HORIZON NUCLEAR POWER

WYLFA NEWYDD

ENERGY WORKING FOR BRITAIN

Wylfa Newydd Project

6.4.41 ES Volume D - WNDA Development App D9-8 - National Vegetation Classification Technical Summary Report

PINS Reference Number: EN010007

Application Reference Number: 6.4.41

June 2018

Revision 1.0

Regulation Number: 5(2)(a)

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

Horizon Internal DCRM Number: WN0902-JAC-PAC-APP-00143

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Wylfa Newydd

Horizon Nuclear Power (Wylfa) Ltd

Technical Summary Report - National Vegetation Classification

60PO8032/TER/REP-001 | 1

WN034-JAC-PAC-REP-00003

Document history and status

Revision	Date	Description	By	Review	Approved
		NVC Technical Summary	Laura Gore	Dave Jones	
1	16/12/15	Minor edits following proof read	Suzanne Jenkins	Jonathan Jackson	Rob Bromley

Distribution of copies

Revision	Issue approved	Date issued	Issued to	Comments

Wylfa Newydd

Project no:	60PO8032
Document title:	Technical Summary Report - National Vegetation Classification
Document No.:	60PO8032/TER/REP-001
Revision:	1
Date:	December 2015
Client name:	Horizon Nuclear Power (Wylfa) Ltd
Client no:	WN034-JAC-PAC-REP-00003
Project manager:	Robert Bromley
Author:	Laura Gore
File name:	\\SOUFIL01\Projects\$PROJECTS\$B1496000 Wylfa Marine Services\6. Reports\Jacobs 2015 Technical Summary Reports\60PO8032 Wylfa NVC Summary Report 2015 LG JJ DM dj check_after proof read.docx

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Contents

Executive Summary

Horizon Nuclear Power Wylfa Ltd. (Horizon) is currently planning to develop a new nuclear power station on Anglesey (the Wylfa Newydd Generating Station) as identified in the National Policy Statement for Nuclear Power Generation (EN-6). The Wylfa Newydd Project (the Project) will require a number of applications to be made under different legislation to different regulators. Jacobs UK Ltd (Jacobs) was commissioned to collect baseline data to inform the various applications, assessments and permits that will be submitted for approval to construct and operate the Wylfa Newydd Generating Station.

This report provides a technical summary of the data collected on selected sites of semi-natural habitat identified as having potential nature conservation, especially botanical, interest within the Wylfa Newydd Development Area and from sites within a 500m buffer zone around its boundary (referred to as the study area). These sites were identified during the Phase 1 habitat surveys undertaken in 2009 and 2013 and following feedback from consultation on the Project. The results of all secondary botanical surveys to National Vegetation Classification (NVC) level are provided in this report.

Field surveys took place in 2010, 2012 and each year between 2013 and 2015. Twenty-four sites were surveyed in total with some overlap of boundaries in coastal areas, around Wylfa Head and Trwyn Pencarreg. It is considered that the coverage of these surveys is sufficient to determine the botanical value and sensitivity of all areas of botanical interest within the study area.

No legally protected vascular plant species as listed on Schedule 5 of The Conservation of Habitats and Species Regulations 2010 (as amended) were recorded. Bluebell was recorded and is listed on Schedule 8 of the Wildlife and Countryside Act 1981 (as amended).

No plant species of principal importance as listed according to the requirements of Section 42 of the Natural Environment and Rural Communities (NERC) Act 2006 were recorded. A number of vascular plant species listed in a variety of Local Biodiversity Action Plans from the North Wales region were identified during the surveys, but only marsh fern is specifically referred to in the Anglesey plan. However, several uncommon vascular plant species were found, including adder's-tongue, allseed, chaffweed, heath pearlwort, lesser water plantain, petty whin, sea kale, spring squill, tufted sedge species and yellow bartsia.

The surveys to determine the presence and abundance of perennial vegetation of stony banks also recorded the presence and abundance of sea kale, a notable species of local significance. This was recorded in Porth-y-pistyll and Cemlyn Bay and is a key species of interest for the determination of the relative value of vegetated shingle within the study area. Surveys showed that the abundance was significantly greater at Cemlyn Bay than Porth-y-pistyll, potentially identifying that habitats in the latter site are of much lower quality.

Only native plant species were identified in areas surveyed using the NVC methodology, indicating that areas of potentially greater botanical interest were generally maintained by low impact management regimes and not regularly disturbed.

The majority of vegetation communities identified were reasonably common and widespread in the north and west of the UK. The exceptions were:

- M5 *Carex rostrata – Sphagnum squarrosum* and M9 *Carex rostrata – Calliergon cuspidatum/giganteum* mire communities at Cae Gwyn Site of Special Scientific Interest (SSSI);
- S2 *Cladium mariscus* swamp and sedge-beds at Tre'r Gof SSSI; and
- SD1 *Rumex crispus – Glaucium flavum* shingle community and MC6 *Atriplex prostrate – Beta vulgaris* ssp. *maritima* sea-bird cliff community at Porth-y-pistyll and Cemlyn Bay.

These NVC vegetation types are of conservation importance, as identified by Rodwell (2006), and are fragmented with limited distribution across the study area. The majority of these areas of habitat were located outside of the Wylfa Newydd Development Area, and were within designated sites for nature conservation.

The M5 *Carex rostrata – Sphagnum squarrosum* and M9 *Carex rostrata – Calliergon cuspidatum/giganteum* mire communities were located within Cae Gwyn SSSI, and are both of high value and are legally protected.

The S2 *Cladium mariscus* swamp and sedge-beds were located in Tre'r Gof SSSI, and, therefore, are both of high value and are legally protected. This NVC classification translates into a habitat type listed under Annex 1 of the European Community Directive of the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC) (JNCC, 2007) (the Habitat Regulations). Under the Habitats Regulations, the S2 habitat type translates to H7210 Calcareous fens with *Cladium mariscus* and species of *Caricon davallianae*. However, there are not considered to be any European designated sites selected for the presence of this habitat type that would be affected by the Project.

The SD1 *Rumex crispus – Glaucium flavum* shingle community and MC6 *Atriplex prostrate – Beta vulgaris* ssp. *maritima* sea-bird cliff community similarly translates to an Annex 1 habitat type under the Habitat Regulations. These translate to the H1220 Perennial vegetation of stony banks, and is present at the Cemlyn Bay Special Area of Conservation (SAC), but is not a primary reason for section. However, because it is within the Cemlyn Bay SAC it is legally protected.

