medium

Visual Sensitivity Evaluation Wylfa-Pentir

For the purpose of this exercise, the overall visual sensitivity of each Visual and Sensory Aspect Area within the LANDMAP Assessment has been identified. While there may be localised variations in sensitivity across each area, the overall sensitivity is taken even though an aspect area may extend out with the Landscape Character Area boundary.

A number of different key factors contribute to overall visual sensitivity to 400kV overhead development within each LANDMAP Visual and Sensory Aspect Area. The following key factors have been considered in the evaluation of visual sensitivity to 400kV overhead lines and their contribution to overall sensitivity assessed:

Presence of Visual Receptors - Visual receptors include dwellings, workplaces, roads, railways, footpaths, cycle routes, bridleways and areas used for outdoor recreation. Landscapes with high concentrations of visual receptors are likely to be more visually sensitive than landscapes with few visual receptors. The importance of tourism areas will also be considered. The Holford Rules recognises that urban areas and areas with high amenity value are sensitive to overhead lines and should be avoided where possible. Ordnance Survey mapping, Address Point data and information of footpaths and rights of way will be used to identify potential visual receptors locations within each LANDMAP aspect area.

Screening Elements, Backdrops, Skylines - Visual containment offered by landform and woodland can reduce the impact of overhead lines and provide a backdrop to views, reducing visibility, apparent scale of pylons and impact on the skyline. Smaller scale features such as stone walls, hedges and hedgerow trees can also help to reduce visual impacts by providing localised screening and backdrops of views.

Where landform provides little containment the visual impact of towers and overhead lines is increased. Where high ground and ridgelines are crossed, the prominence of towers is increased and they are seen silhouetted against the sky increasing visual impacts. The Holford Rules recommends crossing ridgelines obliquely, using natural dips or gaps in belts of trees to help reduce prominence on skylines. LCAs with prominent undeveloped skylines are likely to be more visually sensitive than less prominent skylines or skylines that have already been affected by built development, although overhead lines may detract from prominent features such as church spires or monuments.

The presence or absence of screening elements and backdrops will be examined through analysis of maps and aerial photographs supplemented by field survey.

Mitigation Potential - The potential for mitigation of visual impacts is linked to the landscape character. Typically, wooded landscapes, where there will be greater potential for new planting to assist in mitigating visual impact of overhead lines without detrimental effect to the landscape character, are less sensitive than open, treeless landscapes where new planting would be out of character. Mitigation potential within each LANDMAP aspect area will be examined through analysis of landscape character area descriptions, LANDMAP data and review of maps and aerial photographs. For the purposes of this visual sensitivity evaluation, the mitigation measures being considered have been limited to the potential provision of screening

mitigation, such as the planting of woodland. Potential for rationalisation of existing overhead lines or the use of underground cables will be considered at the next stage of appraisal.

Scenic Quality and Presence of Visual Detractors - A landscape that is recognised for its scenic quality or contains features that may be adversely affected by presence of transmission lines (e.g. there may be a conflict with prominent church spires) would be more sensitive than a landscape whose features would remain largely unaffected.

Areas where views are already adversely affected by existing infrastructure, industry or activities such as quarrying, tend to be less sensitive. However, an awareness of the potential for cumulative impacts of overhead lines with existing power lines, other vertical structures or wind farms is required. The Holford Rules state that in country which is flat and sparsely planted, high voltage lines should be as far as possible independent of smaller lines, converging routes, distribution poles and other masts, wires and cables, so as to avoid concatenation or 'wirescape'

H=high contribution to sensitivity, M= medium contribution to sensitivity, L=low contribution to sensitivity

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (From LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Visual Sensitivity				Visual Sensitivity
				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
North West Anglesey	Open Rolling Lowland	North West Drumlins	This extensive area, covering most of eastern part of north Anglesey, stretches from Cemaes and Llyn Alaw in the east to the north-west coast and the A55 in the west. The basket of eggs glacial landscape of smooth oval hillocks and damp hollows is typically covered with regular m75 edium-sized fields with hedges, mainly pasture for sheep and cattle, with some arable land. There are numerous small villages, hamlets and scattered farms, linked with small roads, giving a settled character to this quiet, unremarkable but	M	M-H	M-H	M	Medium to High

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (From LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Visual Sensitivity				Visual Sensitivity
				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			pleasant landscape, seen from the busy A55.					
	Mosaic Rolling Lowland	Mynydd Mechell	In the centre of the northern part of Anglesey, this area has a rocky upland character, with small irregular fields bounded by stone walls, areas of bare rock and gorse, and numerous small ponds. Although only rising to a maximum of 92m, this is in contrast to the smooth surrounding lowland drumlins. There are small twisting lanes and scattered houses and farms, with the spread out villages of Mynydd Mechell and Carreglefn. From within the area, views are mainly limited by the nearby rocky terrain, whilst from the surrounding land the area is apparent by its craggy skyline. It is generally an attractive varied small scale rural landscape.	M-H	H	H	M-H	High
	Hillside and Scarp Slopes Moorland	Mynydd y Garn	This area of upland is on the north-west tip of Anglesey, rising from the coast to 170m. It is distinctly more craggy than the adjacent lowland and has scattered outcrops of rocks, with gorse and stone walls, plus an area of forestry. Small winding roads give access to scattered farms and the small linear village of Llanfairynghornwy the eastern edge. From the high points there are 360 degree views, including to the Skerries off Carmel Head. Its coastal location adds to its interest	M	L-M	M	M-H	Medium

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
	Mosaic Rolling Lowland	North Coast Hinterland	To the east and west of Amlwch, extending from the coast 2km inland, this is an intricate small scale landscape with winding lanes, glimpses of the coast, small craggy hillocks and damp valleys. There are scattered houses and small fields. Within the area is the settlement of Bull Bay dominated by bungalows and holiday accommodation, and an adjacent golf course. These detract from the integrity of the nearby landscape, as do views glimpsed to Wylfa power station. Otherwise, this is an attractive varied landscape.	M-H	M-H	M-H	M-H	Medium to High
	Open Rolling Lowland	Drumlins with Windfarms	Groups of wind turbines dominate the landscape in the north part of Anglesey, south of the A5025 and Amlwch, to Llyn Alaw, and west to around Mynydd Mechell. The basket of eggs glacial landscape of smooth oval hillocks and damp hollows is typically covered with regular large fields with hedges, mainly pasture for sheep and cattle, with some arable land. There are scattered farms, linked with small roads, all within close sight of wind turbines which appear incongruous on this lowland farmland.	M	M	M-H	M	Medium
	Intertidal	Cemlyn	On the northern coast, west of Cemaes, this is a brackish lagoon, impounded by a crescent-shaped shingle beach. It is a nature reserve, owned by the National Trust and managed by	L-M	H	H	H	High

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			NWWT primarily for its sea bird interest. It is a popular spot for bird watching and is served by two car parks, one at either end.					
	Intertidal	North Coast	From Carmel Point in the west to Point Lynas, east of Amlwch, this is a convoluted area of north-facing coastline. For most of its length it is rocky or with shingle beaches, with the only sandy bathing beach being at Cemaes. Considerable lengths are owned and managed by the National Trust. A series of headlands project, and there are either low shallow cliffs behind, or steep slopes up to higher land. For much of its length the coastal footpath runs alongside providing a series of changing views along the wild rugged coast and out to the Skerries. Although much of it feels remote now, there are remains of past industry, with quarries and brickworks and lime kilns. Wylfa power station, set on its headland, is a conspicuous intrusion for several miles in both directions, as is the old chemical works at Amlwch. At the eastern end of this stretch of coast is the lighthouse on Point Lynas, reaching out into the sea. It forms an attractive landmark and there are fine views along the coast in both directions from it.	M-H	H	H	H	High
	Intertidal	North west	From the Alaw Estuary northward to Carmel Point, this length of coast faces west. It consists	M	H	H	H	High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
		Coast	mainly of sandy bays and coves interspersed with stretches of rocky coast and small headlands, backed by shallow low slopes. Along the northern third, where the land is higher, there are only rocks with steeply rising slopes behind, giving a wild feeling to this part. For much of its length the coastal footpath runs alongside and there are a few access points for bathing. On the whole it is a quiet unspoilt stretch of coastline with fine views west to Holy Island and along the rugged coast itself.					
	Road Corridor	A55 corridor	The A55 dual-carriageway crosses Anglesey diagonally, between the Britannia Bridge and Holyhead. Where it follows a similar alignment to the A5 and the railway, the whole transport corridor is included in the aspect area. There are six interchanges, with intrusive raised roundabouts, signs and lighting. On the whole the corridor fits well into the gently undulating topography and is not particularly conspicuous. It has shallow cuttings and embankments, with mainly hedges alongside. From the road there are views across the pleasant countryside and more dramatic views of the coast towards Holyhead. Small areas of agricultural and/or wild land are included where they form an important part of the setting of the road.	L	L-M	L-M	L	Low to Medium

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
	Lake	Llyn Alaw	This is a shallow reservoir among the hillocks in the north central part of Anglesey. It was formed in 1966 and is the largest stretch of inland water on Anglesey. From the visitor centre at the southern end the dam can be reached and the ugly pumping station on a knoll is prominent. Pasture fields slope gently down to the water's edge and the view is generally not very interesting and limited to the nearby hillocks. The northern end is more varied, with some marshy areas and a hide for watching the wildfowl. It is also used for fishing, but there are no paths around it.	L	H	H	M	Medium to High
	Estuary	Alaw Estuary	This lies immediately north of the Holy Island straits where for the last mile of its length the west-flowing Alaw River forms an estuary. It consists of sand dunes at the seaward end, salt marshes at the edges and areas of shingle and mud at low tide. It is tucked away, hidden from view by low hills and dunes, with only the coastal footpath giving access to the northern side.	L-M	H	H	H	High
	Intertidal	Penrhos Beach	This area of beach, rocks and wide sands lies on the north coast of Holy Island, adjacent to Penrhos Coastal Park, stretching from the South Pier of Holyhead Harbour eastward across the straits to Newlands. Being near Holyhead, much	H	H	H	H	High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			of the area is popular for walking, but the eastern part, beyond the straits, is not very accessible and provides a feeding ground for geese and waders at low tide. There are extensive very attractive views northwards along the north-west coast of Anglesey, but inland the aluminium works dominate.					
	Open Rolling Lowland	Caergeiliog craggy lowlands	This area of low-lying land is south of the A55, east of Four Mile Bridge. The small scale of the fields and twisting lanes is in contrast to the A55 and to RAF Valley, both of which substantially intrude and detract from the overall landscape, with movement and extreme noise.	M	L-M	M	M	Medium
Amlwch and Environs	Mosaic Rolling Lowland	North Coast Hinterland	To the east and west of Amlwch, extending from the coast 2km inland, this is an intricate small scale landscape with winding lanes, glimpses of the coast, small craggy hillocks and damp valleys. There are scattered houses and small fields. Within the area is the settlement of Bull Bay dominated by bungalows and holiday accommodation, and an adjacent golf course. These detract from the integrity of the nearby landscape, as do views glimpsed to Wylfa power station. Otherwise, this is an attractive varied landscape.	M-H	M-H	M-H	M-H	Medium to High
	Open Rolling	Drumlins with	Groups of wind turbines dominate the landscape in the north part of Anglesey, south of the A5025	M	M	M-H	M	Medium

