

# Wylfa Newydd Project Site Preparation and Clearance

## Environmental Statement Non-Technical Summary



APPLICATION November 2017

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# 1 Introduction

## 1.1 Background

- 1.1.1 Land adjacent to the Existing Power Station at Wylfa Head, west of Cemaes, on the north coast of Anglesey, is considered by the UK Government to be suitable for the construction of a new nuclear Power Station.
- 1.1.2 Horizon has submitted an application for planning permission to the Isle of Anglesey County Council (IACC) for a variety of Site Preparation and Clearance (SPC) works and activities to prepare the Wylfa Newydd Development Area for the construction of the Power station.
- 1.1.3 The planning application has been subject to an Environmental Impact Assessment (EIA) and the results of this are reported in the Environmental Statement that accompanies the application. This document provides a non-technical summary of the ES Statement produced in support of the planning application submitted to the IACC for the SPC Proposals. More information about the EIA can be found in the main Environmental Statement (Volume 1) itself.
- 1.1.4 The SPC Proposals include a range of activities to be carried out to enable the construction of the Power Station. The Power Station would consist of two UK Advanced Boiling Water Reactors, which would generate 2,700 megawatts of electricity, providing enough secure, low carbon power for around five million homes for approximately 60 years. It would also create long-term employment opportunities and economic benefits for Anglesey and north Wales. The construction of the Power Station and other development associated with it is referred to in this document and the Environmental Statement as the 'Wylfa Newydd Project'.
- 1.1.5 In order for Horizon to build the Power Station, a number of different consents are required. As a nuclear power station is a nationally significant infrastructure project, the project requires a Development Consent Order (DCO) and Horizon intends to submit an application for the DCO for the Wylfa Newydd Project in summer 2017.
- 1.1.6 The SPC Proposals are being applied for separately ahead of the DCO application to allow for the earliest possible start to the Wylfa Newydd Project, in line with government energy policy.

## 1.2 Consultation

- 1.2.1 This section summarises the consultation carried out by Horizon to date which is relevant to the SPC Proposals.
- 1.2.2 The Wylfa Newydd Project was widely consulted on in late 2014, during the summer of 2016 and during May/June 2017 as part of the pre-application processes required for the DCO application. There was little feedback that related to the SPC Proposals.

### ***Stakeholder consultation***

- 1.2.3 As the design of the SPC Proposals has developed, engagement has been undertaken with various organisations in order to obtain background data, information and records relevant to the SPC Application Site (explained below) and beyond. Key organisations consulted to date have included the IACC and Natural Resources Wales (NRW). The purpose of the consultation was to ensure agreement was reached on the technical assessments and how mitigation measures are incorporated into the final design of the SPC Proposals.

### ***Statutory consultation***

- 1.2.4 As the SPC Proposals meet the definition of 'major development' under the Town and Country Planning (Development Management Procedure) (Wales) Order 2012, there is a requirement to carry out pre-application consultation and publication in accordance with section 61Z of the Town and Country Planning Act 1990. This was undertaken over 28 days in August 2017.
- 1.2.5 Responses received during the August 2017 consultation period have been used by Horizon in finalising the planning application for the SPC Proposals. The consultation activities undertaken have been summarised in a Pre-Application Consultation Report accompanying the planning application. The report also summarises the responses received and how they have been taken into account.

## 2 Description of SPC Proposals

### 2.1 Introduction

2.1.1 This section describes the location and setting of the SPC Proposals, the works and activities comprising the SPC Proposals, and the timing of those works. It also describes the changes to the scope of the SPC Proposals from the earlier version and the alternatives to the SPC Proposals studied by Horizon.

### 2.2 SPC Application Site setting

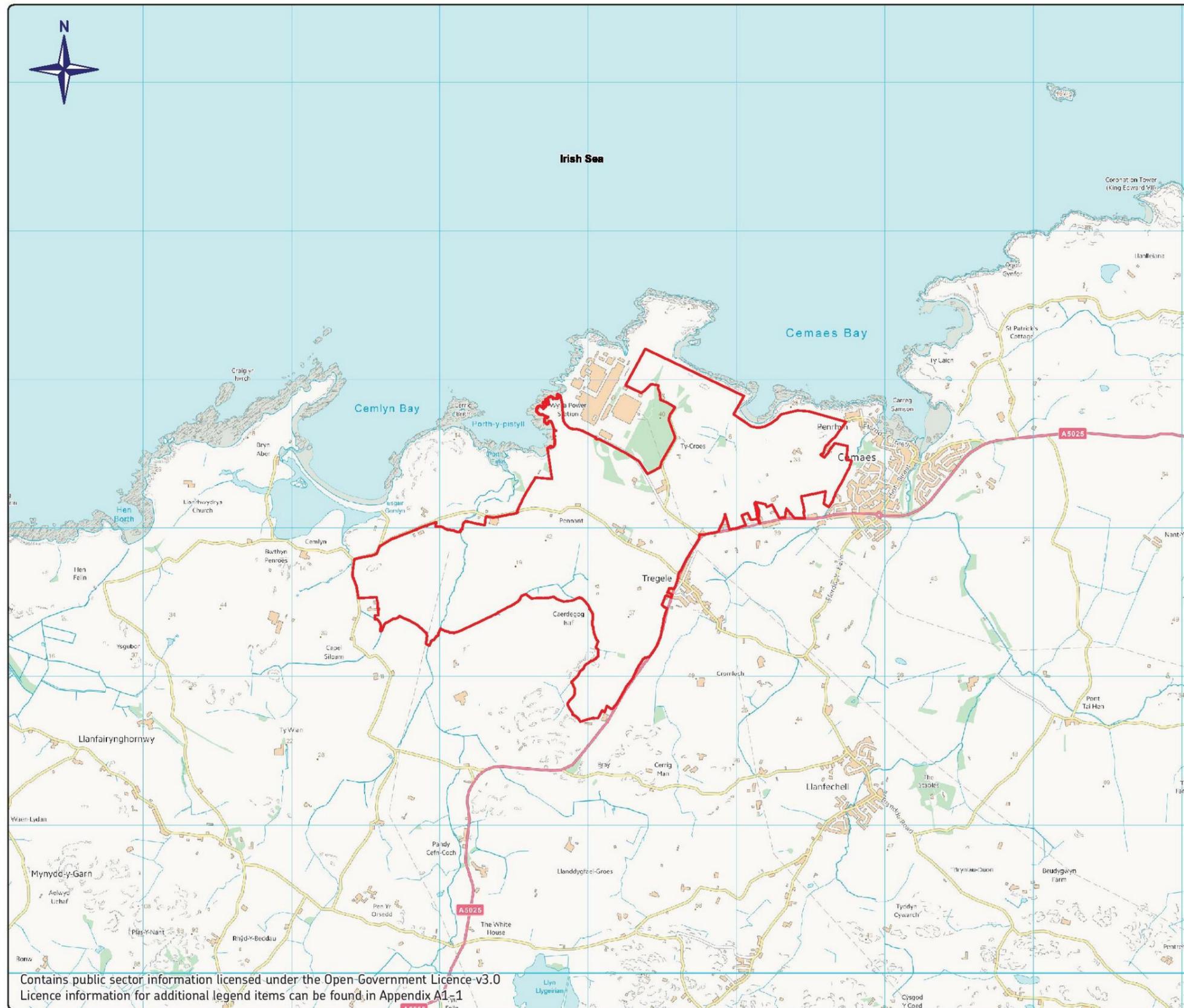
2.2.1 The 299 hectares (approximately 740 acres) of land to which the planning application for the SPC Proposals relates is shown on figure 1 (and referred to as the 'SPC Application Site'). It is located on the north coast of Anglesey and is bounded to the north by the Existing Power Station and in part by the Anglesey coastline. To the east, it is separated from the village of Cemaes by a narrow corridor of agricultural land. The A5025 and residential properties define part of the southeast boundary. To the south and west, the SPC Application Site is adjacent to agricultural land which includes small groups of residential dwellings and farmsteads.. To the west, it adjoins the coastal hinterland with Cemlyn Bay beyond.