Surveys also found small areas of shingle banks in Porth-y-pistyll with habitats that fit the same description as H1220, albeit lacking several key indicator species. These areas were small in extent and so are of limited value in the wider context of the study area and the local area. Porth-y-pistyll is also geographically separated from Cemlyn Lagoon by a distance of approximately 1.2km overland, and the Trwyn Pencarreg headland and Cerrig Brith rocks prevent connectivity of habitats along the coast. It was considered that the separation, geography and the prevailing westerly winds make it unlikely that there are any interactions between the habitats at Porth-y-pistyll that could affect the ecological integrity of the Cemlyn Bay SAC.

The NVC survey results are also interpreted in this report to determine if there are any habitats of principal importance for conservation as listed under the requirements in Section 42 of the NERC Act 2006. As such, seven habitat types were identified within the study area comprising lowland grassland, lowland heaths, lowland fens, purple moor grass and rush pastures, wet woodland, maritime cliffs and slopes, and coastal vegetated shingle (see SD1 *Rumex crispus – Glaucium flavum* shingle community and MC6 *Atriplex prostrate – Beta vulgaris* ssp. *maritima* sea-bird cliff community).

1. Introduction

This report provides a summary of the data collected on semi-natural habitats of potential botanical and conservation interest to National Vegetation Classification (NVC) level at specified sites within the Wylfa Newydd Development Area and from sites within a 500m buffer zone around its boundary.

1.1 Overview

Horizon Nuclear Power Wylfa Ltd. (Horizon) is currently planning to develop a new nuclear power station on Anglesey as identified in the National Policy Statement for Nuclear Power Generation (EN-6). The Wylfa Newydd Project (the Project) comprises the proposed new nuclear power station (the Wylfa Newydd Generating Station), including the reactors, associated plant and ancillary structures and features, together with all of the development needed to support its delivery, such as highway improvements, worker accommodation and specialist training facilities. The Project will require a number of applications to be made under different legislation to different regulators. As a nationally significant infrastructure project under the Planning Act 2008, the construction and operation must be authorised by a development consent order.

Jacobs UK Ltd (Jacobs) was commissioned by Horizon to undertake a full ecological survey programme within the vicinity of the Power Station Site. This work has included the gathering of baseline data to inform the various applications, assessments and permits that will be submitted for approval to construct and operate the Power Station and Associated Development.

1.2 Wylfa Newydd Project

The Project includes the Wylfa Newydd Generating Station and Associated Development[1]. The Wylfa Newydd Generating Station includes two UK Advanced Boiling Water Reactors to be supplied by Hitachi-GE Nuclear Energy Ltd, associated plant and ancillary structures and features. In addition to the reactors, development on the Power Station Site (the indicative area of land and sea within which the majority of the permanent Wylfa Newydd Generating Station buildings, plant and structures would be situated) will include steam turbines, control and service buildings, operational plant, radioactive waste storage buildings, ancillary structures, offices and coastal developments. The coastal developments will include a Cooling Water System (CWS) and breakwater, and a Marine Off-Loading Facility (MOLF).

1.3 Site Description

The Wylfa Newydd Development Area (the indicative areas of land and sea, including the Power Station Site, the Wylfa NPS[2] Site and the surrounding areas that would be used for the construction and operation of the Wylfa Newydd Generating Station) covers an area of approximately 380ha. It is bounded to the north by the coast and the existing Magnox power station (the Existing Power Station). To the east, it is separated from Cemaes by a narrow corridor of agricultural land. The A5025 and residential properties define part of the south-east boundary, with a small parcel of land spanning the road to the north-east of Tregele. To the south and west, the Wylfa Newydd Development Area abuts agricultural land, and, to the west, it adjoins the coastal hinterland.

The Wylfa Newydd Development Area includes the headland south of Mynydd-y-Wylfa candidate Wildlife Site. There is one designated site for nature conservation within the Wylfa Newydd Development Area: the Tre'r Gof SSSI. It is also within 1km of the Cae Gwyn SSSI, Cemlyn Bay SAC and SSSI, and the Ynys Feurig, the Skerries and Cemlyn Bay Special Protection Area (SPA).

[1] Development needed to support delivery of the Wylfa Newydd Generating Station is referred to as Associated Development. This includes highway improvements along the A5025, park and ride facilities for construction workers, Logistics Centre, Temporary Workers' Accommodation, specialist training facilities, Horizon's Visitor Centre and media briefing facilities.

[2] The site identified on Anglesey by the National Policy Statement for Energy EN-6/NPS EN-6 as potentially suitable for the deployment of a new nuclear power station.

Tre'r Gof is a small basin mire adjacent to the Existing Power Station, west of Cemaes. The area receives mineral-enriched waters from the surrounding boulder clay leading to the development of notable flora. The botanical interest provides the reason for the designation of the site as an SSSI.

Cae Gwyn SSSI is located immediately to the south of the site to the west of Llanfechell. The site comprises two wetland areas separated by an outcrop of rock with heathland vegetation. The southern wetland is confined by a rock basin and is dominated by bogmoss (*Sphagnum* spp.) and a wide variety of common wetland herbs. The northern wetland has a different flora containing denser areas of willow (*Salix* spp.) and common reed (*Phragmites communis*).

1.4 Aims and Objectives

The purpose of this technical summary report is to provide a single resource regarding all NVC field survey data and background data available for the semi-natural habitats of potentially greater botanical and conservation interest present within the study area. This will then be used to inform the various applications, assessments and permits required for development of the Wylfa Newydd Generating Station.

This includes supporting the Ecological Chapter of the Environmental Impact Assessment (EIA) and Habitats Regulation Assessments (HRAs). For HRA elements, the need for surveys of habitats in the study area potentially similar to those nearby that are designating features of European protected sites was also required. Specifically, this included a survey to establish the extent of any habitats with similarities to those present in Cemlyn Bay SAC. This would determine if there were any pathways for interaction between habitats that would be affected within the study area, which could be deleterious to the selection features present. Specific surveys for the Annex I[3] habitat type H1220 perennial vegetation of stony banks were therefore undertaken in 2015.

1.5 Summary of Work to Date

Vegetation surveys of selected sites within the study area have taken place in 2010 and 2012 by Arup ecologists and then by Jacobs ecologists in 2013, 2014 and 2015. The surveyed sites during this time have been allocated a number with the location of each shown in Figure 1.1 and Figure 1.2.