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
	Lowland	Windfarms	and Amlwch, to Llyn Alaw, and west to around Mynydd Mechell. The basket of eggs glacial landscape of smooth oval hillocks and damp hollows is typically covered with regular large fields with hedges, mainly pasture for sheep and cattle, with some arable land. There are scattered farms, linked with small roads, all within close sight of wind turbines which appear incongruous on this lowland farmland.					
	Intertidal	North Coast	From Carmel Point in the west to Point Lynas, east of Amlwch, this is a convoluted area of north-facing coastline. For most of its length it is rocky or with shingle beaches, with the only sandy bathing beach being at Cemaes. Considerable lengths are owned and managed by the National Trust. A series of headlands project, and there are either low shallow cliffs behind, or steep slopes up to higher land. For much of its length the coastal footpath runs alongside providing a series of changing views along the wild rugged coast and out to the Skerries. Although much of it feels remote now, there are remains of past industry, with quarries and brickworks and lime kilns. Wylfa power station, set on its headland, is a conspicuous intrusion for several miles in both directions, as is the old chemical works at Amlwch. At the eastern end of this stretch of coast is the lighthouse on Point Lynas, reaching out into the	M-H	H	H	H	High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			sea. It forms an attractive landmark and there are fine views along the coast in both directions from it.					
	Hillside and Scarp Slopes Moorland	Mynydd Eilan	Rising from the north-east coast, south of Point Lynas, this rounded double hill is up to 177m high. The higher hilltop is rocky, with small fields and the scattered settlement of Pengorffwysfa on its northern slopes. The lower hilltop has a smooth profile with large fields and hedges, and conspicuous radio masts on the summit. From the small lanes that cross the hill there are fine views, including to Parys Mountain, and to Amlwch and the coast.	L-M	M	M-H	M-H	Medium to High
Parys Mountain	Derelict/ Waste Ground	Parys Mountain	This is an isolated hill in the centre of north east Anglesey. It is extraordinary and unique, having been extensively quarried, and was the greatest producer of copper ore in the world in the nineteenth century. From a distance it is seen as a rugged outline, with a conspicuous old windmill tower and modern pithead in silhouette on the skyline. It is a desolate place, scarred by centuries of workings, with deep pits, settling pools, tips and quarry faces, all of the most unusual array of colours, including purples, oranges, reds and greens. Parts are becoming vegetated with heather which may eventually hide the special colours. It is all open access and from the car park at the top there are paths	L	H	H	L-M	Medium

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			and tracks leading around the workings, all with a feeling of danger.					
Dulas Bay Hinterland	Intertidal	East Coast	From Point Lynas in the north to Benllech in the south, this coastline consists mainly of rocky shores, backed by low cliffs and grassy slopes. There are also two sandy bays with parking and access for bathing. This area is divided in two by the estuary at Dulas Bay. On this stretch of coast is the fishing village of Moelfre with its shingle beach and small harbour, tucked behind its headland and small offshore island. There are wide distant views eastward across the sea and along the coast to distant headlands.	H	H	H	H	High
	Open Rolling Lowland	Drumlins with Windfarms	Groups of wind turbines dominate the landscape in the north part of Anglesey, south of the A5025 and Amlwch, to Llyn Alaw, and west to around Mynydd Mechell. The basket of eggs glacial landscape of smooth oval hillocks and damp hollows is typically covered with regular large fields with hedges, mainly pasture for sheep and cattle, with some arable land. There are scattered farms, linked with small roads, all within close sight of wind turbines which appear incongruous on this lowland farmland.	M	M	M-H	M	Medium
	Open Hillside and Scarp	Mynydd Bodafon	This is a small isolated hill in the north-eastern sector of the island. The lower slopes rise gently and smoothly within the surrounding undulating	H	M-H	H	H	High

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	Slopes		farmland, but the upper part that forms this aspect area has a craggy profile. It has been described as 'a kind of Lake District surprise among the lowlands'. It is an area of rocky moorland with bracken and heather, with a glacial tarn on top and scattered houses amidst a natural amphitheatre of eroded rocks. There are fine views from the small road that crosses the hill, including a panoramic view of the windfarms to the north. From the surrounding lowlands the hill provides an attractive landmark.					
	Estuary	Traeth Dulas	This estuary on the east coast, north of Moelfre, reaches about a mile inland. The area includes marshland at the head of the estuary and tucked behind the promontory at the entrance. At low tide there are areas of mudflats, shingle and sands with several creeks winding through to the sea. The area is peaceful and generally sheltered and there are good views out to sea where the nearby Ynys Dulas with its white tower forms a focal point. There are a few houses on the shore and to the south the steep wooded hillside provides an attractive backdrop.	H	H	M-H	H	High
	Rolling Open Lowland	Central Smooth Belt	This is a very extensive area, stretching from Moelfre on the east coast, to Aberffraw on the west coast. It appears fairly flat in the west, but more undulating and higher in the east. It is primarily pasture, with some arable land, and	M	M	M-H	M-H	Medium to High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			medium to large sized fields with hedges, some hedgebanks and stone walls. It is criss-crossed by a network of mainly small roads, with many scattered houses and farms, hamlets and small villages. Generally it feels settled and prosperous, with a quiet rural character. It is pleasant but unremarkable, with some long views to the higher parts of Anglesey, and distant views to Snowdonia, but not usually to the coast. Only in the far west can the coast be seen. The part west of the A55 suffers from disturbance from jets from RAF Valley on weekdays.					
	Open Rolling Lowland	North West Drumlins	This extensive area, covering most of eastern part of north Anglesey, stretches from Cemaes and Llyn Alaw in the east to the north-west coast and the A55 in the west. The basket of eggs glacial landscape of smooth oval hillocks and damp hollows is typically covered with regular medium-sized fields with hedges, mainly pasture for sheep and cattle, with some arable land. There are numerous small villages, hamlets and scattered farms, linked with small roads, giving a settled character to this quiet, unremarkable but pleasant landscape, seen from the busy A55.	M	M-H	M-H	M	Medium to High
Holy Island	Intertidal	Penrhos Beach	This area of beach, rocks and wide sands lies on the north coast of Holy Island, adjacent to Penrhos Coastal Park, stretching from the South	H	H	H	H	High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			Pier of Holyhead Harbour eastward across the straits to Newlands. Being near Holyhead, much of the area is popular for walking, but the eastern part, beyond the straits, is not very accessible and provides a feeding ground for geese and waders at low tide. There are extensive very attractive views northwards along the north-west coast of Anglesey, but inland the aluminium works dominate.					
	Road Corridor	A55 corridor	The A55 dual-carriageway crosses Anglesey diagonally, between the Britannia Bridge and Holyhead. Where it follows a similar alignment to the A5 and the railway, the whole transport corridor is included in the aspect area. There are six interchanges, with intrusive raised roundabouts, signs and lighting. On the whole the corridor fits well into the gently undulating topography and is not particularly conspicuous. It has shallow cuttings and embankments, with mainly hedges alongside. From the road there are views across the pleasant countryside and more dramatic views of the coast towards Holyhead. Small areas of agricultural and/or wild land are included where they form an important part of the setting of the road.	L	L-M	L-M	L	Low to Medium
	Mosaic Rolling	Holy Island	This consists of three parts, separated by areas of development, forming most of the island. It is low-lying with a pattern of low craggy ridges and	L-M	M-H	M	M	Medium

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	Lowland		marshy bottoms. The small roads also follow these alignments along the sides of the ridges, serving the scattered houses and farms and giving access to the popular beaches of the west coast. There are small fields with sheep, stone walls and gorsey hedges. The few trees are wind-pruned. There is limited tourist development, with a few caravan/camping sites, but it remains unspoilt, with good views to the coast and to Holyhead Mountain, with a feeling of maritime openness. Overall it has a character and feeling similar to most parts of westernmost peninsula Britain, including the western part of Lleyn. The quiet atmosphere of this landscape is shattered during weekdays by jets from nearby RAF Valley.					
	Hillside and Scarp Slopes Moorland	Holyhead Mountain	On the north-west end of Holy Island, this is the highest hill on Anglesey at 220m, rising steeply from the sea. It has a distinctive rounded profile seen from many parts of western Anglesey and as a landmark on approaching Holyhead from Ireland. Most of the mountain is open rocky moorland, with wildlife and historic interest. At the base of the eastern slopes is the Breakwater Quarry, now a country park, and Gorlan, its associated quarry village with scattered houses and smallholdings. Considering its close proximity to Holyhead there is surprisingly little access, making it feel remote. There are fine	M-H	M	H	H	Medium to High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			panoramic views across Anglesey and the sea to Lleŷn peninsula and Snowdonia in the distance. On a clear day the Lake District, Isle of Mann and Ireland can also be seen.					
	Cliffs and Cliff Tops	South Stack/ North Stack	This is the wildest part of the coastline, on the north-westernmost tip of Holy Island, where Holyhead Mountain comes down to the sea. It includes the rocky shore and the cliffs and steep slopes immediately behind. These are the only high sea-cliffs on Anglesey and some of the best in Europe for rock climbing. The tall white South Stack lighthouse on its own island, reached by many steps and a little bridge, is the focal point of this area. Both this and the RSPB Seabird Centre in the crenellated Ellyn's Tower on the nearby cliffs are popular places to visit. The area is noisy with the sound of the sea and sea birds. There are dizzying views from the coastal path along the top of the cliffs between North and South Stack.	M-H	H	H	H	High
	Intertidal	Holy Island Coast	This is the low-lying part of the coast of Holy Island, formed of most of the length along the south west of the island, on either side of Trearddur and a small section on the north, between Holyhead Mountain and the town. It is a very convoluted coastline with numerous headlands and rocky coves, backed by low cliffs or grassy slopes. It is wild, varied and very	L-M	M-H	H	H	High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			attractive. Throughout its length the coastal path runs nearby, providing ever-changing views along the coast, to Holyhead Mountain and across the sea to the hills of Lleŷn Peninsula.					
	Intertidal	Holy Island Straits	The southern two-thirds of the straits that separate Holy Island from the main island of Anglesey are convoluted and in places narrow. This area is similar to an estuary and at low tide there are expanses of sand and mud, with the sea forming only a narrow channel twisting through. There is little access to the area except by foot, and when the jets from adjacent RAF Valley are not flying, the area is quiet and peaceful. From Four Mile Bridge that crosses these straits, there are views in both directions to the attractive winding water and creeks.	L	H	H	M	Medium to High
	Intertidal	Inland Sea/Stanley Embankment	This area is the wide part of the Holy Island straits, impounded by the Stanley Embankment, originally built by Telford to carry the A5. This causeway, now widened to also carry the railway and A55, brings movement and noise into the area. The tidal currents make the "Inland Sea" popular for kayaking. There are no views out to sea beyond the embankment from here.	L	H	H	H	High
	Urban	Aluminium Works	This large factory and adjacent industrial estate is on the outskirts of Holyhead, between the A5 and the railway. Its single tall chimney is a	M	M	M	L	Medium

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			landmark seen from much of north west Anglesey, and presumably also from approaching ferries. Dense screening woodland along the A5 edge means that the works are hidden from view from the east side. From the A55 and railway, however, there are open unattractive views into the site.					
	Amenity Land	Penrhos Coastal Park	This area lies immediately east of Holyhead, between the A5 and the sea. It is part of the former estate of the Stanley's and has a central farm complex and plantation woodlands. It is popular for walking in the woodland and enjoying the views along the coast. Its entrance is marked by the white-painted tollhouse on the A5. It is managed as a country park and has various paths leading from the car parks.	M	H	M-H	M	Medium to High
	Dispersed Settlement	Trearddur	This dispersed settlement is located on the narrowest part of Holy Island. It consists of various housing estates, areas of bungalow development, caravan parks and holiday accommodation with fields in-between. It straggles along the western coast and thrives as a holiday resort in the summer. In the winter it looks rather sorry for itself. It is centred on the attractive sheltered Trearddur Bay and, being near Holyhead, is popular for water sports and bathing. Most of the buildings are poor quality and the settlement has a haphazard	L	M	H	L-M	Low to Medium