2.2.2 This part of north Anglesey and the remainder of the Island are acknowledged as one of the Welsh-speaking heartlands in Wales and includes the second highest proportion of Welsh speakers throughout Wales. The Welsh language is a part of everyday life within Anglesey and this has been recognised, where appropriate, in the design of the SPC Proposals.

2.2.3 Land in the area is generally managed as grazing pasture, contained by hedgerows and crossed by a network of roads, rural lanes, watercourses and overhead power lines. Much of the land surrounding the SPC Application Site is designated as an Area of Outstanding Natural Beauty (AONB), parts of which coincide with sections of the North Anglesey Heritage Coast. The land immediately surrounding the Existing Power Station is not within the AONB. However, the land to the northeast of Cemaes and to the west of Cestyll Gardens lies within the AONB.

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Figure 1 The SPC Application Site



**KEY**

- Site Preparation and Clearance Application Site



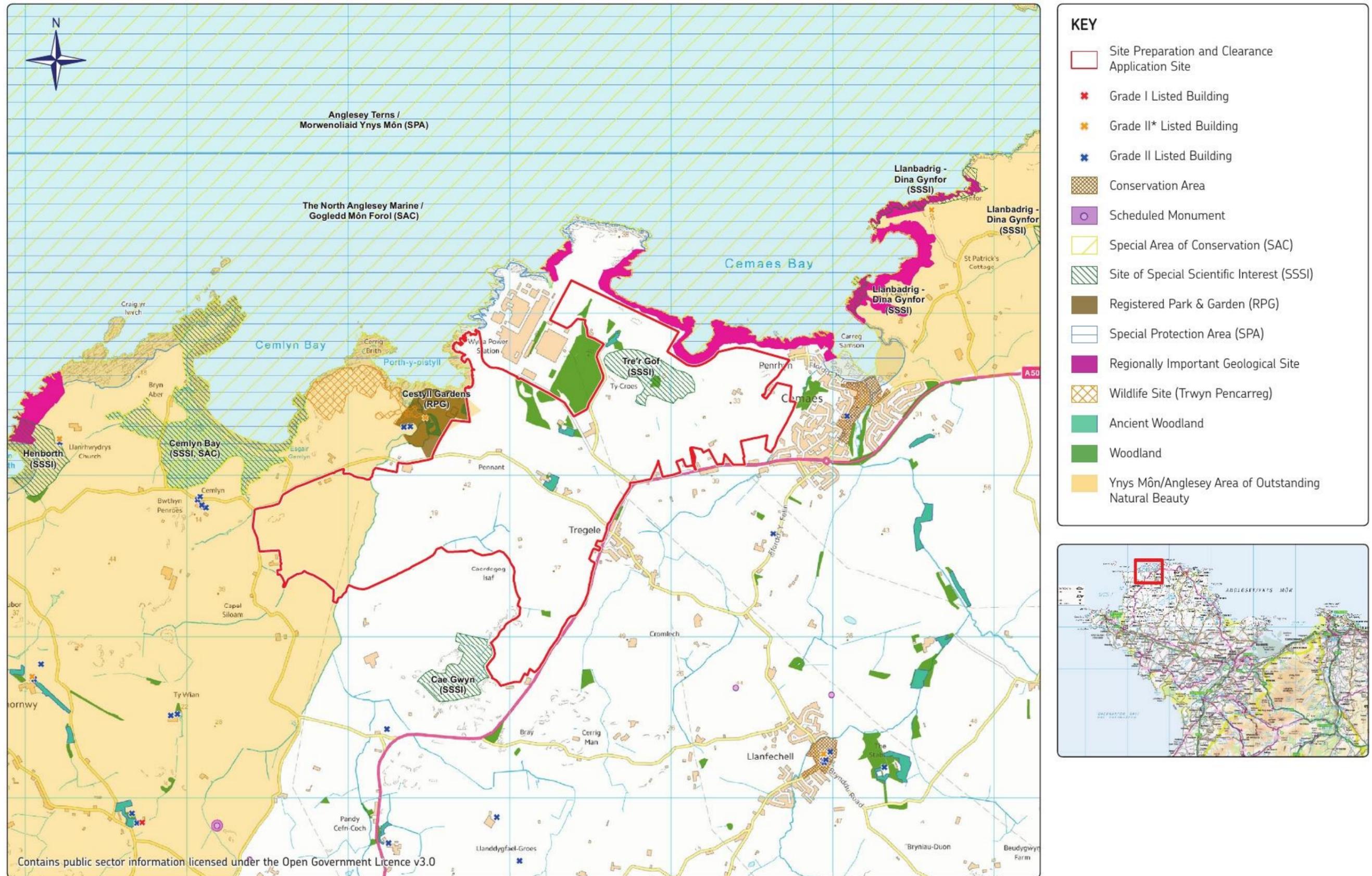
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- 2.2.4 There are a number of sites subject to ecological conservation designations (both statutory and non-statutory) of international, national and local importance on or near the SPC Application Site. These are shown on figure 2. The most notable of these are the Tre'r Gof and Cae Gwyn Sites of Special Scientific Interest (SSSIs), within and adjacent to the SPC Application Site, respectively, and Cemlyn Bay to the west, which forms part of the Ynys Feurig, Cemlyn Bay and The Skerries Special Protection Area (SPA) and the Cemlyn Bay Special Area of Conservation (SAC) and SSSI. A candidate SAC and potential SPA have also been proposed in the waters along the coast to the north of the SPC Application Site due to the presence of harbour porpoises and terns respectively.
- 2.2.5 A number of public rights of way, including the Wales Coast Path and the Copper Trail, are located within the SPC Application Site.
- 2.2.6 There are several buildings and other structures throughout the SPC Application Site including residential properties, agricultural and out buildings, the Existing Power Station Alternative Emergency Control Centre and District Survey Laboratory, the former Wylfa Sports and Social Club, gates and a variety of field boundaries.