The 2010 surveys were carried out in grassland habitats at five sites (Arup, 2010):

- Site 1 – An area south-west of Magnox Visitor Centre;
- Site 2 – An area of coastal grassland south of Porth-y-pistyll;
- Site 3 – Wylfa Head South;
- Site 4 – Cliff-top vegetation east of Porth-y-Wylfa; and
- Site 5 – An area south-west of the Existing Power Station.

The Arup 2012 surveys comprised 145 quadrats at two sites (Arup, 2012):

- Site 6 – Trwyn Pencarreg and Felin Gafnan; and
- Site 7 – Wylfa Head, Ty Croes, north of Tre'r Gof SSSI and Porth-y-Wylfa to Penrhyn.

The locations of the Jacobs surveys were determined by the findings from the Phase 1 habitat survey completed in 2013 (Jacobs, 2013a). The survey sites were:

- Site 8 – Tre'r Gof SSSI;
- Site 9 – Cae Gwyn SSSI;
- Site 10 – Wylfa Head West; and
- Site 11 – Trwyn Pencarreg.

[3] EC Habitats Directive (92/43/EEC)

The 2014 survey locations were also identified during the Phase 1 habitat survey completed in 2013 (Jacobs, 2013a). These were:

- Site 12 – Mynydd Ithel (three fields); and
- Site 13 – Groes-fechan heathland.

The 2015 survey sites (Jacobs, 2015) were selected following feedback on the Preliminary Environmental Information Report as part of the Pre-application Consultation for the Project. Specifically, Natural Resources Wales (NRW) and the Isle of Anglesey County Council (IACC) raised concerns that areas of vegetation similar to those present at Cemlyn Bay were present in the study area and could be affected by the Project. Primarily, the vegetation type of interest that could be present is H1220 perennial vegetation of stony banks. This is an Annex I habitat present at Cemlyn Bay SAC as a qualifying feature, although not a primary reason for the site's designation. Concerns were also raised regarding the distribution of sea kale (*Crambe maritima*) in the study area because of the importance of the presence of the species when classifying vegetation types on shingle banks. Furthermore, NRW and the IACC did not consider that the level of detail on the communities present on Wylfa Head was acceptable. This included determination of the presence of coastal heath on Wylfa Head, a habitat that is a characteristic feature of the Wylfa Head candidate Wildlife Site.

The following locations were therefore surveyed to provide a finer level of detail in habitats that could support the community and species mentioned previously:

- Sites 14a-14c – Cemlyn Bay to Cerrig Brith;
- Site 15 – Cerrig Brith;
- Sites 16a-16e – Porth-y-Felin;
- Sites 17a-17g – Porth-y-pistyll;
- Sites 18a-18b – West of Existing Power Station;
- Sites 19a-19b – Wylfa Head Coast;
- Site 20 – Porth yr Ogof;
- Site 21 – Porth yr Ogof to Porth-y-Wylfa;
- Site 22 – Porth-y-Wylfa;
- Site 23 – Porth-y-Wylfa to Penrhyn; and
- Site 24 – Wylfa Head East[4].

1.6 Legal Status

Protection of plant species at the European level in Great Britain is covered by The Conservation of Habitats and Species Regulations 2010 (as amended), with nine wild plant species listed on Schedule 5.

The legislative provisions in Great Britain for the protection of wild plants are contained primarily in Section 13 of the Wildlife and Countryside Act 1981 (as amended) with protected wild plants listed on Schedule 8. These pieces of legislation make it an offence to intentionally pick, uproot or destroy specific species.

Section 42 of the NERC Act 2006 lists the habitats and species of principal importance for conservation in Wales. Although not specifically legally protected, these habitats and species are material considerations in planning applications. There are 77 species of vascular plants included on Section 42.

[4] Wylfa Head was surveyed in 2013 (Jacobs, 2013a). The habitats across Wylfa Head East have historically been very varied as shown in previous surveys by Arup (2012) and Jacobs (2013a), and this variety of habitats reduces the efficacy of NVC as a survey methodology. As such, 10 additional quadrats were surveyed in 2015.