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			appearance.					
West Central Anglesey	Rolling Open Lowland	Central Smooth Belt	This is a very extensive area, stretching from Moelfre on the east coast, to Aberffraw on the west coast. It appears fairly flat in the west, but more undulating and higher in the east. It is primarily pasture, with some arable land, and medium to large sized fields with hedges, some hedgebanks and stone walls. It is criss-crossed by a network of mainly small roads, with many scattered houses and farms, hamlets and small villages. Generally it feels settled and prosperous, with a quiet rural character. It is pleasant but unremarkable, with some long views to the higher parts of Anglesey, and distant views to Snowdonia, but not usually to the coast. Only in the far west can the coast be seen. The part west of the A55 suffers from disturbance from jets from RAF Valley on weekdays.	M	M	M-H	M-H	Medium to High
	Mosaic Rolling Lowland	Central South West Craggy Belt	This large area extends from the west coast north of Malltraeth to Llangefni and northwards. North-east to south-west aligned rocky ridges are discernable, giving a series of craggy skylines, with marshier land in-between. There are large hedges with hawthorn and gorse and ash trees, enclosing fields of mixed sizes, mainly small on the ridges and larger in the valleys. The roads tend to follow the ridges, giving longer	M	M	M-H	M-H	Medium to High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			views across farmland. There are scattered farms, small villages and hamlets throughout. Altogether this is an attractive mix of textures and colours in generally quiet farmland. The western part in particular, however, is disturbed by jets from RAF Valley during weekdays. The western part of the Bodorgan Estate has a more maritime character due to views over adjacent dunes and estuary and to the rocky coast, with wind-pruned shelter belts.					
	Lake	Cefni Reservoir	This reservoir and surrounding forestry is north of Llangefni, in the centre of Anglesey. It was built in the 1940s and the ugly pumping station and associated buildings stand on the southern side, adjacent to the dam over which water flows into the Dingle. The overgrown track of the Central Anglesey Railway crosses the centre of the reservoir on a causeway with just a narrow gap linking the two parts where a bridge formerly stood. Although there are footpaths through the surrounding coniferous woodland and scrub, the reservoir is mainly hidden away. Only little glimpses of the water are visible from the nearby main road, whilst from the adjacent car park there is no indication of the reservoir and access to the water's edge is very limited and unmanaged.	L	H	M	M-H	Medium to High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
	Wooded Lowland Valley	Llangefni Dingle	This small V-shaped winding valley leads from Cefni Reservoir south-east into the heart of Llangefni. The sides are steep and craggy, clothed with oak and beech trees. The small River Cefni flows through marshy areas and through little rocky gorges. It is a local nature reserve and has recently been developed for better public access with paths, boardwalks, bridges, seating and sculpture. Altogether this creates a delightful hidden away place, its total contrast to the town adding to its appeal. Its long history of use is apparent from the ancient parish church with holy well below at the south east end, and old weirs and fish ladder as well as the dismantled Anglesey Central Railway winding through from the old station yard, now a car park.	H	H	H	H	High
	Open Lowland Valley	Pentraeth Valleys	From Benllech and Red Wharf Bay stretching south-westward, this area is a series of low gently rounded ridges with wide flat-bottomed valleys in between. It is all lower than the land to north and south, and meets with Malltraeth Marsh in the south west. There are fens in the valleys, notably the Cors Bodeilo Nature Reserve, and pasture fields bounded by low hedges with few trees on the ridges. From the lower parts views are limited to the surrounding slopes, giving a secluded rather enclosed	M	M	M-H	M-H	Medium to High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			character to much of the area. Towards the north there are some views to Red Wharf Bay but generally the coast is not dominant.					
Red Wharf Bay	Mosaic Rolling Lowland	Benllech Hinterland	This extends a few miles inland from the east coast north of Benllech. It has small fields, rocky limestone outcrops, gorse and stone walls, and much rough land. There are old quarries, numerous caravan/camping sites, a golf course and a marshy nature reserve. Altogether this has produced an attractively varied and intricate landscape in which the small tourist developments do not appear intrusive	M	M	M	M-H	Medium
	Intertidal	Red Wharf Bay	This is a large semi-circular bay on the east coast, including Benllech Sands at its west end. The tide goes out for more than a mile, revealing 10 square miles of sands, and comes in rapidly through a maze of channels, giving, therefore, an ever-changing view across the bay. Both Benllech Sands and the northern side, around the village of Red Wharf Bay, are popular and get crowded in the summer. From here there are very fine views across to Pentraeth Forest and Mynydd Llwydiarth, whilst from these hillsides there are spectacular panoramic views of all the bay and the coastline beyond. Along the edges of the quieter western part of the bay there are marshy areas and small dunes.	H	H	H	H	High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
	Open Lowland Valley	Pentraeth Valleys	From Benllech and Red Wharf Bay stretching south-westward, this area is a series of low gently rounded ridges with wide flat-bottomed valleys in between. It is all lower than the land to north and south, and meets with Malltraeth Marsh in the south west. There are fens in the valleys, notably the Cors Bodeilo Nature Reserve, and pasture fields bounded by low hedges with few trees on the ridges. From the lower parts views are limited to the surrounding slopes, giving a secluded rather enclosed character to much of the area. Towards the north there are some views to Red Wharf Bay but generally the coast is not dominant.	M	M	M-H	M-H	Medium to High
	Hillside and Scarp Slopes Mosaic	Mynydd Llwydiarth	Rising steeply from Red Wharf Bay to 157m, this hillside provides a fine backdrop to the coast and offers a grand view across the bay. When seen from inland, this area is noticeably craggy, with gorse-covered knolls interspersed with marshy hollows, but is not much higher than the adjacent farmland plateau. Within this area, the settlement of Llanddona is spread out around a series of small greens. From Llanddona steep lanes lead down the hillside, passed scattered houses overlooking the bay. Altogether this is an attractive landscape.	L-M	M	M	M-H	Medium
	Wooded	Pentraeth	This area of mainly privately-owned coniferous	L	M	M	H	Medium

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	Hillside and Scarp Slopes	Forest	forest covers the western part of Mynydd Llwydiarth and forms part of the backdrop to Red Wharf Bay. Within the forest are rocky ridges, a small lake and some enclosed fields. There is little public access and the forest remains a stronghold of the red squirrel, adding to its feeling of special wildness.					
	Intertidal	East Coast	From Point Lynas in the north to Benllech in the south, this coastline consists mainly of rocky shores, backed by low cliffs and grassy slopes. There are also two sandy bays with parking and access for bathing. This area is divided in two by the estuary at Dulas Bay. On this stretch of coast is the fishing village of Moelfre with its shingle beach and small harbour, tucked behind its headland and small offshore island. There are wide distant views eastward across the sea and along the coast to distant headlands.	H	H	H	H	High
Penmon	Mosaic Rolling lowland	Penmon Plateau	This is the easternmost area, inland from the coast between Puffin Island and Red Wharf Bay. It is limestone, with several former quarries along the coast including the large Dinmor Quarry, used to construct A55, now containing a fish farm. Boundary walls of pale limestone, including the old deer park wall, add to the area's distinctive character. It's high point, the hillfort Bwrdd Arthur at 164m overlooks Red Wharf Bay and forms a feature on the skyline.	M	M-H	M	M-H	Medium to High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			The eastern half has prospects over the sea. The area's inland edge is marked by a minor scarp with woodland and a meandering little lane along the top, overlooking the Llangoed vale. There are scattered houses and the hamlets of Penmon and Caim in the south east of the area. There is little access to the coast except at the eastern tip, beyond the beautiful Penmon Priory, to where there are views to Puffin Island and the Great Orme in the distance. The lime kilns and quays at Porth Penmon form a prominent interesting feature seen					
	Mosaic Rolling lowland	Llangoed Vale	North of Beaumaris, to Penmon, this is an area of gently rolling farmland, enclosed by scarps to north and west, and looking out across the Straits to the east. Medium sized fields with well-treed hedges, twisting lanes and numerous scattered houses form a generally attractive landscape with a well settled sheltered character. Groups of bungalows along the roads and the derelict factory at Fryers Bay detract from the overall quality.	M	M	M	M-H	Medium
	Intertidal	Penmon Limestone Coast	This is the most easterly area of coast, from the edge of Red Wharf Bay, round Trwyn Du to the northern reaches of the Menai Straits. The limestone of this coastline has been extensively quarried in the past and there are various	L	H	H	M-H	High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			remains of these workings. There is very little access to the north-facing coast, and the limestone plateau rises steeply behind the narrow shingle and rock shoreline. At Trwyn Du, the easternmost point, however, a road gives access to the fine viewpoint, with the black and white striped lighthouse on the rocky point and views across to Puffin Island and Great Orme beyond.					
	Hillside and Scarp Slopes Mosaic	Mynydd Llwydiarth	Rising steeply from Red Wharf Bay to 157m, this hillside provides a fine backdrop to the coast and offers a grand view across the bay. When seen from inland, this area is noticeably craggy, with gorse-covered knolls interspersed with marshy hollows, but is not much higher than the adjacent farmland plateau. Within this area, the settlement of Llanddona is spread out around a series of small greens. From Llanddona steep lanes lead down the hillside, passed scattered houses overlooking the bay. Altogether this is an attractive landscape.	L-M	M	M	M-H	Medium
	Intertidal	Menai Straits North	This area is the coastline from Penmon to Beaumaris. At low tide it is mainly mud and sand with rocky shingle. Backing the shoreline, there are banks of loose sandy soil, rather than cliffs, where the lowland vale meets the straits, giving an open feeling to the coastline. There are a few groynes and old jetties projecting onto	L-M	H	H	H	High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			the shore and in two places the road runs immediately alongside, allowing good wide views along the straits and across the extensive Lavan Sands to Snowdonia.					
	Wooded Lowland Valleys	Beaumaris Wooded Slopes	This long sinuous east-facing small scarp runs from Beaumaris northward. It is almost entirely wooded and forms an important backdrop to Beaumaris and the Llangoed vale, clearly separating it from the plateau farmland above. From the slopes there are fine views across the Menai Straits to northern Snowdonia. The grand houses of Barons Hill (now derelict) and Henllys (now apartments) at the base of the scarp, developed various drives and paths through the woods, with some exotic tree planting. Some of these walks are still accessible.	L	H	M-H	H	Medium to High
	Open Rolling Lowland	Eastern Smooth Belt	This area extends north of the A55 towards Red Wharf Bay. It consists of rolling plateau with large regular fields bounded by hedges, mixed woodland plantations and shelterbelts, and less marshy land than elsewhere. Snowdonia appears very close, but the Menai Straits are hidden from view. Altogether it is a pleasant but rather featureless unremarkable landscape.	M	M	M	M	Medium
East Central Anglesey	Open Rolling Lowland	Eastern Smooth Belt	This area extends north of the A55 towards Red Wharf Bay. It consists of rolling plateau with large regular fields bounded by hedges, mixed	M	M	M	M	Medium

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			woodland plantations and shelterbelts, and less marshy land than elsewhere. Snowdonia appears very close, but the Menai Straits are hidden from view. Altogether it is a pleasant but rather featureless unremarkable landscape.					
	Open Lowland Valley	Pentraeth Valleys	From Benllech and Red Wharf Bay stretching south-westward, this area is a series of low gently rounded ridges with wide flat-bottomed valleys in between. It is all lower than the land to north and south, and meets with Malltraeth Marsh in the south west. There are fens in the valleys, notably the Cors Bodeilo Nature Reserve, and pasture fields bounded by low hedges with few trees on the ridges. From the lower parts views are limited to the surrounding slopes, giving a secluded rather enclosed character to much of the area. Towards the north there are some views to Red Wharf Bay but generally the coast is not dominant.	M	M	M-H	M-H	Medium to High
	Open Rolling Lowland	South West Ridges	From the A55 corridor at Llanfair Pwllgwyngyll south-west towards Newborough there is a clear pattern of gentle ridges and valleys on a north-east/south-west alignment. Roads run along the ridges, and at right angles across the valleys, linking the ridgetop villages. The fields are generally regular and medium to large in size,	M	M-H	M-H	M-H	Medium to High