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Figure 2 Environmental designations

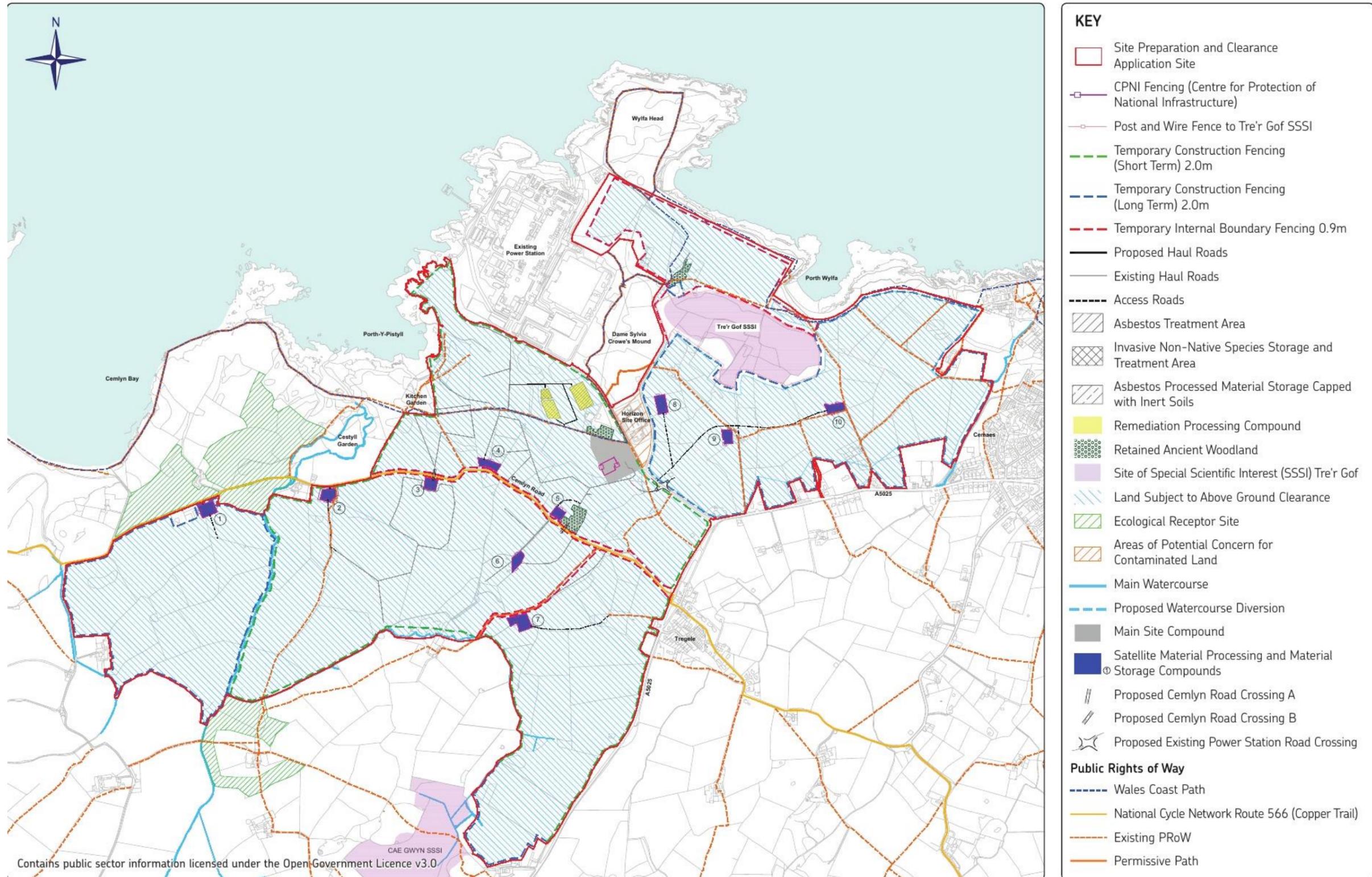


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## 2.3 The SPC Proposals

2.3.1 The SPC Proposals comprise a range of works and activities including the following as shown on figure 3.

Figure 3 The SPC Proposals



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### ***Site compounds***

- 2.3.2 The existing on-site compound, located just to the south of the former Wylfa Sports and Social Club, would be enlarged and upgraded to create the main site compound for the SPC works (shown on figure 3). This compound would be fenced and would contain:
- site-security facilities;
  - material handling and storage;
  - secure parking for plant and machinery;
  - a vehicle wheel-wash;
  - temporary offices;
  - toilet and mess facilities; and
  - fuel store and car parking.
- 2.3.3 In addition to the main site compound, there is a requirement for three satellite compounds and seven material compounds to be used for the secure storage of equipment and materials and materials processing. These are all shown on figure 3.

### ***Road crossings***

- 2.3.4 In order to enable safe access for Heavy Goods Vehicles, plant and other vehicles from the area of the main site compound to the northern section of the SPC Application Site, it is necessary to create a new vehicular crossing of the Existing Power Station access road. This crossing would be sign-posted (in both Welsh and English) to ensure safe passage of vehicles and pedestrians.
- 2.3.5 New fencing and gates would be installed at two existing crossings of Cemlyn Road to allow access from the north to south of the SPC Application Site.

### ***Fencing***

- 2.3.6 Temporary perimeter fencing up to 2m in height would be installed around the boundary of the SPC Application Site in order to demarcate defined areas or boundaries and constitute a barrier to prevent crossing of the boundary. The fence would be left incomplete at all roads and public rights of way so that these can continue to be used unimpeded during the SPC works and can then quickly be made secure in the event that additional works commence after the DCO is granted. Additional security fencing (up to 3m in height) would be installed around each of the site compounds where plant is being stored.

### ***Vegetation clearance***

- 2.3.7 Horizon would clear trees to approximately 300mm, hedgerows to between 300 and 900mm, and other vegetation to approximately 50 to 100mm above ground level across the SPC Application Site. This would include removal of some of the trees, shrubs and hedges which make up road and field boundaries throughout the SPC Application Site. This would be carried out carefully by both hand and machine to reduce disruption to sensitive habitats.

Where possible, some trees and shrubs would be retained around the boundary of the SPC Application Site to reduce landscape and visual effects associated with the SPC works. This is explained further in the landscape and visual subsection herein.

- 2.3.8 There are a variety of species within the SPC Application Site whose habitats would be lost or affected by the SPC Proposals. Some species, such as common lizards and water vole, would be trapped and translocated and some would be moved through directional clearance of vegetation (see the 'ecology' subsection at para. 4.9).

### ***Demolition***

- 2.3.9 Horizon would demolish 35 buildings and a number of other structures. These include the Existing Power Station Alternative Emergency Control Centre and District Survey Laboratory as well as a number of empty dwellings and related structures, such as the former Wylfa Sports and Social Club. Other more general site clearance activities would include the removal of walls, gates and field boundaries. Demolition would be undertaken to ground level only and foundations and anything below ground would be left in place following the SPC works. The materials resulting from these demolition works would be re-used (with treatment or processing where required) or removed to an appropriate waste management facility.

### ***Watercourse realignment***

- 2.3.10 A 350 metre section of a small watercourse, the Nant Porth-y-pistyll located to the north of Caerdegog Isaf, would be realigned to form a new channel, due south of the existing watercourse. The works would comprise:
- establishment of water vole fencing to ensure vole protection;
  - vegetation identified for retention would be protected from damage and vegetation identified for removal would be cleared;
  - excavation/stripping of topsoil from the proposed channel realignment route;
  - realigned watercourse excavated and allowed to establish vegetation cover before flows are diverted;
  - construction of upstream and downstream sections;
  - laying of a pipe to allow drainage from the north to continue; and
  - backfilling of the redundant watercourse with clean uncontaminated material as dug from excavation on-site.

### ***Soil remediation***

- 2.3.11 Localised areas of chemical and asbestos-contaminated soils have been identified within the SPC Application Site. Horizon would establish an on-site Remediation Processing Compound (shown on figure 3) to deal with these soils. Any areas of soils identified as, or suspected of being, contaminated would be excavated, tested and where possible treated using specialist mobile plant for on-site re-use. If determined to be unsuitable for re-use, the soils

would be sent for off-site treatment or disposal at an appropriately licensed facility.