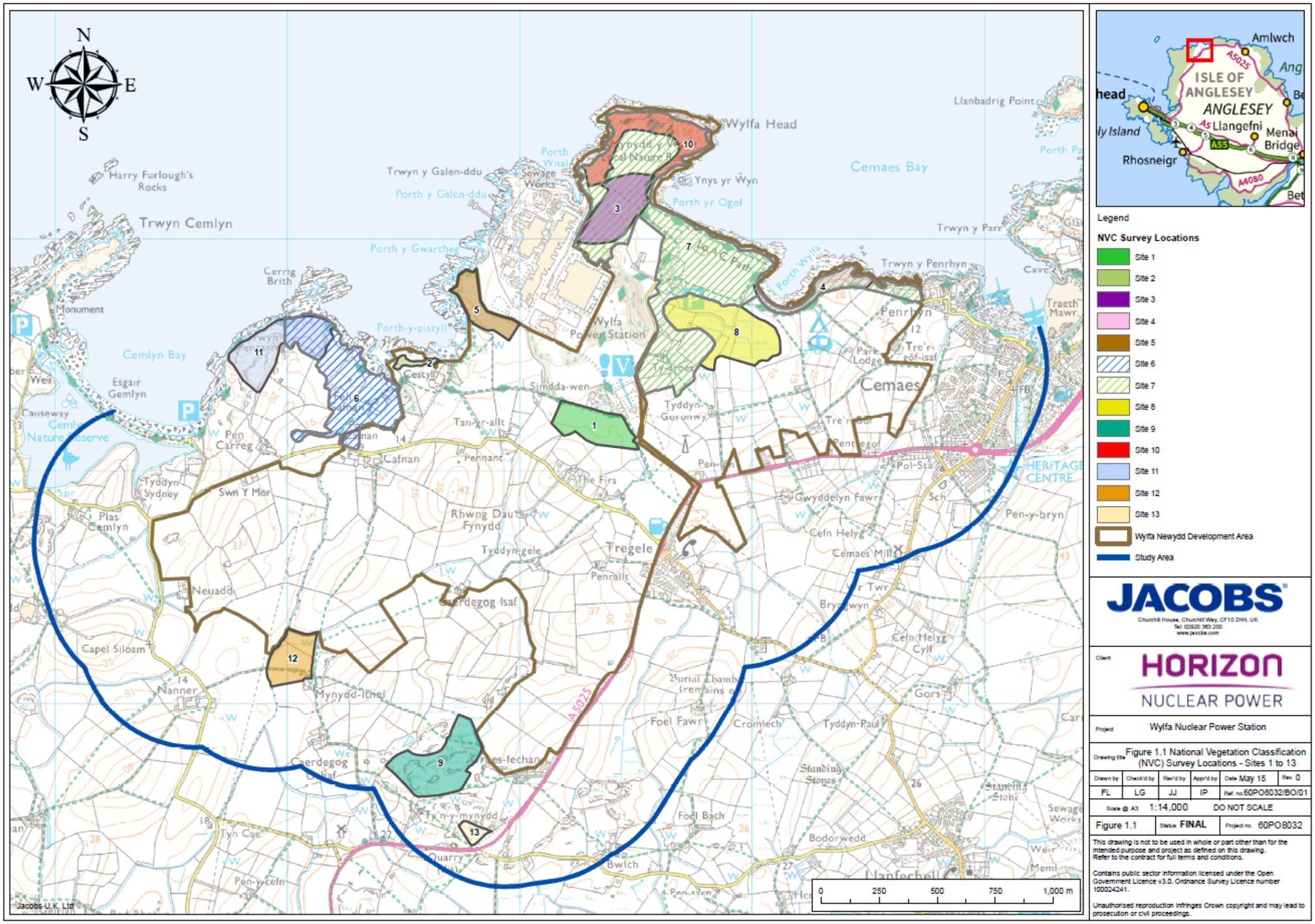
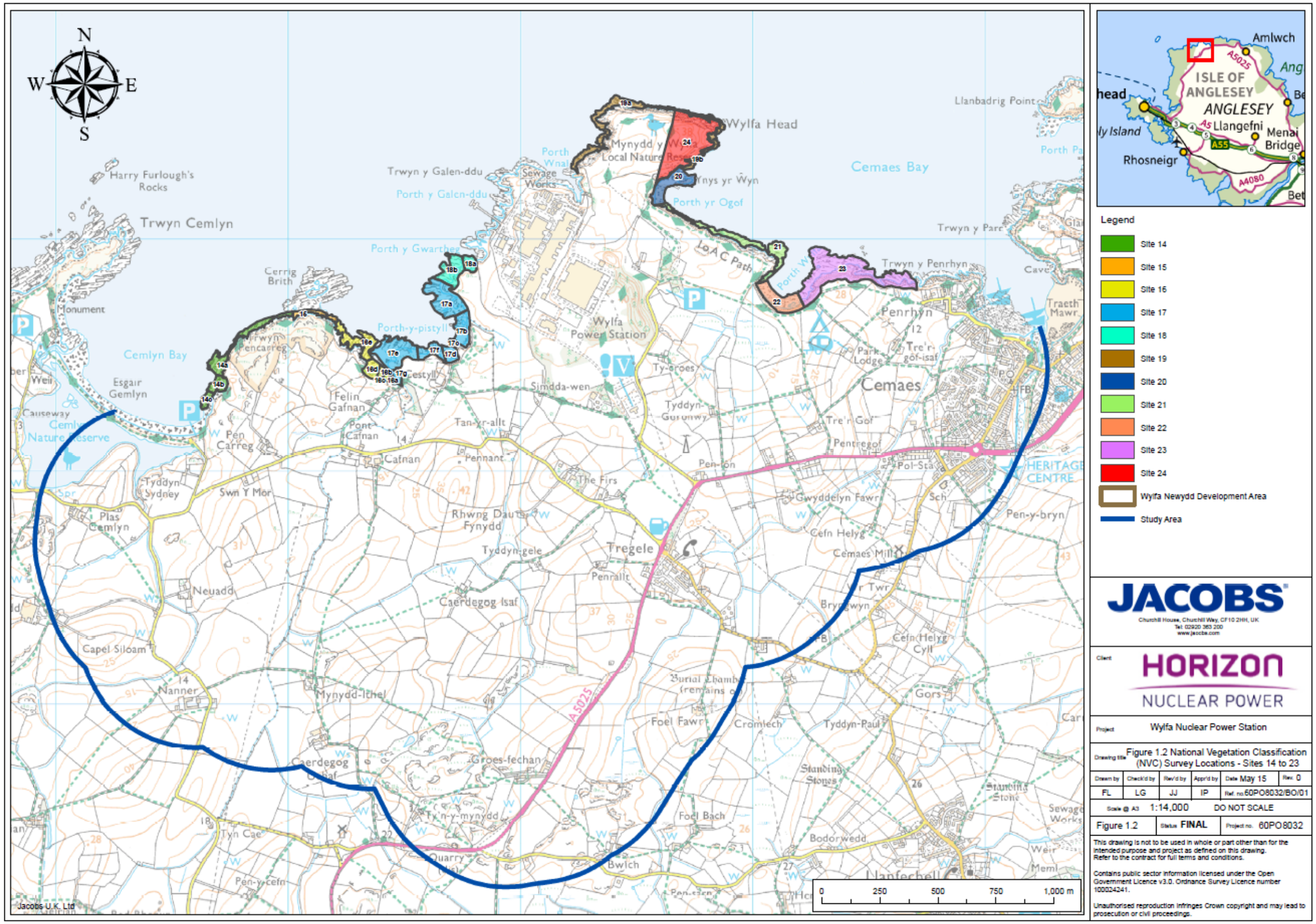


Figure 1.1 National Vegetation Classification (NVC) Survey Locations – Sites 1 to 13



Legend

- Site 14
- Site 15
- Site 16
- Site 17
- Site 18
- Site 19
- Site 20
- Site 21
- Site 22
- Site 23
- Site 24
- Wylfa Newydd Development Area
- Study Area

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Drawing title: Figure 1.2 National Vegetation Classification (NVC) Survey Locations - Sites 14 to 23

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Figure 1.2 | Status: FINAL | Project no. 60PO8032

Figure 1.2 National Vegetation Classification (NVC) Survey Locations – Sites 14 to 24

2. Methodology

2.1 Desk Study

A background data search was requested from Cofnod (North Wales Environmental Information Service) and included all species records, including notable plant species, within 2km of the study area. Notable species are those with legal protection or that are listed in policy documents or conservation lists. This dataset was searched for any historic records of notable or protected plant species that had not been found during the surveys, and to provide information to support the determination of the relative value and sensitivities of the habitats present.