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (From LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Visual Sensitivity				Visual Sensitivity
				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			with well-treed hedges. From within the valleys the views to Snowdonia are hidden. There are several important prehistoric monuments within this area.					
	Dispersed Settlement	Gaerwen	Gaerwen is a large village spread out along the A5, a few miles west of Llanfairpwllgwyngyll. The main part of the village is on the plateau, with scattered develop on the slopes down to Pentre Berw on the edge of Malltraeth Marsh. It is not a particularly attractive village, on the straight main road, with housing and industrial estates behind. Various fields and other undeveloped land link the various parts of the settlement. Small areas of agricultural and/or wild land are included where they form an important part of the setting of the settlement.	H	L-M	L	L	Low to Medium
	Road Corridor	A55 corridor	The A55 dual-carriageway crosses Anglesey diagonally, between the Britannia Bridge and Holyhead. Where it follows a similar alignment to the A5 and the railway, the whole transport corridor is included in the aspect area. There are six interchanges, with intrusive raised roundabouts, signs and lighting. On the whole the corridor fits well into the gently undulating topography and is not particularly conspicuous. It has shallow cuttings and embankments, with mainly hedges alongside. From the road there are views across the pleasant countryside and	L	L-M	L-M	L	Low to Medium

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			more dramatic views of the coast towards Holyhead. Small areas of agricultural and/or wild land are included where they form an important part of the setting of the road.					
Rhosneigr-Gwalchmai	Mosaic Rolling Lowland	Central South West Craggy Belt	This large area extends from the west coast north of Malltraeth to Llangefni and northwards. North-east to south-west aligned rocky ridges are discernable, giving a series of craggy skylines, with marshier land in-between. There are large hedges with hawthorn and gorse and ash trees, enclosing fields of mixed sizes, mainly small on the ridges and larger in the valleys. The roads tend to follow the ridges, giving longer views across farmland. There are scattered farms, small villages and hamlets throughout. Altogether this is an attractive mix of textures and colours in generally quiet farmland. The western part in particular, however, is disturbed by jets from RAF Valley during weekdays. The western part of the Bodorgan Estate has a more maritime character due to views over adjacent dunes and estuary and to the rocky coast, with wind-pruned shelter belts.	M	M	M-H	M-H	Medium to High
	Rolling Open Lowland	Central Smooth Belt	This is a very extensive area, stretching from Moelfre on the east coast, to Aberffraw on the west coast. It appears fairly flat in the west, but more undulating and higher in the east. It is primarily pasture, with some arable land, and	M	M	M-H	M-H	Medium to High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			medium to large sized fields with hedges, some hedgebanks and stone walls. It is criss-crossed by a network of mainly small roads, with many scattered houses and farms, hamlets and small villages. Generally it feels settled and prosperous, with a quiet rural character. It is pleasant but unremarkable, with some long views to the higher parts of Anglesey, and distant views to Snowdonia, but not usually to the coast. Only in the far west can the coast be seen. The part west of the A55 suffers from disturbance from jets from RAF Valley on weekdays.					
	Road Corridor	A55 corridor	The A55 dual-carriageway crosses Anglesey diagonally, between the Britannia Bridge and Holyhead. Where it follows a similar alignment to the A5 and the railway, the whole transport corridor is included in the aspect area. There are six interchanges, with intrusive raised roundabouts, signs and lighting. On the whole the corridor fits well into the gently undulating topography and is not particularly conspicuous. It has shallow cuttings and embankments, with mainly hedges alongside. From the road there are views across the pleasant countryside and more dramatic views of the coast towards Holyhead. Small areas of agricultural and/or wild land are included where they form an	L	L-M	L-M	L	Low to Medium

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (From LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Visual Sensitivity				Visual Sensitivity
				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			important part of the setting of the road.					
	Excavation	Caer Glaw Quarry	This working granite quarry is in the centre of Anglesey, adjacent to the A5. It is situated within an area of craggy low ridges and therefore is not particularly conspicuous. Apart from the entrance area, it is well-screened from the main road, but the rock faces, crushers and other structures can be seen from the minor road nearby. A public recycling centre in grey clad sheds is tucked away to the side of the main entrance. Inevitably it produces some dust and noise, but overall, it is not intrusive. Small areas of agricultural and/or wild land are included where they form an important part of the setting of the development.	L	L-M	L-M	L	Low to Medium
	Flat lowland Mosaic	Llanfihangel lakes and dunes	Inland from RAF Valley, towards the A55, this low-lying area on either side of Llanfihangel yn Nhowyn is a mosaic of former dunes, lakes and marshy areas, interspersed with rocky patches. There is open access on much of the flattened grassy dunes, including a golf course. The lakes are used for fishing and have wildlife interest. The rest of the land is divided into small irregular fields. This area suffers from the extremely noisy jets of RAF Valley during weekdays.	L	L	L	L	Low

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	Open Rolling Lowland	Caergeiliog craggy lowlands	This area of low-lying land is south of the A55, east of Four Mile Bridge. The small scale of the fields and twisting lanes is in contrast to the A55 and to RAF Valley, both of which substantially intrude and detract from the overall landscape, with movement and extreme noise.	M	L-M	M	M	Medium
	Amenity	RAF Valley Airfield	This airfield is situated on the west coast, adjacent to the Holy Island straits, on an area of flattened dunes. It has a long runway parallel to the coast and most of the buildings, including neat office blocks, are clustered in the northern corner. It is hidden by dunes from the nearby beach, but the large hangers are seen at a distance from Rhosneigr. It is used for low-level flying of jets and the noise can be ear-shattering from nearby. The noise affects about a third of Anglesey during weekdays. It is also used by the search and rescue helicopters and a civilian plane service has recently started.	M	L	L	L	Low to Medium
	Intertidal	Southwest Coast Rhosneigr	This area comprises the coastline from the headland north of Cable Bay to the northern end of Cymyran Bay. These sandy bays on either side of the holiday resort of Rhosneigr are popular accessible bathing and surfing beaches, and are also much used for windsurfing and kite-flying. The stretches of sand are broken by areas of tidal rocks and are backed mainly by	L	H	M-H	M	Medium

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			dunes. There are a few scattered houses on these dunes, and recent building out from Rhosneigr is starting to suburbanise the character of them. There are fine views along the beaches and out to the Lleŷn Peninsula. With RAF Valley immediately behind the edge of the dunes, noise from jets is very disturbing during weekdays.					
	Dispersed Settlement	Llanfihangel yn Nhowyn	This village is spread out along the B road between the A55 and RAF Valley. The southern part, nearer the airfield, is a typical RAF base with forces housing and expanses of neat mown grass. The northern part is mainly housing estates, with a few shops. Adjacent natural lakes help bring some character to this otherwise very ordinary settlement. Noise from jets is very intrusive in this area during weekdays.	M-H	M	M-H	L	Medium
	Amenity Land	Mona airfield/show ground	The airfield is in the centre of Anglesey, adjacent to the A5, to the west of Llangefni. An industrial estate is being developed on a former military camp layout in the eastern part. This currently appears incongruously isolated and inappropriate. The airfield appears semi-derelict, with weeds growing from cracks in the concrete runways and scrub and rushes developing on the grassland, plus scattered old buildings. The main runway, with its adjacent	L-M	M	M	L	Low to Medium

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			tower, is used for practice touchdowns by the military and is disturbing for the adjacent villages and for drivers on the A5. The Anglesey Showground occupies former camp area on the other side of the main road. There are some recently-built permanent large sheds here.					
Aberffraw	Mosaic Rolling Lowland	Central South West Craggy Belt	This large area extends from the west coast north of Malltraeth to Llangefni and northwards. North-east to south-west aligned rocky ridges are discernable, giving a series of craggy skylines, with marshier land in-between. There are large hedges with hawthorn and gorse and ash trees, enclosing fields of mixed sizes, mainly small on the ridges and larger in the valleys. The roads tend to follow the ridges, giving longer views across farmland. There are scattered farms, small villages and hamlets throughout. Altogether this is an attractive mix of textures and colours in generally quiet farmland. The western part in particular, however, is disturbed by jets from RAF Valley during weekdays. The western part of the Bodorgan Estate has a more maritime character due to views over adjacent dunes and estuary and to the rocky coast, with wind-pruned shelter belts.	M	M	M-H	M-H	Medium to High
	Rolling Open Lowland	Central Smooth Belt	This is a very extensive area, stretching from Moelfre on the east coast, to Aberffraw on the west coast. It appears fairly flat in the west, but	M	M	M-H	M-H	Medium to High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			more undulating and higher in the east. It is primarily pasture, with some arable land, and medium to large sized fields with hedges, some hedgebanks and stone walls. It is criss-crossed by a network of mainly small roads, with many scattered houses and farms, hamlets and small villages. Generally it feels settled and prosperous, with a quiet rural character. It is pleasant but unremarkable, with some long views to the higher parts of Anglesey, and distant views to Snowdonia, but not usually to the coast. Only in the far west can the coast be seen. The part west of the A55 suffers from disturbance from jets from RAF Valley on weekdays.					
	Dunes and Dune Slack	Tywy Aberffraw	This is an area of dunes that extends inland for about two miles, immediately south of Aberffraw, on the south west coast. In places the dunes are hillocky, cutting off views, in other parts they are flatter with wider views across to the farmland rising on either side. They are mainly grass-covered and are grazed. There are two roads crossing the dunes and all the area has open access. At the landward end is Llyn Coron, a slack with marshy edges which is used for fishing.	L	H	H	M-H	Medium to High
	Intertidal	South West	From the edge of Malltraeth Sands in the south to popular little Cable Bay, south of Rhosneigr,	L	H	H	H	High