### ***Invasive non-native plant species***

2.3.12 The SPC Application Site also contains a number of locations where invasive non-native plant species (e.g. Japanese knotweed) have been identified. These plants and the surrounding soil would be removed by a specialist contractor and the majority treated in an on-site Remediation Processing Compound. Where this is not possible the material would be removed for off-site disposal at an appropriately licensed facility.

### ***Public rights of Way***

2.3.13 There would be times, due to health and safety requirements, when construction activities result in the need for short-term temporary marshalling of the public rights of way within the SPC Application Site. Where necessary, marshals would ensure the safe use of footpaths.

### ***Hours of working***

2.3.14 The workforce would work in a single shift pattern to align with the proposed working hours:

- from 07:00 to 19:00 on weekdays; and
- from 08:00 to 13:00 on Saturdays.

2.3.15 There would be no working outside of these hours or on public holidays, unless previously agreed in writing with the IACC.

## **2.4 Programme**

2.4.1 The SPC works would start as soon as possible, once Horizon had been granted planning permission. The SPC works are expected to last for around 15 months in total, as shown on figure 4. It is anticipated that the later stages of the SPC works could overlap with the very early stages of construction of the Power Station.

**Figure 4 Indicative SPC programme**

ACTIVITY SUMMARY	Works by month post commencement																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Main Site Compound	■	■															
Perimeter Fence	■	■	■	■	■	■	■	■	■								
Site Clearance incl. Translocation	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
Watercourse Realignment	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Material & Satellite Compounds		■	■	■	■	■	■	■									
Road Crossings			■	■													
Contaminated Land Remediation			■	■	■	■	■										

## **2.5 Restoration**

- 2.5.1 The purpose of the SPC Proposals is to create an area suitable to construct the Power Station. If the DCO is not granted or the Wylfa Newydd Project does not proceed for any reason, the SPC works would cease immediately and a phased programme for the restoration of the SPC Application Site would be undertaken. This would include the removal of any temporary structures, construction and compound fencing and the Remediation Processing Compound and the restoration of field boundaries, landscape planting and other works designed to return the site to a state resembling its former condition.
- 2.5.2 The landscaping restoration scheme would be designed to improve both the landscape character and biodiversity of the area and allow a productive agricultural after-use. Demolished buildings would not be reinstated. If the watercourse realignment works have been substantially completed by the time a decision not to proceed is taken, the watercourse would be left in its realigned state to provide habitat improvements.

## **2.6 Alternatives and design evolution**

- 2.6.1 The EIA process requires the applicant to show how it has considered alternatives to the proposed development. The general location of the Wylfa Newydd Project has been determined by national policy for nuclear power generation that included the consideration of alternative sites. Horizon has not, therefore, considered alternative locations in the Environmental Statement.
- 2.6.2 The alternative of not submitting this application and including the SPC Works with the DCO submission has the potential to increase the overall construction period by 12 to 18 months, and therefore the benefits of undertaking the SPC works early would be delayed and/or lost. In addition, if permission for SPC works is delayed until after the DCO is awarded, the works programme would have to be accelerated and the greater intensity of work could exacerbate effects from traffic, noise and vibration and dust.
- 2.6.3 The SPC Proposals have been informed by consideration of the iterative nature of the EIA process and consultation with stakeholders. These processes have helped inform alternative layouts, activities and designs to reduce and/or eliminate, where practicable, potentially significant environmental effects.
- 2.6.4 Horizon examined a number of potential alternatives for specific activities and the likely environmental effects of those alternatives. For example, Horizon looked at different types of perimeter fencing; extending the main site compound rather than establishing satellite compounds; different ways of managing contaminated soils; and an alternative watercourse alignment. These and the other alternatives studied by Horizon are explained in more detail in table 4-1 of chapter 4 (Alternatives and design evolution) of the Environmental Statement.

## 3 Environmental Impact Assessment

### 3.1 The process of EIA

- 3.1.1 Horizon is undertaking EIA to ensure that likely significant environmental and social effects of the SPC Proposals are fully understood and properly taken into account when the planning application for the SPC Proposals is determined.
- 3.1.2 EIA is a process that allows the identification, assessment and evaluation of the likely significant environmental effects of a project and how they might be reduced or avoided (mitigation). This process involves the following steps, which are underpinned by stakeholder consultation:
- screening – determining whether EIA is required;
  - scoping – identifying which environmental issues should be considered in the EIA;
  - environmental assessment – the process of identifying the likely significant environmental and social effects;
  - reporting;
  - decision making; and
  - mitigation and monitoring.
- 3.1.3 EIA is a process of assessment and design revision to progressively develop an environmentally and socially acceptable project. Assessments have been made using a range of techniques including surveys, computer modelling and professional judgement.
- 3.1.4 In addition to the Environmental Statement, the planning application for the SPC Proposals is accompanied by a number of other supporting documents including:
- **Rapid Health Impact Assessment Screening Statement:** a study to understand the potential for significant effects of the SPC Proposals on the health and well-being of local communities and the construction workforce. The study concludes that the changes introduced by the SPC Proposals would be unlikely to have significant effects on population health.
  - **Welsh Language Impact Assessment:** Horizon recognises the importance of the Welsh language and culture and has undertaken an assessment to consider the effects of the SPC Proposals on Welsh-speaking communities, as well as the Welsh language, culture and traditions. The assessment concludes that the effects of the SPC works are primarily either beneficial or neutral, with only two overall significant adverse effects (associated with noise and historic Welsh culture) identified. Mitigation for these effects is discussed in the noise and vibration and cultural heritage chapters of the Environmental Statement.

The Welsh Language Impact Assessment is available in Welsh and English.

- **Flood Consequences Assessment:** Horizon has undertaken a study to understand how the SPC Proposals would affect flood risk in the local area. This concludes that there is a low flood risk from all sources to the SPC Application Site.
- **Code of Construction Practice:** This document sets out the general and specific standards and measures to ensure the effective planning, management and control of all construction activities.
- **Report to Inform Habitats Regulations Assessment:** In accordance with the Habitats Directive, Horizon has undertaken an assessment to understand the potential for significant effects on designated European sites and their features. This concludes that there would be no likely significant effects on European wildlife sites due to the SPC Proposals.

3.1.5 These documents have been prepared in coordination with the Environmental Statement and are referred to when appropriate, but their results are not presented in this non-technical summary.

## 4 Overview of potential effects

### 4.1 Introduction

4.1.1 This non-technical summary of the Environmental Statement summarises the potential effects determined from the assessment process and identifies the main mitigation measures proposed. Any further information required on methodology, study areas, details of assessments, their results and the mitigation identified to address them, can be found in the relevant chapters of the Environmental Statement.

### 4.2 Socio-economics

4.2.1 The assessment of the likely effects on employment, business supply chain, tourism, land use and consequences for human populations of the SPC Proposals has not identified any significant effects.

4.2.2 Horizon anticipates a maximum of 80 construction workers to be engaged on the SPC Application Site. The employment assessment has concluded that the jobs associated with the SPC works would not be new to the local employment market, but would safeguard opportunities for local people (i.e. those living within a 90 minute daily commuting time). As this is a small number relative to construction jobs within this area, the assessment concluded that there are no significant effects on total employment.

4.2.3 The local spend from the SPC works is expected to be negligible when set in the context of the economy of the area, suggesting that the overall effect on the economy within north Wales as a consequence of the SPC Proposals is not significant.