2.2 Field Survey

Habitats and plant communities of potentially higher botanical and conservation interest were surveyed. These were identified following Phase 1 habitat surveys (Arup, 2009 and Jacobs, 2013a). A combination of quadrats based on the NVC approach and DAFOR surveys (dominant, abundant, frequent, occasional and rare) were undertaken. This provided a greater degree of flexibility to surveyors and therefore facilitated a much more accurate interpretation of habitat types to be made.

Surveyed sites were visited as follows (see Figure 1.1 and Figure 1.2):

- Sites 1 to 5 – August 2010;
- Sites 6 and 7 – July 2012;
- Sites 8 to 11 – July 2013;
- Sites 12 and 13 – June 2014; and
- Sites 14 – 24 June 2015.

2.2.1 National Vegetation Classification (NVC)

The NVC survey method followed that described by Rodwell (2006) based on a sample of 2m x 2m quadrats. All plant species and their relative abundances were recorded from each quadrat. Where possible, a minimum of five quadrats were completed in each site recorded.

2.2.2 DAFOR survey

The DAFOR survey methodology was only used where there was an area of habitat too small in extent for the NVC method to be practical or where there was a larger area of habitat considered to be relatively unimportant ecologically. The quantitative values for vegetation cover known as the DAFOR scale and the relationship to NVC frequency classes are provided in Table 2.1.

Table 2.1 DAFOR Scale

DAFOR rating	Description	NVC Frequency Class	Percentage cover	Percentage cover entered into Tablefit
D	Dominant	V	81% - 100%	90%
A	Abundant	IV	61% - 80%	70%
F	Frequent	III	41% - 60%	50%
O	Occasional	II	21% - 40%	30%
R	Rare	I	1% - 20%	10%

2.2.3 Perennial vegetation of stony banks

As described in Section 1.5, surveys were completed in 2015 in order to determine the presence or absence of perennial vegetation of stony banks as a characteristic (but not designating feature) of the nearby Cemlyn Bay SAC. The potential for perennial vegetation of stony banks was identified using standard NVC methods described above. This was completed in all coastal areas that could support this vegetation type as shown in Figure 1.2.

2.2.4 Uncommon plant species

During the 2015 surveys to determine the presence of perennial vegetation of stony banks, any occurrence of sea kale, sea radish (*Raphanus raphanistrum ssp. maritimus*), brackish water-crowfoot (*Ranunculus baudotii*) and beaked tasselweed (*Ruppia maritima*) were recorded and mapped individually. These were recorded, as they are characteristic of the perennial vegetation of stony banks Annex 1 habitat.

2.2.5 Terminology and identification references

The terminology for vascular plant and bryophyte species identified follows those of Mapmate Version 2.4.0., Stace (2010), and Atherton *et al*. (2010) for bryophytes (liverworts and mosses).

2.2.6 Data analysis and TABLEFIT

The analysis of the data from the NVC surveys primarily used the botanical and vegetation science expertise of the ecologist who undertook the work. Plant community NVC types were identified using the binomial keys of Rodwell (1998a and 1998b) with TABLEFIT software (Hill, 1996) being used to confirm identification where necessary.

For the TABLEFIT analysis, only the commoner species recorded were entered into the software to ensure a high value for the key coefficient of 'goodness-of-fit'. The 'goodness-of-fit' is an index which allows vegetation types to be graded depending on the degree of similarity between the sampled area and known plant communities (Hill, 1996). Only those species with a frequency class of III, IV or V were entered into TABLEFIT or any other species showing a maximum Domin Value[5] >6 (corresponding to greater than 25% vegetation cover).

2.2.7 Interpretation of results

In some cases, the NVC survey sites in the study area overlap. This is due to the purpose of surveys varying between years and habitats changing over time. Therefore, where there is complete overlap in a particular area, only the most up-to-date survey information is provided, as this will be used to determine the value and sensitivity of that area. This applies to many of the coastal sites resurveyed in 2015 that supersede previous survey data.

For all of the survey sites, an evaluation of the importance of both the identified NVC communities and of individual nationally uncommon species was undertaken. In each case, this included an evaluation of both their national and regional significance.

2.3 Limitations

Site 1 – The areas had been mown in the days preceding the survey meaning quadrat samples were not possible. Cut vegetation had been left and some identification of species was therefore possible. However, there were contiguous uncut areas along the northern margin of the site, and it is unlikely that these were significantly different or of greater botanical interest.

[5] Domin scale percentage vegetation coverage used as follows: 10 = 91%-100%, 9 = 76%-90%, 8 = 51%-75%, 7 = 34%-50%, 6 = 26%-33%, 5 = 11%-25%, 4 = 4%-10%, 3 = <4% (many individuals), 2 = <4% (several individuals), 1 = <4% (few individuals).

Site 4 – High winds at the time of the survey of Site 4 meant that it was not mapped or sampled. However, the vegetation was surveyed in detail, and confidence in that description as being representative of the habitat is high.

Site 9 – Only part of the site could be accessed due to landowner access constraints, as shown in Figure 3.9. However, these areas were visible from nearby and appeared to consist of scrub or bare rock. This was supported by aerial images. Therefore, it is considered that these inaccessible areas were not significant in determining the ecological value of the site.

Sites 14 to 23 – Access to some coastal habitats was restricted due to steep rock faces, which prevented full survey. This is not considered to have significantly affected results.

3. Results

3.1 Desk Study

A total of 256 records of 112 different vascular plant species within 2km of the study area were provided by Cofnod. Full details are provided in Appendix A and shown on Figure 3.1.

Figure 3.1 includes references to UK Biodiversity Action Plan (UK BAP) species. This has since been replaced by the UK post-2010 Biodiversity Framework whereby the conservation status of the UK BAP species was devolved to England, Northern Ireland, Scotland and Wales respectively rather than a UK-wide approach. In Wales the strategy that has been adopted has been the transfer of the species and habitats listed under the defunct UK BAP to being listed under the responsibilites of Section 42 of the NERC Act (described above). However, many of the tools and resources originally developed under the UK BAP still remain of use, including background information on UK BAP priority habitats and species which form the basis of county level biodiversity protection initiatives e.g. LBAPs.

Notable vascular plants with legal protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) were: bluebell (*Hyacinthoides non-scripta*); pedunculate sea-purslane (*Atriplex pedunculata*), which was recorded before 1990 in Cemaes and is now found only in Essex coastal fringes; and peacock's tail (*Padina pavonica*). Peacock's-tail is a marine brown algae and would not have been encountered in the habitats surveyed.