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		Coast	this coast is mainly rocky, with low cliffs and off-shore islets. Apart from the sands at Aberffraw, and the small cove at Porth Cwyfan, which can be reached from the coastal path, this area is not very accessible. There are views out across the sea to the Lleŷn Peninsula, and along the rugged coast, best seen from the coastal path. Noise from the jets at RAF Valley to the north, and from the adjacent Ty Croes racing circuit, intrude at times.					
	Amenity Land	Ty Croes racing circuit	This has an out-of-the-way cliff-top location on the south-west coast, west of Aberffraw. Formerly a Royal Artillery camp, there are remains of concrete roads, brick lookouts and various other ruined buildings in the northern part. The circuit and associated buildings are being completely re-worked, with high screen mounds around the landward side. It will still be seen and heard from the coastal path to the south. It is busy most weekends, but during the week it is eerily isolated. Small areas of agricultural and/or wild land are included where they form an important part of the setting of the development.	L-M	M	M	L-M	Low to Medium
Afon Cefni	Mosaic Rolling Lowland	Central South West Craggy Belt	This large area extends from the west coast north of Malltraeth to Llangefni and northwards. North-east to south-west aligned rocky ridges are discernable, giving a series of craggy	M	M	M-H	M-H	Medium to High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			skylines, with marshier land in-between. There are large hedges with hawthorn and gorse and ash trees, enclosing fields of mixed sizes, mainly small on the ridges and larger in the valleys. The roads tend to follow the ridges, giving longer views across farmland. There are scattered farms, small villages and hamlets throughout. Altogether this is an attractive mix of textures and colours in generally quiet farmland. The western part in particular, however, is disturbed by jets from RAF Valley during weekdays. The western part of the Bodorgan Estate has a more maritime character due to views over adjacent dunes and estuary and to the rocky coast, with wind-pruned shelter belts.					
	Flat Open lowland Farmland	Malltraeth Marsh	This belt of flat land, about one mile wide, fills the Cefni valley inland from Malltraeth Bay to Llangefni. In the south-west of Anglesey, it reaches more than half way across the island. In its present form, this is a relatively recent landscape, created when The Cob was built across the tidal marshes in order to drain the land, allowing the A5 to be built across. The river is canalised through the centre of the area, with high straight banks, and throughout this reclaimed marshland there is a regular pattern of clay-lined drainage ditches with tidal flaps to prevent flooding. There are hedges alongside the drains and most of the land is sheep	L-M	H	H	M-H	Medium to High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			pasture, with some reed bed areas managed as nature reserve by the RSPB. The A5 and A55, running parallel, sweep down to cross the marsh but are well integrated into the landscape and not particularly intrusive. The railway line crosses diagonally on a low arched viaduct that is most conspicuous. From these there are long views over the marsh. From the small roads that cross the marsh views are to the valley sides, but not over The Cob to the sea. Altogether this a distinctive landscape but not particularly attractive in itself.					
	Estuary	Malltraeth Sands	This area is a large estuary extending two and a half miles in from Malltraeth Bay, ending where The Cob cuts it off from the drained lands behind. At low tide it is sandy, with the Cefni River meandering along the northern shore. It is not very accessible and it is the haunt of sea birds and waders. There are fine wide views of it from the path along The Cob, framed by the headland and Newborough Forest and Cefni saltmarsh.	L	H	H	M	Medium to High
	Intertidal	Llanddwyn Bay/ Malltraeth Bay	This five mile stretch of sand reaches northwest from Abermenai Point at the southern entrance to the Menai Straits. It is backed by the dunes of Newborough Warren and Forest and the estuary of Malltraeth Sands, with Llanddwyn Island linked to the beach at all but the highest	L	H	H	H	High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			of tides. It is popular for bathing and walking, with access via the Forest. There are fine views throughout to the adjacent Llanddwyn Island, and across to the Lleŷn Peninsula.					
	Open Lowland Valleys	Malltraeth Marsh Slopes	This length of north-west facing slopes stretches from the A55 at Gaerwen to Newborough in the south, bounded by the ridge road on the top and the flat Malltraeth Marsh on the bottom. The fields are generally regular and medium in size, with well-treed hedges and some stone walls and disused small quarries. It is steeper than the adjacent ridges and valleys and is distinctive because of its views out across the marsh and to the sea and headlands to the south and to the A55 to the north.	L-M	M-H	M-H	M-H	Medium to High
	Road Corridor	A55 corridor	The A55 dual-carriageway crosses Anglesey diagonally, between the Britannia Bridge and Holyhead. Where it follows a similar alignment to the A5 and the railway, the whole transport corridor is included in the aspect area. There are six interchanges, with intrusive raised roundabouts, signs and lighting. On the whole the corridor fits well into the gently undulating topography and is not particularly conspicuous. It has shallow cuttings and embankments, with mainly hedges alongside. From the road there are views across the pleasant countryside and more dramatic views of the coast towards	L	L-M	L-M	L	Low to Medium

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			Holyhead. Small areas of agricultural and/or wild land are included where they form an important part of the setting of the road.					
Newborough	Wooded Rolling Lowland	Newborough Forest	Near the south west corner of Anglesey, this forestry covers stabilised dunes. It is accessed by a toll road and is a popular place for walking and recreation and access to the beach. It is managed by the Forestry Commission and is mainly coniferous, including pines. From within the forest there are few views out. From the coast the forest appears monotonous and dark.	L	M	M	M-H	Medium
	Estuary	Malltraeth Sands	This area is a large estuary extending two and a half miles in from Malltraeth Bay, ending where The Cob cuts it off from the drained lands behind. At low tide it is sandy, with the Cefni River meandering along the northern shore. It is not very accessible and it is the haunt of sea birds and waders. There are fine wide views of it from the path along The Cob, framed by the headland and Newborough Forest and Cefni saltmarsh.	L	H	H	M	Medium to High
	Other Coastal Wild Land	Cefni saltmarsh	This area forms the southern side of Malltraeth Sands, the Cefni estuary, and is backed by Newborough Forest. It is part of a nature reserve and access is limited to the forest fringe. It is a typical area of ungrazed saltmarsh, with reeds and numerous sinuous little creeks. There	H	H	H	M	High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			are wide views from the marsh across the estuary to Malltraeth on the far side, and seaward to rocky headlands.					
	Intertidal	Llanddwyn Bay/ Malltraeth Bay	This five mile stretch of sand reaches northwest from Abermenai Point at the southern entrance to the Menai Straits. It is backed by the dunes of Newborough Warren and Forest and the estuary of Malltraeth Sands, with Llanddwyn Island linked to the beach at all but the highest of tides. It is popular for bathing and walking, with access via the Forest. There are fine views throughout to the adjacent Llanddwyn Island, and across to the Lleŷn Peninsula.	L	H	H	H	High
	Dunes and Dune Slack	Newborough Warren	This is an extensive area of stabilised sand dunes at the south-west tip of Anglesey. The area is a nature reserve and mainly covered with marram grass and a great variety of low-growing native vegetation. In the hollows there are slacks, some with willow round about. This is a strange disorientating landscape. From the high dunes there are wide views and the wind brings the sound of the sea, but in the hollows it is quiet and secluded. Footpaths cross the dunes, leading from car parks at the landward side towards the sea.	L	H	H	M-H	Medium to High
	Open Rolling	South West	From the A55 corridor at Llanfair Pwllgwyngyll south-west towards Newborough there is a clear	M	M-H	M-H	M-H	Medium to

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	Lowland	Ridges	pattern of gentle ridges and valleys on a north-east/south-west alignment. Roads run along the ridges, and at right angles across the valleys, linking the ridgetop villages. The fields are generally regular and medium to large in size, with well-treed hedges. From within the valleys the views to Snowdonia are hidden. There are several important prehistoric monuments within this area.					High
	Flat Open lowland Farmland	Malltraeth Marsh	This belt of flat land, about one mile wide, fills the Cefni valley inland from Malltraeth Bay to Llangefni. In the south-west of Anglesey, it reaches more than half way across the island. In its present form, this is a relatively recent landscape, created when The Cob was built across the tidal marshes in order to drain the land, allowing the A5 to be built across. The river is canalised through the centre of the area, with high straight banks, and throughout this reclaimed marshland there is a regular pattern of clay-lined drainage ditches with tidal flaps to prevent flooding. There are hedges alongside the drains and most of the land is sheep pasture, with some reed bed areas managed as nature reserve by the RSPB. The A5 and A55, running parallel, sweep down to cross the marsh but are well integrated into the landscape and not particularly intrusive. The railway line crosses diagonally on a low arched viaduct that	L-M	H	H	M-H	Medium to High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			is most conspicuous. From these there are long views over the marsh. From the small roads that cross the marsh views are to the valley sides, but not over The Cob to the sea. Altogether this a distinctive landscape but not particularly attractive in itself.					
	Open Lowland Valleys	Malltraeth Marsh Slopes	This length of north-west facing slopes stretches from the A55 at Gaerwen to Newborough in the south, bounded by the ridge road on the top and the flat Malltraeth Marsh on the bottom. The fields are generally regular and medium in size, with well-treed hedges and some stone walls and disused small quarries. It is steeper than the adjacent ridges and valleys and is distinctive because of its views out across the marsh and to the sea and headlands to the south and to the A55 to the north.	L-M	M-H	M-H	M-H	Medium to High
	Intertidal	Traeth Abermenai	This area is the coast at the southern end of the Menai Straits where they open out and expose wide sandbanks at low tide. This includes the estuary of the small River Briant, protected by the dunes and sand spit of Abermenai Point. The foreshore is shingle. There are wide views out across the straits to Caernarfon and southward across the sands, giving a very open and exposed character to the area.	L	H	H	H	High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
	Intertidal	Menai Straits south	From Britannia Bridge southward to where the straits widen out at Traeth Gwyllt, this area of coast is rural in character. It is backed by low sandy banks and the shoreline and intertidal area is mainly rocky shingle and mud. A few lanes come down to the shore and there are a few jetties, piers and other remains of former activities, including the ferry at Moel-y-Don. From all along this coast there are views across to the busier mainland coast, and vice versa.	M	M-H	M-H	H	Medium to High
	Open Rolling Lowland	Abermenai lowlands	South of Brynsiencyn and Dwyran the land slopes gently down from the minor ridge to the southern end of the Menai Straits and the estuary of the River Briant. This is a quiet, out-of-the-way part of Anglesey, with a few lanes leading down to the water's edge and wide views across the tidal sands. There are medium sized fields of pasture, with fences and some hedges giving an open feel to the landscape.	L-M	M-H	H	M-H	Medium to High
	Other Coastal Wild Land	Llanddwyn Island	Protruding off the south west of Anglesey, this island is linked to the beach at all but the highest of tides. It has a rocky coast with sandy coves, and crags protrude through the sandy soil of the interior. There is springy turf, areas of marram grass and damp hollows, all grazed by Welsh mountain ponies. In the centre of the island is a ruined chapel, and towards the far end there is a	H	H	H	H	High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			row of low, white-painted pilots cottages and a prominent white tower lighthouse. The island is managed as part of the wider nature reserve. There are paths along the length of the island and it is a popular place to visit. There are wonderful views all round, to the Lleŷn Peninsula, Snowdonia, and back along the coast in both directions. This, combined with the island's association with Saint Dwynwen and its location beyond the edge of the land, makes for a very special sense of place.					
Western Menai	Open Rolling Lowland	South West Ridges	From the A55 corridor at Llanfair Pwllgwyngyll south-west towards Newborough there is a clear pattern of gentle ridges and valleys on a north-east/south-west alignment. Roads run along the ridges, and at right angles across the valleys, linking the ridgetop villages. The fields are generally regular and medium to large in size, with well-treed hedges. From within the valleys the views to Snowdonia are hidden. There are several important prehistoric monuments within this area.	M	M	M	M-H	Medium
	Intertidal	Traeth Abermenai	This area is the coast at the southern end of the Menai Straits where they open out and expose wide sandbanks at low tide. This includes the estuary of the small River Briant, protected by the dunes and sand spit of Abermenai Point. The foreshore is shingle. There are wide views	L	H	H	H	High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			out across the straits to Caernarfon and southward across the sands, giving a very open and exposed character to the area.					
	Mosaic Lowland Valleys	Menai Strait Slopes - south	From Menai Bridge southwards, this area is bounded by the A5 and Brynsiencyn Road along the upper part of the slopes that overlook the Menai Straits. These slopes are less steep and less wooded than further north. For centuries the magnificent views of the straits and Snowdonia have been appreciated and there is a series of grand mansions along the mid slopes, surrounded by estates and parkland. These include the National Trust's Plas Newydd with Repton gardens which look across to the Vaynol estate near Bangor. There are lanes leading down from the top road to former ferry points where slates were imported, accounting for the old slate fences in the area. This is a peaceful rural area, contrasting with the busier mainland side of the straits.	M	M	M	M-H	Medium
	Intertidal	Menai Straits south	From Britannia Bridge southward to where the straits widen out at Traeth Gwyllt, this area of coast is rural in character... It is backed by low sandy banks and the shoreline and intertidal area is mainly rocky shingle and mud... A few lanes come down to the shore and there are a few jetties, piers and other remains of former activities, including the ferry at Moel-y-Don...	M	M-H	M-H	H	Medium to High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			From all along this coast there are views across to the busier mainland coast, and visa versa...					
	Open Rolling Lowland	Abermenai lowlands	South of Brynsiencyn and Dwyran the land slopes gently down from the minor ridge to the southern end of the Menai Straits and the estuary of the River Briant. This is a quiet, out-of-the-way part of Anglesey, with a few lanes leading down to the water's edge and wide views across the tidal sands. There are medium sized fields of pasture, with fences and some hedges giving an open feel to the landscape.	L-M	M-H	H	M-H	Medium to High
Eastern Menai	Open Rolling Lowland	Eastern Smooth Belt	This area extends north of the A55 towards Red Wharf Bay. It consists of rolling plateau with large regular fields bounded by hedges, mixed woodland plantations and shelterbelts, and less marshy land than elsewhere. Snowdonia appears very close, but the Menai Straits are hidden from view. Altogether it is a pleasant but rather featureless unremarkable landscape.	M	M	M	M	Medium
	Mosaic Rolling lowland	Llangoed Vale	This is the easternmost area, inland from the coast between Puffin Island and Red Wharf Bay. It is limestone, with several former quarries along the coast including the large Dinmor Quarry, used to construct A55, now containing a	M	M	M	M-H	Medium