4.2.4 The potential effects on tourism businesses, including both attractions and accommodation, was considered. Access to the only tourist attraction located within the SPC Application Site, the Wales Coast Path, would be maintained throughout the works, and as a result, significant effects on tourism are not anticipated.

4.2.5 The SPC works have the potential to provide opportunities for businesses, associated with increased wages and economic growth, however, these effects would not be significant.

4.2.6 As no significant adverse socio-economic effects have been identified, no mitigation measures are required.

### 4.3 Public access and recreation

4.3.1 The assessment of the likely effects on public access and recreation of the SPC Proposals has identified that, with mitigation, there would be no potential significant effects.

4.3.2 Horizon has considered the need to maintain access to footpaths, the national cycle network and other recreation features such as Wylfa Head and local beaches during the SPC works.

- 4.3.3 Studies and surveys were undertaken to establish the current levels of use, importance and condition of these facilities. Horizon has therefore also consulted with key stakeholders, specialist consultees in Wales and the public, in order to better understand the issues associated with the footpaths and other networks in the area.
- 4.3.4 The activities that might result in potentially significant effects on public access and recreation are:
- establishment of short and long-term construction fencing around the site perimeter and localised construction and ecology fencing within the perimeter fence;
  - removal of internal field boundaries;
  - temporary closure of Cemlyn Road;
  - asbestos treatment; and
  - vegetation clearance and removal.
- 4.3.5 The following measures would be implemented to ensure that the effects of the SPC works on public access and recreation are not significant:
- keeping public rights of way open with occasional use of marshals to ensure that people can pass by working areas safely;
  - good practice construction methods to limit noise, visual impacts and control dust, such as effective plant and vehicle maintenance, screening and sheeting or dampening of stockpiles, to help to avoid a reduction in amenity to users of footpaths, cycle routes, Wylfa Head and beaches; and
  - the duration of the temporary closures of Cemlyn Road, which would require the diversion of the Copper Trail, would be kept to a minimum and clear signposts explaining the diversion along Nanner Road would be provided in both Welsh and English.

## 4.4 Air quality

- 4.4.1 The assessment of the potential effects of the SPC Proposals on air quality has determined that, with the implementation of good practice measures, the potential dust, emissions and odour effects at human receptors would not be significant.
- 4.4.2 The term 'air quality' refers to pollution in the air, from sources such as emissions from construction plant and machinery, vehicle exhausts, and dust generated from construction and restoration activities, which can affect plants, animals and their habitats, and human health. The assessment also includes potential releases of odorous substances during remediation and earthwork activities.
- 4.4.3 The key features that could experience the greatest potential effects from the SPC works include:

- properties, schools and workplaces within or close to Tregle and Cemaes, as well as the A5025 between these two settlements;
  - isolated properties generally to the south, southwest and west of the SPC Application Site;
  - the Existing Power Station, where workers are anticipated to be present during decommissioning activities;
  - users of public rights of way or recreational areas which are close to or within the SPC Application Site; and
  - sensitive ecological sites and species, such as nationally designated sites like the Tre'r Gof SSSI, within 2km of the SPC Application Site.
- 4.4.4 Horizon's Dust and Air Quality Strategy, as set out in the CoCP, creates the requirements by which Horizon will manage and control dust and air quality emissions.
- 4.4.5 The measures that would be used to control of emissions, odour and dust include, but are not limited to:
- locating dusty activities as far as practicable from nearby receptors;
  - damping down stockpiles of dusty material; and
  - avoidance of idling engines.

## **4.5 Noise and vibration**

- 4.5.1 Following the implementation of the mitigation measures only one residential property, which Horizon currently owns, would be significantly affected.
- 4.5.2 The assessment of the effects of noise and vibration from the SPC Proposals on local communities and the environment has identified only a single potentially significant effect, relating to increased noise and vibration from plant and machinery working in close proximity to residential properties when undertaking site clearance, installation of fences, building demolitions and stone processing.
- 4.5.3 Noise is often described as 'unwanted sound', whereas vibration is usually felt as a physical movement of the ground or a building. Noise and vibration can cause disturbance and affect the quality of life enjoyed by individuals and communities and can affect other environmental interests such as wildlife and historic buildings.
- 4.5.4 Horizon has identified that the following could be affected:
- residential properties within Tregle, Cemaes and along the A5025 between these settlements;
  - isolated properties generally to the south, west and east of the study area;
  - Cemaes Primary School, St David's Roman Catholic Church, Bethesda Methodist Church, Eglwys Sant Padrig Church and the village hall in Cemaes;

- users of recreational areas including public rights of way, users of local playing fields, School Lane Football Ground, marine leisure activities, Isle of Anglesey AONB and Cestyll Garden;
- Ynys Feurig, Cemlyn Bay and The Skerries SPA (designated due to breeding birds), bat roosts and habitats where water voles and otters are located;
- the Existing Power Station, National Grid transformers and underground statutory services; and
- offices, retail and other buildings.

4.5.5 In addition to adopting standard good practice control measures for noise and vibration, such as appropriate site layout (positioning noisy activities away from sensitive features where possible), using low noise and vibration plant and equipment, and scheduling works to only take place during normal day-time working hours, a number of additional measures would be adopted which would further reduce the effects so that they are not significant:

- no vibrating rollers to be used within 62m of occupied residential receptors, or within 20m of public rights of way unless further vibration risk assessments confirm alternative restricted working distances; and
- designing the works programme to reduce the duration of noise generating activities in proximity to residential properties and the offices of the Existing Power Station.

## 4.6 Soils and geology

4.6.1 The assessment of the potential effects of the SPC Proposals on soils and geology concluded that the only significant effect would be beneficial, related to the remediation of existing ground contamination.

4.6.2 The following features that could be affected have been identified within the study area through surveys, ground investigations and desk-top studies:

- soil quality – very good to very poor quality agricultural soils;
- people (construction workers, future site users, maintenance workers and adjacent land users), groundwater and surface water, and property (buildings, grazing livestock and crops) could be exposed to existing ground contamination;
- sites of geological importance – Regionally Important Geodiversity Sites; and
- geological resources – locally or regionally important aggregate (minerals) reserves.

4.6.3 Horizon would implement the following measures to prevent any significant effects on soils and geology as a result of the SPC works:

- characterisation in detail of existing contamination risks and techniques to deal effectively with contamination;

- pollution prevention strategies, as part of the Code of Construction Practice, to prevent any accidental leaks or spills during the works;
  - management of all materials to ensure that they are re-used as far as possible on the site;
  - a contamination watching brief during certain elements of the SPC works to ensure any unexpected contamination is identified and addressed as soon as possible and setting out clear procedures for dealing with any unexpected contamination encountered.
- 4.6.4 Following the implementation of these measures the only remaining effects would be:
- a minor adverse effect on soil quality due to site clearance works, which cannot be avoided, but is not significant;
  - minor adverse effects on the health of construction workers due to their potential exposure to unexpected contamination, although this is considered unlikely to occur and would not be significant; and
  - Significant beneficial effects relating to treatment of contaminated soils.