Twenty-one records of notable vascular plant species were provided by Cofnod from within the Wylfa Newydd Development Area. Of these, eight have been recorded in the last 20 years:

- hoary ragwort (*Senecio erucifolius*) near Cemaes;
- lesser tussock-sedge (*Carex diandra*), early marsh-orchid (*Dactylorhiza incarnata subsp. pulchella*) and marsh fern (*Thelypteris palustris*) at Tre'r Gof;
- petty whin (*Genista anglica*), allseed (*Radiola linoides*) and vervain (*Verbena officinalis*) on Wylfa Head; and
- pale flax (*Linum bienne*) at the Existing Power Station.

These species are notable for being Red Data Book species[6] or having LBAPs in the North Wales region. Of these, only marsh fern is listed on the Anglesey LBAP, with the rest having neighbouring county LBAPs only.

[6] In addition to the classifications above, the background data search refers to those species that are listed in Red Data Books. The Red Data Book system was initiated by the International Union for Conservation of Nature (IUCN) in 1996. The books deal with many plants, fungi and animals at a global, country and regional scale. The aim has been to identify those species at greatest risk of extinction and to identify the factors responsible in order to inform conservation approaches. Species are classified according to their breeding status within each site and by their conservation status.

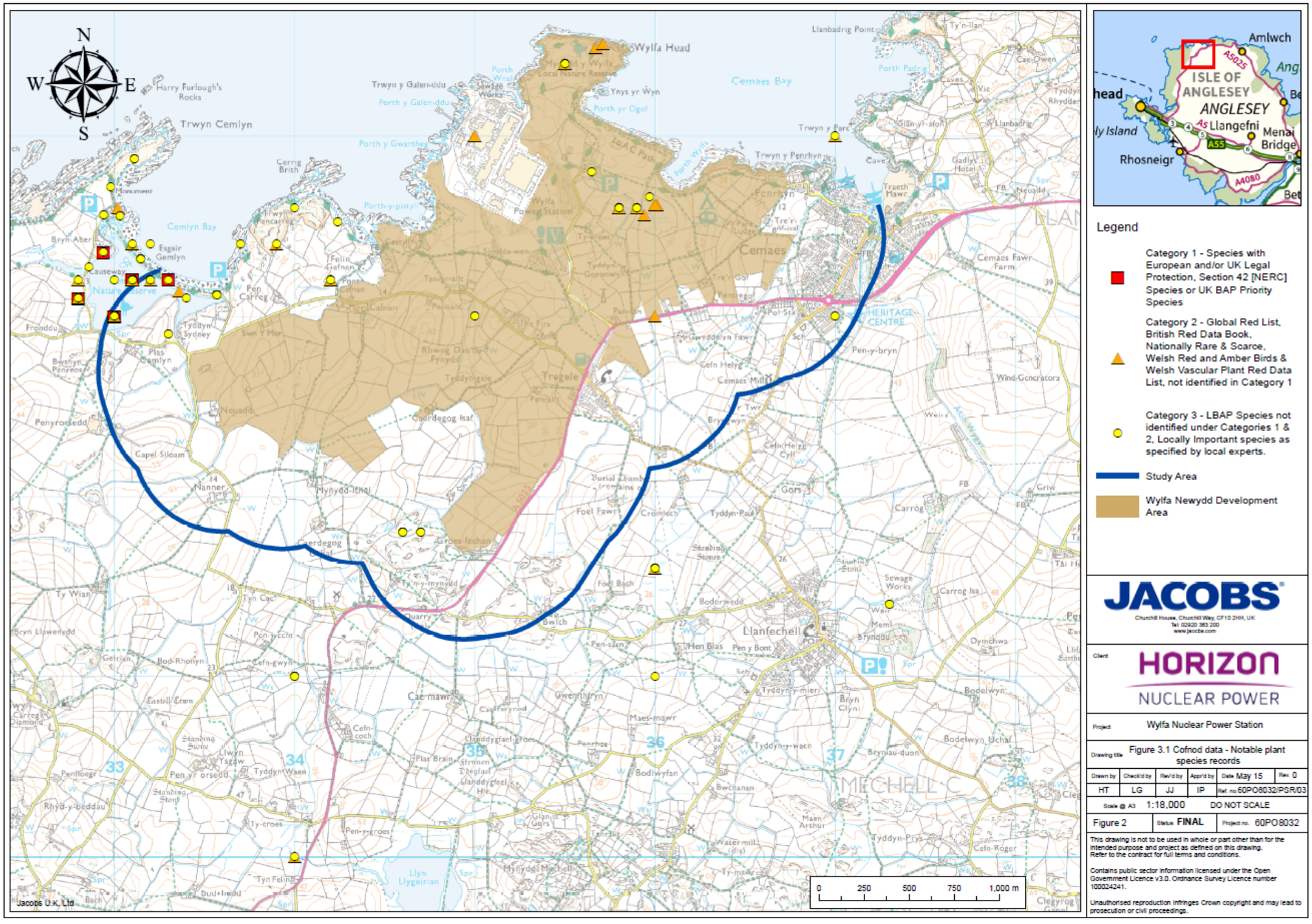

Figure 3.1 Cofnod data – Notable plant species

3.2 Field Survey

Sites 1 to 13 are inland habitats, which are all located at least 50m from the approximate mean high-tide mark. Habitats recorded include mesotrophic, acid and coastal grasslands, heathland, rush pastures, mire, fen and swamps and wet woodland and scrub.

Coastal habitats within 50m of the approximate mean high-tide mark are discussed in the coastal habitats site descriptions in Section 3.2.14.

3.2.1 Site 1 – South-west of Magnox Visitor Centre (from Arup, 2010)

From examination of cut hay, the main grass species appeared to be cock's-foot (*Dactylis glomerata*), common bent grass (*Agrostis capillaris*) and Yorkshire fog (*Holcus lanatus*). Herbs included black knapweed (*Centaurea nigra*) and creeping buttercup (*Ranunculus repens*). Soft rush (*Juncus effusus*) became more prominent in the hay along the southern margin of this area.

The level, central area on the western side of the site was dominated by tall (approximately 1m high) soft rush and has been classified as M23 *Juncus effusus/acutiflorus – Galium palustre* rush pasture. The number of other species recorded in this area was very low with constant species including greater bird's-foot trefoil (*Lotus pedunculatus)*, compact rush (*Juncus conglomeratus*), silverweed (*Potentilla anserina* now *Argentina anserina*), velvet bent grass (*Agrostis canina*) and hairy sedge (*Carex hirta*). The typical species marsh bedstraw (*Galium palustre*) was not recorded within the stand. The classification of this stand into one of the two sub-communities was not attempted, as the division between them is hard to fix; however, the species present indicated that the vegetation would be more likely to fit with the M23a *Juncus effusus/acutiflorus-Galium palustre* rush-pasture, *Juncus acutiflorus* sub-community.