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			fish farm. Boundary walls of pale limestone, including the old deer park wall, add to the area's distinctive character. It's high point, the hillfort Bwrdd Arthur at 164m overlooks Red Wharf Bay and forms a feature on the skyline. The eastern half has prospects over the sea. The area's inland edge is marked by a minor scarp with woodland and a meandering little lane along the top, overlooking the Llangoed vale. There are scattered houses and the hamlets of Penmon and Caim in the south east of the area. There is little access to the coast except at the eastern tip, beyond the beautiful Penmon Priory, to where there are views to Puffin Island and the Great Orme in the distance. The lime kilns and quays at Porth Penmon form a prominent interesting feature seen					
	Wooded Lowland Valleys	Menai Straits slopes - north	This area is between Beaumaris and Menai Bridge, from the road along the top of the slopes, down to the shore. It is generally steep and well-wooded. The coast road runs along the base of the slope, with various large houses and hotels on the shoreline and set on the sides. Towards the top of the slopes there are numerous scattered houses, linked by steep little lanes, taking advantage of the wonderful views to the Straits, to Bangor and Snowdonia beyond. This area is prominent from parts of	M-H	M	M	H	Medium to High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			Bangor and appears as attractively wooded, with a particularly ugly prominent block of flats near the water's edge.					
	Intertidal	Menai Straits - North	This area is the coastline from Penmon to Beaumaris. At low tide it is mainly mud and sand with rocky shingle. Backing the shoreline, there are banks of loose sandy soil, rather than cliffs, where the lowland vale meets the straits, giving an open feeling to the coastline. There are a few groynes and old jetties projecting onto the shore and in two places the road runs immediately alongside, allowing good wide views along the straits and across the extensive Lavan Sands to Snowdonia.	L-M	H	H	H	High
	Wooded Lowland Valleys	Cwm Cadnant	This is a small wooded gorge to the north east of Menai Bridge, carrying the Cadnant down to the Straits. It is hidden away and dark and almost inaccessible. There are views into it, however, from the attractive old stone bridge on the loop of road than has now been superseded by the straight main road on its ugly concrete bridge.	H	M-H	M-H	H	Medium to High
	Wooded Lowland Valleys	Beaumaris Wooded Slopes	This long sinuous east-facing small scarp runs from Beaumaris northward. It is almost entirely wooded and forms an important backdrop to Beaumaris and the Llangoed vale, clearly separating it from the plateau farmland above. From the slopes there are fine views across the	L	H	M-H	H	Medium to High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			Menai Straits to northern Snowdonia. The grand houses of Barons Hill (now derelict) and Henllys (now apartments) at the base of the scarp, developed various drives and paths through the woods, with some exotic tree planting. Some of these walks are still accessible.					
	Intertidal	Menai Straits Mid section	This section of the coast of the Menai Straits stretches from Beaumaris to Britannia Bridge. Compared to the shores of the Straits to north and south, this section is busy, with piers and jetties, backed by the main road and numerous buildings. It includes several little islands, each connected to the shore by a causeway. These have houses on them, with trees and gardens. Seen from the coast road, they give an intricate, sheltered, small scale character to the area. In contrast to this, the iconic Menai Suspension Bridge and the Britannia Bridge soar overhead, giving the best views of the Straits on either side.	L	H	H	H	High
	Road Corridor	A55 corridor	The A55 dual-carriageway crosses Anglesey diagonally, between the Britannia Bridge and Holyhead. Where it follows a similar alignment to the A5 and the railway, the whole transport corridor is included in the aspect area. There are six interchanges, with intrusive raised roundabouts, signs and lighting. On the whole the corridor fits well into the gently undulating	L	L-M	L-M	L	Low to Medium

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			topography and is not particularly conspicuous. It has shallow cuttings and embankments, with mainly hedges alongside. From the road there are views across the pleasant countryside and more dramatic views of the coast towards Holyhead. Small areas of agricultural and/or wild land are included where they form an important part of the setting of the road.					
Menai Coast	Intertidal	Sandy Beaches	Three areas of wide expanses of sandy beach with coastal views with a strong coastal feel derived in part from the sea- air smell and sound of waves. Hell's Mouth on south coast of Lleŷn Peninsula which has south-west aspect and means that it catches all the winds, generally not very accessible, but popular with surfers. On either side of Abersoch are beaches popular with holiday makers as they are easily accessed. Also at Dinas Minelle to the south of the Menai Straits. Here the aspect is westerly, and the several car parks, caravan park, etc means that it gets busy.	L	H	H	H	High
	Dunes and Dune Slack	Beach and Dunes	Area of sand dunes extending into southern entrance of Menai Straits, with Fort Belan as remote landmark at northern point. Wild unspoilt area, away from rest of world, almost like an island at high tide. There are attractive views across Menai Straits to Anglesey and distant views south along coast to Lleŷn peninsula,	L	H	H	H	High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			giving dominant maritime character to all the area. Very little access, important to retain this remoteness.					
	Intertidal	Fford Bay	Foryd Bay, at southern entrance to Menai Straits. Sandy and muddy broad inlet with marshy and shingle areas giving variety, plus tidal interest. Little access and no man-made features. Strong coastal character with views of Menai Straits, Anglesey and Snowdonia add to strong sense of place. Plenty of bird life adds visual and aural interest. Slight detractor is noise/movement of occasional airplane at adjacent airfield.	L-M	H	H	H	High
	Flat Open Lowland Farmland	Morfa Dinlle	Two areas of coastal strip, divided by Foryd Bay at southern entrance to Menai Straits. Flat and low lying predominantly agricultural land between 5m to 40m AO. Parts nearest coast tend to be marshy, or drained marshland, plus caravan parks. Inland there is more intricate pattern of irregular fields and small farms. Coastal views dominate, across Caernarfon Bay to Lleŷn peninsula in southern area, and across Menai Straits in northern area. Strong visual and smell/exposure association with coast provides sense of place. Some local detractors relating to airfield noise/movement, and rather tacky tourist developments. Attractive features include unusual prominent coastal hillfort, and	M	M-H	M-H	M-H	Medium to High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			inland small-scale farmland. Caravans and tourist related developments should not be allowed to spoil these areas.					
	Intertidal	Mud/Shingle	Two areas of mud/shingle flats with views across Menai Straits. Southern one is south of Caernarfon, with minor road alongside and therefore accessible. Northern one is alongside Vaynol Park (National Trust) and inaccessible, forms part of view from Pont Britannia. Not special in themselves but integral part of coast of Menai Straits.	L	H	H	M	Medium to High
	Open Low Valley	Caernarfon estuary	A narrow enclosed river valley of Afon Seiont adjacent to urban edge of Caernarfon. Steep sides with dense vegetation, particularly to south. Castle provides a focal point from western reaches of river valley. Traffic noise from A487 bridge slight visual and sensory detractor. Generally important to setting of historic town and must retain its rural character.	H	H	H	M	High
	Dispersed Settlement	Plas Menai	Incongruous patchwork mix of large-scale retail/industry, farms and pasture with some hedgerows, on flat 'coastal strip' between Caernarvon and Felinheli, ranging from approximately 5m and 15mAOD. Classified as urban, but much remains undeveloped. Recreational use along coast and with cycle route along old railway adds to general 'busy-	M	M	M	M	Medium

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			ness' of area. A487 is a strong linear element that forms the boundary to the landward side. Attractive views across Menai Strait, plus some interest relating to sailing and Outdoor Pursuits Centre. Area much in need of careful planning and visual improvements to prevent urban sprawl along this stretch of Menai Straits.					
	Intertidal	Traeth Lafen	Extensive area of intertidal mud flats and sand in north-east of county, continuing into Conwy. Inaccessible Part of the Menai Straits, with good views (from edges) across to Anglesey and along the coast to Great Orme. In southern part, views to Bangor and Porth Penrhyn and Penrhyn Castle add interest. Strong coastal sense of place with great tidal changes, tranquillity and additional interest of bird life. Any changes or development would detract.	L-M	H	H	M-H	Medium to High
	Rolling Wooded Estate Farmland or Parkland	Vaynol Estate	Vaynol Estate on shores of Menai Straits to south of Bangor, plus smaller similar area at Upper Bangor. Undulating woodland and mature parkland, very important designed landscape, bounded by impressive stone wall in parts. Other land uses include golf, caravans, university playing fields as well as farmland. Parts owned by National Trust, University, WDA. Vaynol Hall provides focal point but generally rundown air. Britannia Bridge approach crosses the area and forms detractor. Other detractors	M	M	L-M	H	Medium

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			include edge of business park (light pollution) and traffic noise/movement from main roads. Area appears to be in need of overall strategy of conservation of estate to ensure no further deterioration of important landscape.					
Caernarfon - Coast and Plateau	Flat Open Lowland Farmland	Morfa Dinlle	Two areas of coastal strip, divided by Foryd Bay at southern entrance to Menai Straits. Flat and low lying predominantly agricultural land between 5m to 40m AO. Parts nearest coast tend to be marshy, or drained marshland, plus caravan parks. Inland there is more intricate pattern of irregular fields and small farms. Coastal views dominate, across Caernarfon Bay to Lleŷn peninsula in southern area, and across Menai Straits in northern area. Strong visual and smell/exposure association with coast provides sense of place. Some local detractors relating to airfield noise/movement, and rather tacky tourist developments. Attractive features include unusual prominent coastal hillfort, and inland small-scale farmland. Caravans and tourist related developments should not be allowed to spoil these areas.	M	M-H	M-H	M-H	Medium to High
	Open Lowland Valleys	Pont Faen	Westernmost, lower Gwyrfai valley, opening out into Foryd Bay. Rural landscape in gentle low lying valley. Strong coastal sense of place at western end from views/proximity with Foryd Bay and end of Menai Straits. Meandering	L	M-H	M-H	M	Medium to High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			course of the river is dominant element. Only a few scattered farms and minor roads make the area quiet. Moderately attractive, with sewage works are minor visual detractor. Agricultural land uses should be continued.					
	Rolling Farmland	Bethel (Between Clynnog and Bangor)	From Clynnog in south to Bangor in north, between the coastal lowlands and rising land to foothills of Snowdonia, five areas of rolling pasture, generally with northerly aspect, on land lying between approximately 20m to 100m AOD, separated by shallow west-flowing valleys. Gradual transition to upland in east, so boundary of area is not clear-cut. Field boundaries consist of mix of stone walls (tend to be more with elevation to east) and hedges in varied state of repair, with scattered clumps of woodland and plantation. Settlement mainly scattered farms, with few small villages. Visual detractors include electricity pylons, major north/south roads (A499, A487, and A5). Views to Snowdonia and across Menai Straits to Anglesey. Slight upland feel, particularly in eastern parts where stone walls dominate and views out are more extensive.	M-H	M-H	M	M	Medium to High
	Mosaic Lowland Valley	Afon Seiont	Shallow valley of Afon Seiont upstream from Caernarfon to Llanrug. Pleasant pasture with stone walls and riparian woodland. Enclosed, relatively narrow valley, with meandering river	M	H	M	H	Medium to High