## **4.7 Conventional waste and materials management**

- 4.7.1 The assessment of the effects of the use of materials and generation of waste associated with the SPC Proposals identified that there will be no significant effects.
- 4.7.2 The aspects of the SPC works that could give rise to effects comprise:
- the removal of trees, hedges and other vegetation;
  - the demolition of buildings and walls and other above-ground features, and the excavation of asbestos materials;
  - the removal of contaminated soils containing hydrocarbons; and
  - the treatment and/or removal of Japanese knotweed and other invasive non-native species.
- 4.7.3 These would produce a range of waste and materials including inert, non-hazardous and hazardous wastes. Some of these would require specialist management and treatment and/or disposal off-site. Where waste is required to be disposed of off-site this has been assessed as being a small percentage of the local available capacity.
- 4.7.4 All waste and materials arising from the SPC works would be managed in a responsible manner, with measures in place aiming to maximise the re-use of materials on-site where possible. This would have the benefit of reducing the volume of material that would need to be removed from the SPC Application Site.

## 4.8 Surface water and groundwater

4.8.1 The assessment of effects on the freshwater environment, including surface water (rivers, ponds, wetlands and drains) and groundwater (water held within rocks or soil below the earth's surface), as a result of the SPC Proposals concluded that none of the potential effects would be significant.

4.8.2 The potential for the SPC works to affect surface water and groundwater has been considered in terms of the following:

- water quality changes (including sediment inputs, spills of oil and other polluting materials);
- local changes in the ability of rainfall to enter the ground, potentially increasing stream flow and altering flood risk;
- changes in stream flow characteristics associated with the realignment of Nant Caerdegog Isaf;
- fine sediment entrained in runoff affecting the geomorphology of the watercourses, altering deposition and erosion regimes;
- demolition works affecting the stability of the banks of watercourses; and
- localised changes to groundwater recharge rates and groundwater levels due to the removal of vegetation.

4.8.3 In order to reduce and avoid adverse effects, certain measures have been included in the design. These include:

- the avoidance of works within the boundaries of Tre'r Gof or Cae Gwyn SSSIs;
- targeted remediation of known contaminated land;
- the surfacing of the main compound with hardstanding, with drainage routed through an oil/water interceptor;
- where possible, a 15m buffer (in which no works would take place) set from both banks of Afon Cafnan, Nant Caerdegog Isaf, Nant Cemlyn and Tre'r Gof SSSI drains within which only limited and agreed activities will take place;
- engineered containment in the fuel storage area;
- no discharges of foul sewage to surface watercourses;
- implementation of pollution prevention measures, emergency response procedures and sediment management (in accordance with the Code of Construction Practice);
- realignment of the watercourse using techniques to control sediment release;
- incorporation of flood water storage into the design of the watercourse realignment; and

- the installation of drainage channels around the asbestos treatment area of the Remediation Processing Compound for collection of runoff; where the quality is suitable, it would be used to dampen soil or would be allowed to discharge to ground and where it is not suitable the water would be tankered for off-site disposal.
- 4.8.4 With the implementation of these measures, the only remaining effect, whilst only of minor importance, would be the beneficial restoration of a more natural river form as a result of the realignment of the Nant Caerdegog Isaf.

## 4.9 Terrestrial and freshwater ecology

- 4.9.1 The assessment of the effects of the SPC Proposals on terrestrial (land) and freshwater ecology, comprising designated sites, habitats and species of nature conservation importance, indicates that there would be significant effects relating to habitat being lost, fragmented or changed.
- 4.9.2 The SPC works would involve loss, fragmentation or modification to the existing short-mown grassland, resulting in adverse effects on land-based habitats, breeding birds and over-wintering and passage birds. These changes will also affect common toad, bats, red squirrel and other notable mammals, although the effects would not be significant.
- 4.9.3 Measures which would be taken to reduce and avoid effects include:
- the use of an ecological clerk of works to oversee activities and ensure requirements and measures are implemented;
  - the use of buffer zones around sensitive features such as watercourses and designated sites;
  - the location of site compounds away from noise-sensitive areas;
  - the design of the watercourse realignment to include improvements for habitats;
  - the transfer of species from affected areas to suitable safer ones;
  - the replacement of lost habitats where possible;
  - implementation of a Code of Construction Practice, including pollution prevention measures;
  - obtaining relevant European protected species mitigation and conservation licences;
  - no night working would take place during SPC works (unless agreed in writing with the IACC) to avoid disturbance of nocturnal species;
  - limiting lighting at compounds to the dawn and dusk period at the start and end of the working day;
  - timing of works to avoid sensitive periods such as when animals are breeding, nesting, hibernating or migrating;

- the systematic clearance of the site from northeast to southwest to encourage movement of species into off-site enhancement areas (providing suitable habitats for species such as common toad, notable mammals, adder, common lizard, birds and bats) rather than towards Cemaes and the A5025; and
  - building artificial dreys and feeding stations for red squirrels, and supplying food during the SPC works.
- 4.9.4 With the inclusion of these measures, significant adverse effects resulting from the following would be avoided:
- direct injury;
  - mortality;
  - disturbance caused by changes to noise, vibration, visual and light stimuli;
  - poor air or water quality; and
  - introduction and spread of invasive species.

## 4.10 Marine environment

- 4.10.1 The assessment of the effects of the SPC Proposals on the marine environment, which considers potential effects on designated conservation sites, seabirds and seals, determined that there are no significant effects on the marine environment. The assessment took into account the findings of other assessments such as surface water and groundwater and terrestrial and freshwater ecology.
- 4.10.2 There is the potential for some effects to occur due to noise and vibration from SPC works (such as demolition and clearance, establishment of compounds, lighting and fencing, stone crushing, and materials management), and visual disturbance from people and machinery moving around the SPC Application Site.
- 4.10.3 Key features that would be affected by the SPC works include:
- sites of conservation importance, including the coastal lagoon habitat and breeding bird assemblage of Cemlyn Bay SAC and SSSI; tern breeding areas of Ynys Feurig, Cemlyn Bay and The Skerries SPA/Anglesey Terns SPA; and the North Anglesey Marine/Gogledd Môn Forol candidate SAC for harbour porpoise;
  - grey seals, including consideration of potential seal haul-out locations and pupping sites; and
  - seabirds, particularly those with conservation designations, such as Arctic tern, common tern, roseate tern and Sandwich tern, which have been identified in the study area; consideration has also been given to the black-headed gulls that breed within Cemlyn lagoon.

4.10.4 Measures have been proposed to avoid or reduce these effects so that they would not be significant. Such measures include:

- avoidance of night time working, unless agreed with the IACC in advance;
- where required, lighting would be carefully planned to reduce effects on identified receptors;
- pollution prevention practices, such as careful management of hazardous substances emergency response procedures, and measures; and
- measures identified in other assessments such as the noise and vibration and surface water and groundwater would also be applicable.

## 4.11 Landscape and visual

4.11.1 The assessment of the potential effects of the SPC Proposals has determined that, even with the implementation of mitigation measures, there would be some significant effects on both landscape character and visual effects (views and general amenity).

4.11.2 There would be a significant erosion of landscape character due to the removal of field boundary walls and hedgerows (and therefore farming field patterns), trees, shrubs and buildings. The introduction of fencing, bare soils during excavation, and construction elements on-site would also lessen the rural nature of the landscape.

4.11.3 The plant and machinery and other construction elements on-site such as compounds and fencing would temporarily but significantly affect local people's views. The removal of vegetation and field boundaries would also have a significant effect on the landscape. The effects on views would be limited to those people within 1km of the SPC Application site.