As the land rises to the south, the vegetation grades into a grassier sward classified as MG10 *Holcus lanatus – Juncus effusus* rush pasture. The vegetation here was characterised by creeping buttercup, greater bird's-foot trefoil, compact rush, Yorkshire fog and sweet vernal grass (*Anthoxanthum odoratum*).

A further area of M23 *Juncus effusus – Galium palustre* rush pasture was identified on the relatively steep bank on the southern boundary. This vegetation was more diverse than the other M23 vegetation on the site. Soft rush and compact rush were abundant, with a high proportion of grasses including common bent, sweet vernal grass and Yorkshire fog. Characteristic herbs included greater bird's-foot trefoil, meadow vetchling (*Lathyrus pratensis*), black knapweed and creeping cinquefoil (*Potentilla reptans*). The community showed some affinities with the MG10 community description in Rodwell (1998a), but M23 is considered the better fit because of the herb species recorded. Figure 3.2 is an extract from the Arup report (Arup, 2010) illustrating the communities of interest.

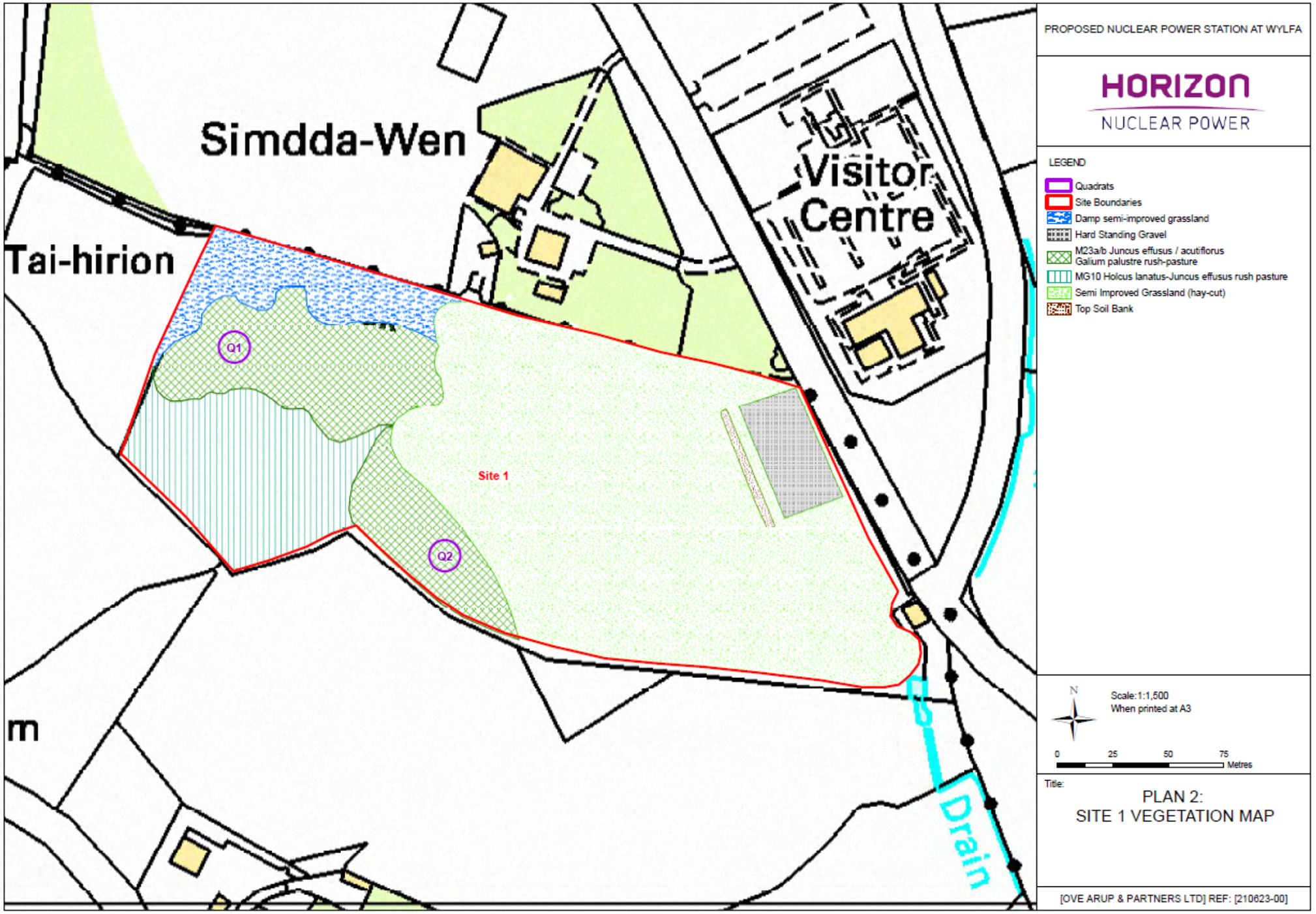

Figure 3.2 Site 1 – Vegetation Map (from Arup, 2010

3.2.2 Site 2 – South of Porth-y- pistyll (from Arup, 2010)

Site 2 comprised a narrow fringe of grassland on a coastal headland (Figure 1.1), on the edge of a larger enclosure of agriculturally improved grassland. The majority of the grassland was of limited size and interest and did not warrant mapping or sampling. This area was characterised by red fescue (*Festuca rubra*), Yorkshire fog, perennial rye grass, common bent and cock's-foot. Forb species included mouse-ear (*Cerastium fontanum*), yarrow (*Achillea millefolium*), ribwort plantain (*Plantago lanceolata*) and tufted vetch (*Vicia cracca*).

The eastern extremity of Site 2 included a small (less than 20m x 10m) stand which was sampled and attributable to the MC10c *Festuca rubra – Plantago* spp. maritime grassland, *Schoenus nigricans* sub-community. Red fescue, ribwort plantain and buck's-horn plantain (*Plantago coronopus*) were constants with fen species, notably saw-wort (*Serratula tinctoria*), devil's-bit scabious (*Succisa pratensis*), heath grass (*Danthonia decumbens*) and carnation sedge (*Carex panicea*) also present. Maritime species quickly dropped out of the vegetation away from the rocky foreshore, with an increase in purple moor-grass (*Molinia caerulea*).