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			and many small islands, with some areas of steep sides, e.g. near Pont Rug. Seen from nearby roads but not very accessible. Some views to Snowdonia hills from upper valley sides. Relatively intact farmland, although some lengths of stone wall require repair to maintain overall feeling of integrity.					
	Wooded Mosaic Lowland Valleys	Afon Gwyfai	Middle section of floor of Afon Gwyrfai valley, from Bontnewydd in west to Waun Fawr in east. Enclosed valley with rural character and much riparian woodland. Dominant mosaic pattern along valley, although this borders on mainly wooded character for much of this reach of the valley with the river itself mainly hidden. Very few views out, but where afforded often attractive to uplands of Snowdonia to southeast. This part of the valley is away from roads and settlements and very quiet and pretty, seen from tourist railway.	L-M	H	M-H	H	Medium to High
	Enclosed Hill and Scarp Grazing	Waen-Pentir	Four separate areas of extensive tracts of rising land which form a transition from lowland to upland along edges of Snowdonia. Characterised by network of small/medium sized pasture fields on sloping/undulating ground with a north-westerly aspect, with dry stone walls and scattered tree/scrub. Overhead powerlines/pylons visual detractor. Some attractive views to Menai Strait/Anglesey/coast	M-H	M	M-H	H	Medium to High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			and Lleyn from selected viewpoints. Stone walls, sense of exposure/elevation and the accessibility of views all contribute to an upland sense of place.					
Llanberis-Bethesda	Enclosed Hill and Scarp Grazing	Waen-Pentir	Four separate areas of extensive tracts of rising land which form a transition from lowland to upland along edges of Snowdonia. Characterised by network of small/medium sized pasture fields on sloping/undulating ground with a north-westerly aspect, with dry stone walls and scattered tree/scrub. Overhead powerlines/pylons visual detractor. Some attractive views to Menai Strait/Anglesey/coast and Lleyn from selected viewpoints. Stone walls, sense of exposure/elevation and the accessibility of views all contribute to an upland sense of place.	M-H	M	M-H	H	Medium to High
	Upland Grazing	Cefn Du	Three separate areas of rough grass/upland grazing with scattered rocky outcrops on eastern edge of north part of county adjoining National Park. Attractive views of Snowdonia inland, and Lleyn /coast to the west. Adjacent slate quarries may be considered visual detractors. Strong visual linkage with nearby mountains adjacent, slightly at odds with the proximity to the villages and farm land below.	L	M-H	H	H	Medium to High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
	Lake	Llyn Padarn	Llyn Padarn and Llyn Peris divided by narrow strip of land, adjacent to Llanberis at edge of Snowdonia, with mountain character. Large scale inland waterbody in typical U-shaped glacial valley, with dramatic views of Snowdonia mountains, in particular, the reflected views distinctly add to the quality of the experience, when viewed from the western end. Dramatic Dinorwg quarry overlooking lakes, tourist railway alongside, Llanberis and important tourist route adjacent all means that these lakes are important part of Snowdonia image which needs protection especially as outside the National Park.	M	M-H	H	H	Medium to High
	Open lowland Valley	Afon Rhythallt	Flat bottom of valley of Afon Rhythallt, from Llanrug to Llyn Padarn, between approximately 105m and 110mAOD. Riparian trees and open pasture, marshy in places. Post and wire fence and hedge. Fine views to Snowdonia mountains to the south and up valley. Sinuous form of river dominant element with hillsides rising on either side in contrast to flat floor. Main road brings noise and disturbance to valley.	L-M	M-H	M	M	Medium
	Rolling Farmland	Bethel (Between Clynnog and Bangor)	From Clynnog in south to Bangor in north, between the coastal lowlands and rising land to foothills of Snowdonia, five areas of rolling pasture, generally with northerly aspect, on land	M-H	M-H	M	M	Medium to High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			lying between approximately 20m to 100m AOD, separated by shallow west-flowing valleys. Gradual transition to upland in east, so boundary of area is not clear-cut. Field boundaries consist of mix of stone walls (tend to be more with elevation to east) and hedges in varied state of repair, with scattered clumps of woodland and plantation. Settlement mainly scattered farms, with few small villages. Visual detractors include electricity pylons, major north/south roads (A499, A487, and A5). Views to Snowdonia and across Menai Straits to Anglesey. Slight upland feel, particularly in eastern parts where stone walls dominate and views out are more extensive.					
Penisarwaun Plateau	Enclosed Hill and Scarp Grazing	Waen-Pentir	Four separate areas of extensive tracts of rising land which form a transition from lowland to upland along edges of Snowdonia. Characterised by network of small/medium sized pasture fields on sloping/undulating ground with a north-westerly aspect, with dry stone walls and scattered tree/scrub. Overhead powerlines/pylons visual detractor. Some attractive views to Menai Strait/Anglesey/coast and Lleyn from selected viewpoints. Stone walls, sense of exposure/elevation and the accessibility of views all contribute to an upland sense of place.	M-H	M	M-H	H	Medium to High

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (From LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Visual Sensitivity				Visual Sensitivity
				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
	Open lowland Valley	Afon Rhythallt	Flat bottom of valley of Afon Rhythallt, from Llanrug to Llyn Padarn, between approximately 105m and 110mAOD. Riparian trees and open pasture, marshy in places. Post and wire fence and hedge. Fine views to Snowdonia mountains to the south and up valley. Sinuous form of river dominant element with hillsides rising on either side in contrast to flat floor. Main road brings noise and disturbance to valley.	L-M	M-H	M	M	Medium
	Rolling Farmland	Bethel (Between Clynnog and Bangor)	From Clynnog in south to Bangor in north, between the coastal lowlands and rising land to foothills of Snowdonia, five areas of rolling pasture, generally with northerly aspect, on land lying between approximately 20m to 100m AOD, separated by shallow west-flowing valleys. Gradual transition to upland in east, so boundary of area is not clear-cut. Field boundaries consist of mix of stone walls (tend to be more with elevation to east) and hedges in varied state of repair, with scattered clumps of woodland and plantation. Settlement mainly scattered farms, with few small villages. Visual detractors include electricity pylons, major north/south roads (A499, A487, and A5). Views to Snowdonia and across Menai Straits to Anglesey. Slight upland feel, particularly in eastern parts where stone walls dominate and views out are more extensive.	M-H	M-H	M	M	Medium to High

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				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
Bangor Coastal Plain	Hillside and Scarp Slopes Grazing	Abergwyngregyn	Coastal hills & valleys - strong borrowed view of coast / sea. Pleasant river environment of fields with conifer & broadleaf woodland.	L-M	M	M	M-H	Medium
	Wooded Mosaic Low Valley	Afon Ogwen	Valley of Afon Ogwen from edge of Bangor at lower north- western end to boundary of National Park in south-east where the valley enters the high uplands. Pasture fields and riparian woodland in narrow flat valley floor. Enclosure due to valley landform augmented by some dense vegetation. The A5 is a strong 'curvy-linear' element that slightly echoes the sinuous form of the Afon Ogwen. The valley elevation drops to the north from 150m to 50m AOD over approximately 4km. There are some detractive views out to the slate tips at Penrhyn quarry, and to Bethesda, but also fine views up valley to dramatic Snowdonia mountains.	L	M-H	M	M	Medium
	Rolling Farmland	Bethel (Between Clynnog and Bangor)	From Clynnog in south to Bangor in north, between the coastal lowlands and rising land to foothills of Snowdonia, five areas of rolling pasture, generally with northerly aspect, on land lying between approximately 20m to 100m AOD, separated by shallow west-flowing valleys. Gradual transition to upland in east, so boundary of area is not clear-cut. Field boundaries consist of mix of stone walls (tend to be more with	M-H	M-H	M	M	Medium to High

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (From LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Visual Sensitivity				Visual Sensitivity
				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			elevation to east) and hedges in varied state of repair, with scattered clumps of woodland and plantation. Settlement mainly scattered farms, with few small villages. Visual detractors include electricity pylons, major north/south roads (A499, A487, and A5). Views to Snowdonia and across Menai Straits to Anglesey. Slight upland feel, particularly in eastern parts where stone walls dominate and views out are more extensive.					
	Mosaic Rolling Lowland	Penrhyn Park	Undulating parkland landscape dropping down to valleys to east and west, with views across Menai Straits. Penrhyn Castle prominent focal point attracting many visitors in summer. Main detractor is the well defined urban edge of Bangor.	M-H	M-H	M	H	Medium to High
	Flat Open Lowland Farmland	Wig	Northernmost coastal strip of flat farmland between busy, noisy A55 and quiet coast of Menai Straits. Mixed farmland with medium to large rectangular pasture fields with trim hedges. Only a few scattered farms and limited access except to two car parks on coast used for low-key recreation, bird watching and walking. Railway bisects the area lengthways and creates noise /movement as a minor detractor, together with the A55 along south-eastern boundary. Coastal views and sea air dominate, with views across Straits and to mountains	L-M	H	M-H	M	Medium to High

Landscape Character Area*	Landscape Type	LANDMAP Visual & Sensory Aspect Area	Summary Description (From LANDMAP Visual & Sensory Layer)	Factors Considered & their Contribution to Visual Sensitivity				Visual Sensitivity
				Presence of Visual Receptors	Screening Elements, Backdrops, Skylines	Mitigation Potential	Scenic Quality & Presence of Visual Detractors	
			giving great contrast in views. These add to the moderate overall sense of place in otherwise bland landscape. Its generally undeveloped character is important to conserve.					
Area within Snowdonia - LCA name TBC	Upland Grazing	Carneddau Uplands	Rough upland heath / grass / rocky outcrops / traversed by rough tracks & paths. Scattered scrub & trees, with some drystone walls. Impressive borrowed view to sea & Snowdon Massif. Overhead pylon corridor in northern area is major visual detractor.	L	H	H	H	High
	Hillside and Scarp Slopes Grazing	Abergwyngregyn	Coastal hills & valleys - strong borrowed view of coast / sea. Pleasant river environment of fields with conifer & broadleaf woodland.	L	H	H	H	High

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Appendix N:
Glossary

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Glossary term	Definition
Cable	An insulated conductor designed for underground electricity transmission or distribution.
Conductor	Wire strung between pylons, used for transmitting electricity.
Development Consent Order	Certain types of energy infrastructure fall within the categories of Nationally Significant Infrastructure Projects (NSIPs) which require a Development Consent Order (DCO) under the Planning Act 2008. Applications for DCOs are currently determined by Secretary of State for Energy and Climate Change.
Electricity Transmission Lines	Either an overhead line or an underground cable used to transmit electricity.
Holford Rules	The Holford Rules are a series of planning guidelines first developed in 1959 by Lord Holford, adviser to the then Central Electricity Generating Board (CEGB) on amenity issues. They were reviewed in the 1990s by National Grid (NG) and are still recognised as a set of guidelines used to inform the identification of potential routes for new overhead lines. The rules are primarily based on visual impacts and amenity values, but they also provide an important basis for the environmental assessment of power lines. They are also a key consideration set out in the National Policy Statement EN-5 against which the appropriateness of overhead electricity transmission lines will be judged.
LANDMAP	LANDMAP is a GIS (Geographical Information System) based landscape resource where landscape characteristics, qualities and influences on the Welsh landscape are recorded and evaluated into a nationally consistent data set. It identifies and explains the most important characteristics and qualities of the landscape - whether they are ordinary, but locally important landscapes, or nationally recognised spectacular landscapes.
Local Distribution Companies	Local distribution companies generally own and operate lines with a voltage of 132,000 volts and below and supply electricity to homes and businesses.
Local Impact Report	When a nationally significant infrastructure project is under consideration, the relevant Local Authorities are invited to prepare a Local Impact Report. These reports give details of the likely impact of the proposed development on the authority's area.
National Infrastructure Directorate	The National Infrastructure Directorate (NID) replaced the Infrastructure Planning Commission (IPC) in April 2012. Any applications for nationally significant infrastructure projects must now be submitted to the National Infrastructure Directorate of the Planning Inspectorate.