4.11.4 The main people who would be affected by the SPC works include:

- walkers using the Wales Coast Path;
- users of other public rights of way (mainly walkers) and open access land;
- cyclists using the Copper Trail/National Cycle Network Route 566 (local users and tourists);
- users of the A5025 approaching from the south-west (mainly vehicle travellers);
- users of the local road network (mainly vehicle travellers, but with limited numbers of cyclists and pedestrians);
- viewers on the western edge of Tregele;
- visitors to specific viewpoints, including the William Thomas monument on Mynydd y Garn; and
- offshore water-based users close to the SPC Application Site (such as canoeists).

4.11.5 In order to reduce or avoid landscape and visual effects, the following measures would be implemented:

- existing field boundaries and trees on-site, but outside the construction fencing, ancient woodland and vegetation near the watercourse diversion, would be retained;
- landscaping, including planting of native species, around the realignment of the Nant Porth-y-pistyll watercourse;
- use of two storey temporary offices in the Main Site Compound and single storey for the other site compounds;
- use of lighting limited at compounds to the dawn and dusk period at the start and end of the working day designed to ensure minimum spillage;
- fencing height and colour;
- timing woodland clearance around the remediation processing compound so that the woodland would provide screening whilst the area is in use;
- enhancement of the existing field boundaries retained on-site but outside the perimeter construction fence, through planting and maintenance, to improve their current condition where practicable;
- limiting the height of material stockpiles in order to reduce their visual effect; and
- implementation of a landscape management strategy for retained/proposed landscape features within the SPC Application Site during SPC works, including a programme of management of retained trees and hedgerows and the control of weed growth.

## 4.12 Cultural heritage

- 4.12.1 The assessment of the potential effects of the SPC Proposals on cultural heritage has concluded that, with the implementation of mitigation measures to record heritage assets and landscapes, the effects would not be significant.
- 4.12.2 The term 'cultural heritage' refers to heritage assets such as archaeological remains, historic buildings and the historic landscape. Such features can be affected either physically or by changes in their setting.
- 4.12.3 The key features that would experience the greatest effect from the SPC works include:
- historic buildings that would be removed as part of the works;
  - archaeological remains that would be partially or completely removed;
  - historic landscape features such as field boundaries and vegetation that would be removed; and
  - heritage assets whose setting contribute to their value and would be subject to physical changes, and noise and visual intrusion from machinery.

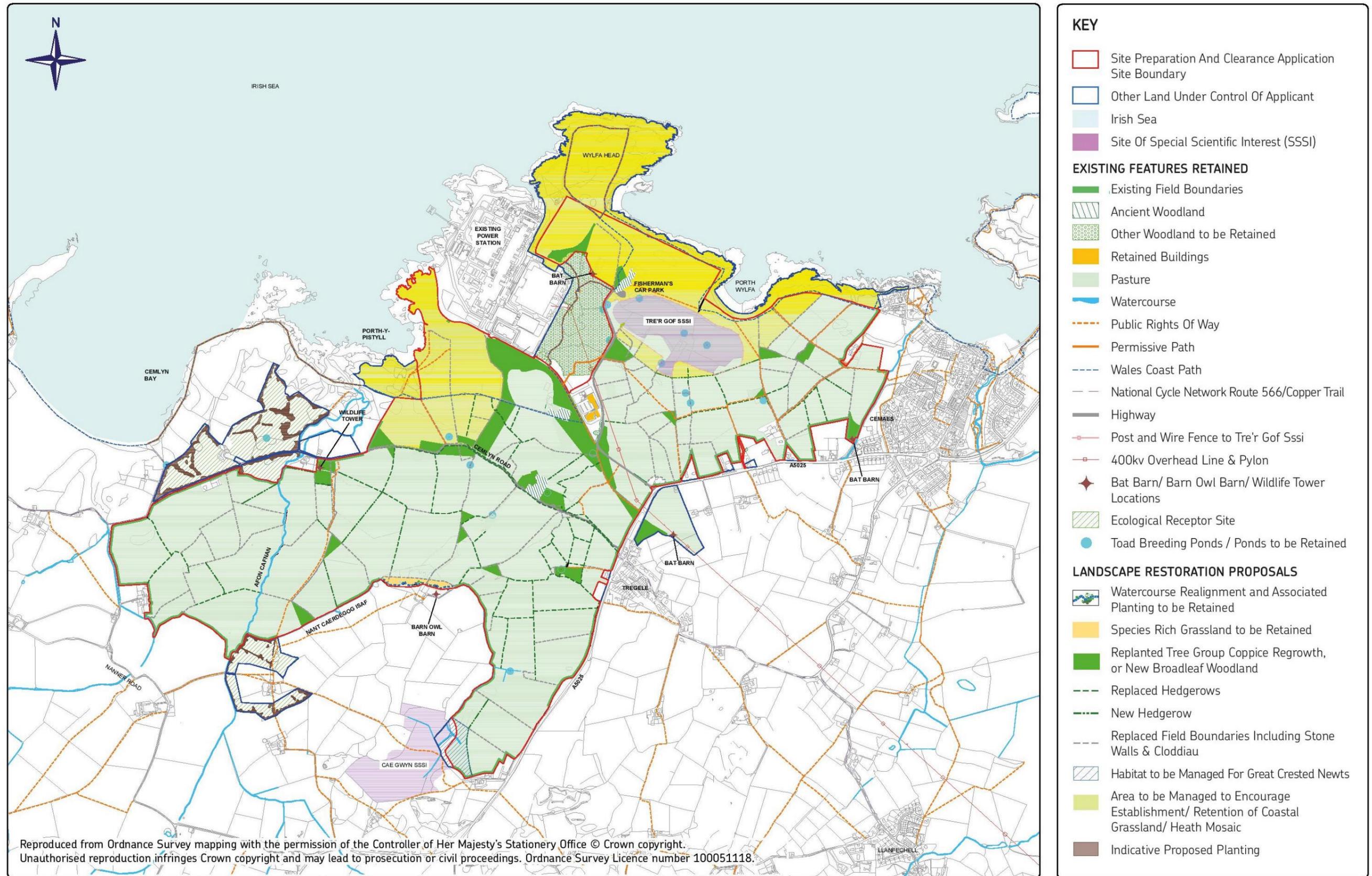
4.12.4 The measures that would be implemented to reduce adverse effects on archaeological remains, historic buildings and historic landscapes so that they would not be significant include:

- avoiding works within the boundary of Tre'r Gof SSSI, to avoid effects on any archaeological remains or historical environmental remains that may be present in the SSSI;
- limiting the height of material stockpiles in order to reduce their visual effect;
- archaeological watching briefs (expert monitoring of excavation to identify and record any remains found);
- photographic and earthwork surveys; and
- permanent recording and photographic surveys of historic buildings and historic landscapes in their current form and setting.

## 5 Restoration

- 5.1.1 In the event that the DCO is not granted or the Wylfa Newydd Project does not proceed, a scheme of restoration would be implemented to return the SPC Application Site to an agreed condition. The restoration works themselves would take approximately 12 months to complete, followed by an agreed aftercare period to ensure suitable landscape maintenance.
- 5.1.2 The potential restoration scheme has been designed to extend the opportunities for nature conservation that are typically associated with the coastline from Cemlyn Bay to Cemaes, with most of the remaining land being retained as farmland. and the largely pastoral characteristics of the remaining land. Figure 5 illustrates the Landscape Restoration Principles.
- 5.1.3 The works required to restore the SPC Application Site would include:
- removal and restoration of temporary infrastructure such as fencing, compounds and road crossings;
  - landscape reinstatement including planting and provision of field boundaries; and
  - re-use or removal of material.
- 5.1.4 Demolished buildings would not be rebuilt and the realigned watercourse would not be restored to its original state. It is not considered practical to rebuild demolished structures and the works to the watercourse will bring about habitat improvements, with no beneficial effects arising from restoring it to its original route. Whilst remediation of known contamination hotspots would have taken place during SPC works, it is possible that further remediation activities would be required to make the SPC Application Site suitable for its intended use.
- 5.1.5 With the implementation of mitigation, there is considered to be no residual significant effects associated with restoration of the SPC Application Site.