Glossary term	Definition
Nationally Significant Infrastructure Projects	Nationally Significant Infrastructure Projects are defined by The Planning Act 2008 and cover projects relating to: ▪ Energy (including generating stations, electric lines and pipelines); ▪ Transport (including trunk roads and motorways, airports, harbour facilities, railways and rail freight interchanges); ▪ Water (dams and reservoirs, and the transfer of water resources); ▪ Waste water treatment plants; and ▪ Hazardous waste facilities. In most cases these forms of project will only qualify as Nationally Significant if they satisfy a statutory threshold in terms of the scale or effect of the proposal.
National Grid	National Grid owns and maintains the high-voltage electricity transmission system in England and Wales, together with operating the system across Great Britain, balancing supply with demand on a minute by minute basis.
Natura 2000 Sites	Natura 2000 is a European Union wide network of nature protection areas established under the 1992 Habitats Directive. The aim of the network is to assure the long-term survival of Europe's most valuable and threatened species and habitats. It is comprised of Special Areas of Conservation (SAC) designated by Member States under the Habitats Directive, and also incorporates Special Protection Areas (SPAs) which they designate under the 1979 Birds Directive.
Ofgem	Ofgem is the Office of the Gas and Electricity Markets which regulates the electricity and gas markets in Great Britain.
Overhead Electricity Transmission Lines	In England and Wales there are 7,200 kilometres of overhead electricity transmission lines at 275 kV and 400 kV. Virtually all of these lines carry two separate circuits, one each side of the pylons, each with three wires or bundles of wires.
Permitted Development	National Grid is a statutory undertaker under the Town and Country Planning (General Permitted Development) Order 1995. Under this Order, National Grid has certain rights to carry out development without the need for planning permission from the local planning authority. This 'permitted development' relates primarily to development in existing substations, on operational land and to underground cables.

Glossary term	Definition
Pylon	An overhead line structure used to carry overhead electrical conductors, insulators and fittings. They are also known as pylons and are of a lattice steel construction. The three most typical types are: ▪ suspension pylons which support the conductors on straight stretches of line; ▪ deviation pylons at points where the route changes direction; and ▪ terminal pylons where lines terminate at substations or are connected to underground cables.
Ramsar	A designation covering all aspects of wetland conservation and wise use, recognising wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities.
Route Alignment	Once a broad route corridor is identified, detailed survey work is carried out to find the alignment of the transmission line which bests satisfies National Grids obligations and the needs of stakeholders. The alignment is refined to minimise any visual and other environmental impacts, in consultation with stakeholders and communities.
Route Corridor	A broad corridor within which a transmission route could be located. The corridor is derived from constraint mapping, desk based sensitivity assessment, site visits and discussions with stakeholders.
Sealing End Compounds	Where a high-voltage underground cable joins onto an overhead line, the transition from one to the other usually takes place at a "sealing end compound". The overhead line finishes on a terminal pylon. Downleads bring the conductors down to join on to where the ends of the underground cables come out of the ground.
SP Manweb	SP Manweb are the operators of the local distribution network in North Wales.
SPA	Special Protection Area - Gives protection under the Birds Directive to rare and vulnerable birds, and for regularly occurring migratory species.
SSSI	Site of Special Scientific Interest – Aims to protect the country's best wildlife and geological sites.
Study Area	The area within which it would be feasible to constrict the transmission line whilst taking into account the major topographical and infrastructure constraints.
Substations	Transforming or switching stations to control the voltage and direction of electricity. Transforming stations are used to increase the supply of electricity (to 275 kV or 400 kV) into the national grid system for transmission and to reduce the voltage to lower levels (to 132 kV) for distribution by the local distribution companies. Switching controls the direction of electricity and ensures fault protection.

Glossary term	Definition
Transmission Network	National Grid own and operate the electricity transmission network in England and Wales. This currently comprises approximately 7,200 kilometres of overhead line, about 690 kilometres of underground cable and 337 substations at 241 sites.
Underground Cables	In England and Wales there are 690 kilometres of underground electricity transmission cable. On the National Grid network there are two generic types of cable capable of operating at 275 kV and 400 kV – fluid filled cables and Cross Linked Polyethylene (XLPE).
Voltage	National Grid's transmission lines generally operate at 275,000 volts and 400,000 volts. Lower voltage lines, such as 132,000 volts and 33,000 volts are generally owned by local distribution companies.
Watt (W)	The SI unit of power: 1 kilowatt (kW) = 1,000 watts 1 megawatt (MW) = 1,000 kW 1 gigawatt (GW) = 1,000 MW

Appendix O:
Acronyms

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Acronym	Definition
ACHWS	Advisory Committee on Historic Wreck Sites
ALC	Agricultural Land Classification
AOD	Above Ordnance Datum
AONB	Area of Outstanding Natural Beauty
ASIDOHL	Assessment of the Significance of Impacts of Development on Historic Landscape
BAP	Biodiversity Action Plan
CCW	Countryside Council for Wales
CRoW	Countryside and Rights of Way Act 2000
DCLG	Department for Communities and Local Government
DCO	Development Consent Order
DIO	Defence Infrastructure Organisation
EA	Environment Agency
EAW	Environment Agency Wales
EIA	Environmental Impact Assessment
EIP	Energy Island Programme
GAT	Gwynedd Archaeological Trust
GIS	Geographic Information System
GPDO	Town and Country Planning (General Permitted Development) Order 1995
GW	Gigawatt
HC	Heritage Coast
HER	Historic Environment Record
HRA	Habitats Regulations Assessment
IBA	Important Bird Area
ICOMOS	International Council on Monuments and Sites
JLDP	Joint Local Development Plan
JPPU	Joint Planning Policy Unit
kV	Kilovolt
kW	Kilowatt
LB	Listed Building
LBAP	Local Biodiversity Action Plan
LCA	Landscape Character Area
LDP	Local Development Plan
LiDAR	Light Detection and Ranging
LNR	Local Nature Reserve
LPA	Local Planning Authority
MOD	Ministry of Defence
NCN	National Cycle Network
NERC	Natural Environment and Rural Communities Act 2006
NID	National Infrastructure Directorate
NNR	National Nature Reserve
NPS	National Policy Statement
NSIP	Nationally Significant Infrastructure Project
NT	National Trust

Acronym	Definition
NWWT	North Wales Wildlife Trust
OD	Ordnance Datum
OHL	Overhead Line
PRoW	Public Right of Way
RAF	Royal Air Force
RCAHMW	Royal Commission on the Ancient and Historical Monuments of Wales
RHPG	Register of Historic Parks and Gardens
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SM	Scheduled Monument
SOR	Strategic Optioneering Report
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
TAN	Technical Advice Note
UDP	Unitary Development Plan
UKBAP	UK Biodiversity Action Plan
UNESCO	United Nations Educational, Scientific and Cultural Organization
WCA	Wildlife and Countryside Act 1981
WG	Welsh Government
WHS	World Heritage Site
WO	Welsh Office

Appendix P:
Ecological Latin Names

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Common Name	Latin Name
Arctic tern	*Sterna paradisaea*
Atlantic grey seals	*Halichoerus grypus*
Atlantic salmon	*Salmo salar*
Atlantic salt meadows	*Glauco-Puccinellietalia maritimae*
Black guillemot	*Cepphus grille*
Cave spider	*Meta bourneti*
Chough	*Pyrrhocorax pyrrhocorax*
Common alder	*Alnus glutinosa*
Common frog	*Rana temporaria*
Common tern	*Sterna hirundo*
Cormorants	*Phalacrocorax carbo*
Creeping willow	*Salix repens ssp. Argentea (Salicion arenariae)*
Cross-leaved heath	*Erica tetralix*
Curlew	*Numenius arquata*
Davall's sedge	*Caricion davallianae*
Dwarf stonewort	*Nitella tenuissima*
Early sand grass	*Mibora minima*
Eider duck	*Somateria mollissima*
European ash	*Fraxinus excelsior*
Floating water plantain	*Luronium natans*
Flush mire	*Caricion bicoloris-atrofuscae*
Fulmar	*Fulmarus glacialis*
Golden samphire	*Inula crithmoides*
Great black-backed gull	*Larus marinus*
Great cormorant	*Phalacrocorax carbo*
Great crested grebes	*Podiceps cristatus*
Great crested newt	*Triturus cristatus.*
Guillemot	*Uria aalge*
Hard Fern	*Blechnum*
Hay scented buckler fern	*Dryopteris aemula*
Herring gull	*Larus argentatus*
Holly	*Ilex*
Juniper	*Juniperus communis*
Kestrel	*Falco tinnunculus*
Kittiwake	*Rissa tridactyla*
Lesser black backed gull	*Larus fuscus*
Linnet	*Carduelis cannabina*
Marram grass	*Ammophila arenaria*
Marsh fritillary	*Euphydryas aurinia*
Meadow saxifrage	*Saxifraga granulata*
Otter	*Lutra lutra*
Oystercatchers	*Haemtopus ostraleques*
Pale heath violet	*Viola lactea*

Common Name	Latin Name
Palmate newt	*Lissotriton helveticus*
Peregrine	*Falco peregrinus*
Petalwort	*Petalophyllum ralfsii*
Petrifying tufa formation	*Cratoneurion*
Puffin	*Fratercula arctica*
Purple moor-grass	*Molinion caeruleae*
Raven	*Corvus corax*
Razorbill	*Alca torda*
Rock sea-lavender subspecies celticum	*Limonium britannicum subsp. celticum*
Rock sea-lavender subspecies procerum	*Limonium procerum subsp. procerum*
Roseate tern	*Sterna dougallii*
Round-leaved wintergreen	*Pyrola rotundifolia*
Sandwich tern	*Sterna sandvicencis*
Saw-sedge	*Cladium mariscus*
Shag	*Phalacrocorax aristotelis*
Shore dock	*Rumex rupestris*
Shoreweed	*Littorelletea uniflorae*
Silver studded blue	*Plebejus argus*
Skylark	*Alauda arvensis*
Slender green feather-moss	*Drepanocladus (Hamatocaulis) vernicosus*
Snowdon lily	*Lloydia serotina*
South Stack fleawort	*Tephroseris integrifolia subsp. maritima*
Southern damselfly	*Coenagrion mercuriale*
Spotted rock-rose	*Tuberaria guttata*
Starwort	*Callitriche* spp
Stonechat	*Saxicola torquata*
Stonewart	*Chara spp*
Toad	*Bufo bufo*
Tunbridge filmy fern	*Hymenophyllum tunbrigense*
Variegated horsetail	*Equisetum variegatum*
Water vole	*Arvicola amphibius*
Water-crowfoot	*Ranunculus spp*
Water-crowfoot subgenus *fluitantis*	*Ranunculion fluitantis*
Wheatear	*Oenanthe oenanthe*
Whitethroat	*Sylvia communis*
Wilsons filmy fern	*Hymenophyllum wilsonii*
Yellowhammer	*Emberiza citrinella*

Appendix Q:
Referenced Legislation

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- Ancient Monuments and Archaeological Areas Act 1979;
- Civil Amenities Act 1967 (as amended);
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) 1973;
- Countryside and Rights of Way Act 2000 (CROW Act);
- Electricity Act 1989;
- Environment Act 1995;
- Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended;
- National Heritage Act 1983;
- Natural Environment and Rural Communities Act 2006 (NERC Act);
- Planning (Listed Buildings and Conservation Areas) Act 1990;
- Planning Act 2008;
- Protection of Wrecks Act 1973;
- The Conservation of Habitats and Species Regulations 2010;
- Town and Country Planning (Environmental Impact Assessment) Regulations 2010;
- Town and Country Planning (General Permitted Development) Order 1995 (GDPO);
- Town and Country Planning Act 1990; and
- Wildlife and Countryside Act 1981.

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