Figure 5 Landscape Restoration Principles



**KEY**

- Site Preparation And Clearance Application Site Boundary
- Other Land Under Control Of Applicant
- Irish Sea
- Site Of Special Scientific Interest (SSSI)

**EXISTING FEATURES RETAINED**

- Existing Field Boundaries
- Ancient Woodland
- Other Woodland to be Retained
- Retained Buildings
- Pasture
- Watercourse
- Public Rights Of Way
- Permissive Path
- Wales Coast Path
- National Cycle Network Route 566/Copper Trail
- Highway
- Post and Wire Fence to Tre'r Gof SSSI
- 400kv Overhead Line & Pylon
- ◆ Bat Barn/ Barn Owl Barn/ Wildlife Tower Locations
- Ecological Receptor Site
- Toad Breeding Ponds / Ponds to be Retained

**LANDSCAPE RESTORATION PROPOSALS**

- Watercourse Realignment and Associated Planting to be Retained
- Species Rich Grassland to be Retained
- Replanted Tree Group Coppice Regrowth, or New Broadleaf Woodland
- Replaced Hedgerows
- New Hedgerow
- Replaced Field Boundaries Including Stone Walls & Cloddiau
- Habitat to be Managed For Great Crested Newts
- Area to be Managed to Encourage Establishment/ Retention of Coastal Grassland/ Heath Mosaic
- Indicative Proposed Planting

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## 6 Summary of cumulative effects

### 6.1 Introduction

6.1.1 The assessment of cumulative effects is a complex area. Cumulative effects can arise at a number of different levels and in a number of ways. The key terms used in this section to describe those effects are:

- **Intra-development effects:** when a single receptor is affected by more than one impact from the same development, usually at the same time. These effects are often also termed 'in-combination' effects because they arise where effects from the same development combine (for example, noise, air and visual effect from the SPC Proposals all affecting the same residential property).
- **Intra-project cumulative effects:** when a single receptor is affected by impacts from different developments (in the same project) at the same time. For example, noise from SPC works and light from A5025 highway construction could combine to have an effect on a single population of bats feeding in the area.
- **Inter-project cumulative effects:** when a single receptor is affected by more than one project at the same time. For example, noise from construction activities associated with utilities diversions within the SPC Application Site (undertaken under different projects) and noise from the SPC Proposals themselves could combine to have a cumulative effect on local residents.

### 6.2 Summary of effects

#### *Intra-development*

6.2.1 Some of the activities associated with the SPC Proposals have the potential to act in combination and so give rise to potential intra-development cumulative effects.

6.2.2 Professional judgement has been used to identify any such in-combination cumulative effect and assess their significance. Such effects have been described qualitatively because there is no accepted guidance or methodology for the assessment of their significance.

6.2.3 Potentially significant intra-development effects have been identified arising from effects on visual amenity, landscape character, users of public rights of way, Cemlyn Bay and the local community (the western edge of Cemaes and the north-west edge of Tregelle) resulting primarily from noise effects acting in combination with the visual impact of site operations and machinery.

#### *Intra-project*

6.2.4 The SPC Proposals are enabling works for the Wylfa Newydd Project. Mitigation of intra-project cumulative effects will primarily be achieved through

measures to reduce the effects of the construction of the Wylfa Newydd Project and would be subject to controls established through the DCO.

- 6.2.5 Cumulative effects would be experienced by many of the environmental receptors identified in the Environmental Statement as a result of the construction of the Power Station and to a lesser extent its associated development such as the construction of a site campus for construction workers.
- 6.2.6 Significant cumulative effects identified comprise reduction in amenity due to noise and dust on the Wales Coast Path; adverse landscape and visual effects on receptors such as the visitors to the AONB and North Anglesey Heritage Coast, users of the Wales Coast Path, the Copper Trail, the A5025 and other local roads and public right of way, and communities of Cemaes Treglele and Llanfairynghornwy; and removal of historic landscape elements and visual and noise intrusion on Cestyll Garden.

### ***Inter-project***

- 6.2.7 From an initial list of 52 different projects, 20 projects which could, with reasonable certainty, overlap geographically and temporally with the SPC Proposals, were short-listed. Of these, the only ones that are considered to have the potential to act together with the SPC Proposals to produce significant adverse effects are the decommissioning of the Existing Power Station, the National Grid North Wales Connection project and various utilities removal and diversion activities within the SPC Application Site.
- 6.2.8 The effects would be increased noise and vibration at residential dwellings and the Existing Power Station; a reduction in visual amenity at the Isle of Anglesey AONB, the non-designated wider landscape, the North Anglesey Heritage Coast, and for users of the Wales Coast Path, local public rights of way and the Copper Trail; erosion of the local landscape and seascape character; effects on local views from the communities of Cemaes and Treglele; and the removal of historic landscape elements.

## **6.3 Mitigation**

- 6.3.1 It is considered that the mitigation identified in each topic chapter will adequately address any identified cumulative effects. Therefore no specific requirements for further mitigation, above that already proposed in the Environmental Statement, have been identified. Measures to mitigate effects on local visual amenity, landscape and seascape character, and historic features are discussed in more detail in the relevant chapters of the Environmental Statement.

## 7 Conclusion

- 7.1.1 The assessments undertaken as part of the EIA have confirmed that a number of significant effects would occur as a result of the SPC Proposals.
- 7.8.2 A number of additional mitigation measures, as well as good practice mitigation and mitigation already incorporated into the design of the SPC works, would avoid, reduce and mitigate potential adverse environmental effects as far as reasonably practicable.
- 7.8.3 Following the implementation of the mitigation measures, the following residual effects would remain:
- noise affecting a single residential property close to the SPC Application Site, that is currently owned by Horizon;
  - habitat loss, fragmentation and modification;
  - erosion of landscape character and loss of local and site landscape features within the Isle of Anglesey AONB, Local Landscape Character Areas and Heritage Coast and the non-designated wider landscape;
  - introduction of features into the landscape which would detract from its predominantly rural nature; and
  - visual effects along public rights of way, local road networks, offshore areas and from residences within Cemaes and Treglele.
- 7.8.4 The short timescale of the SPC Proposals, and their relative lack of overlap spatially and temporally with other projects, means that there is limited scope for cumulative effects. Those that have been identified are similar in nature and scope as described in the above paragraph.
- 7.8.5 There would be no permanent effects of the SPC works due to their temporary nature. Effects of the Wylfa Newydd Project once the SPC Proposals have been completed will be reported in the Environmental Statement that accompanies the application for development consent. In the event that the DCO is not granted or the Wylfa Newydd Project does not proceed for any reason, a scheme of restoration would be implemented to return the SPC Application Site to an agreed condition.
- 7.8.6 The SPC Proposals would be undertaken in accordance with the approach described and the mitigation measures identified in the Code of Construction Practice.

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