3.2.3 Site 3 – Wylfa Head South (from Arup, 2010)

This site comprised the southern half of a large enclosure bounded to the north by the Wylfa Head candidate Wildlife Site with the Existing Power Station grounds and infrastructure to the south and west (Figure 1.1). Agricultural land and the coastline bordered the area to the east. The southern half of the enclosure was gently sloping with a north-easterly aspect, before the land rose up toward Wylfa Head with a south-westerly aspect.

The northern part of the enclosure was largely agriculturally improved grassland, with small rock exposures vegetated with scrub comprising gorse (*Ulex europaeus*), and short unimproved grassland. The southern limit of this agricultural improvement appeared very distinct both on the ground and from available aerial photography (see Figure 3.3).

The southern part of the enclosure was best described as MG5a *Cynosurus cristatus – Centaurea nigra* grassland, *Lathyrus pratensis* subcommunity. Constant species in this community included crested dog's tail (*Cynosurus cristatus*), bird's-foot trefoil (*Lotus corniculatus)*, black knapweed, red fescue and ribwort plantain. The species and their abundances made this vegetation a very good fit with the community description in Rodwell (1998a).

Species indicative of agricultural improvement were present only at low frequencies. A small area of shallower soils on rock exposures to the south of site had a shorter turf with species indicative of base-rich conditions, e.g. burnet saxifrage (*Pimpinella saxifraga*) and pale flax (*Linum bienne*). Small, isolated patches of semi-improved grassland were present, mostly associated with taller vegetation in and around patches of gorse scrub. The northern part of the site may be cut for hay/silage, but this does not extend to the southern area. It is likely that this area is open to any aftermath grazing as part of the larger enclosure. Figure 3.3 is an extract from the Arup report (Arup, 2010) detailing this range of vegetation recorded at the site.

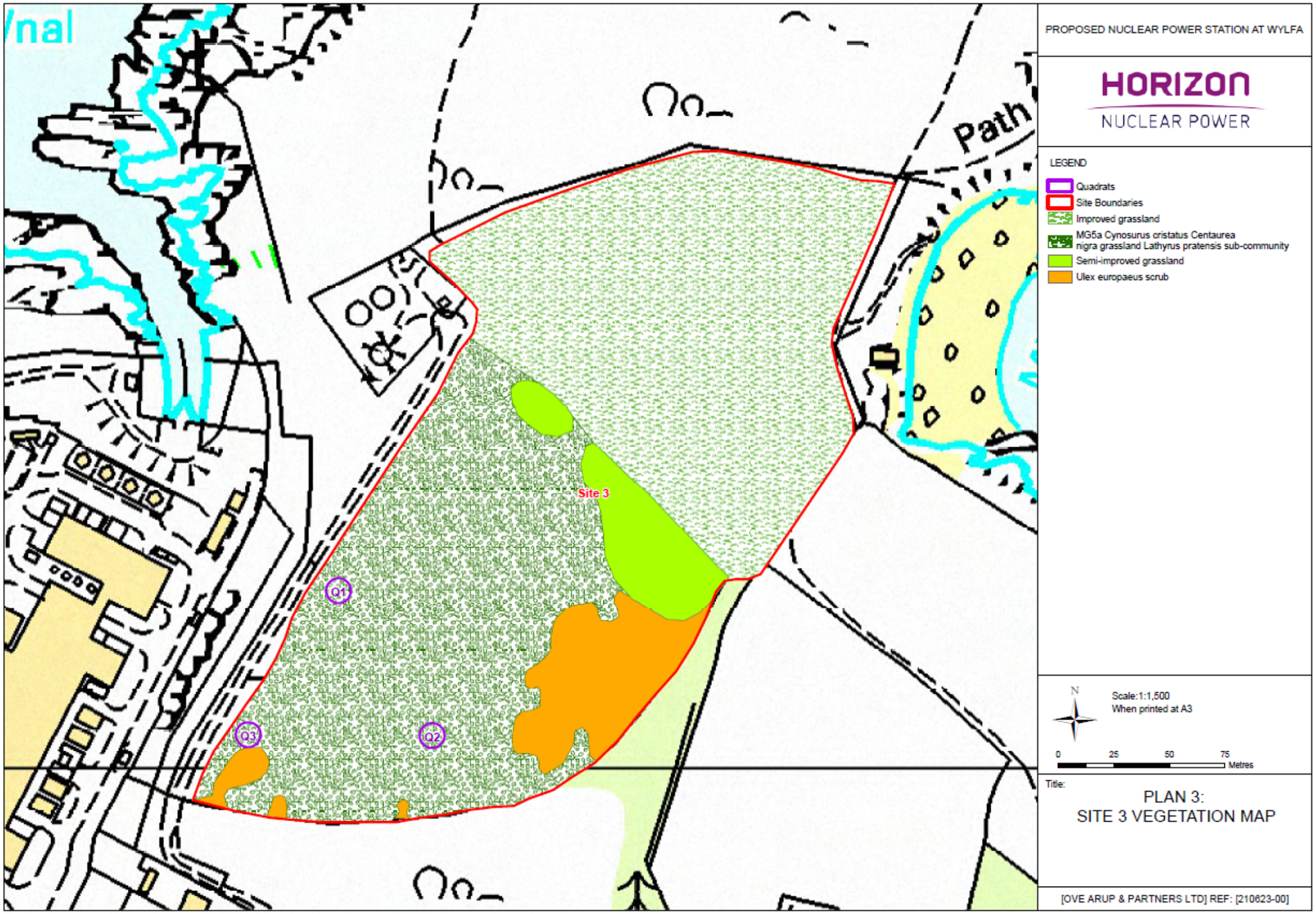

Figure 3.3 Site 3 – Vegetation Map (from Arup, 2010

3.2.4 Site 4 – East of Porth-y-Wylfa (from Arup, 2010)

Data recorded at Site 4 in 2010 (Arup, 2010) has been superseded by the 2015 survey and is covered in the descriptions of Sites 22 and 23, given in Section 3.2.14.

3.2.5 Site 5 – South-west of Existing Power Station (from Arup, 2010)

Site 5 is adjacent to the south-west corner of the Existing Power Station boundary (Figure 1.1). The area is part of a larger enclosure vegetated by species-poor, semi-improved grassland extending to the south. The land dips gently to the south and west, with a small stream draining from the east to the beach. The western half of the site is undulating, with several small rock outcrop plateaux.

The majority of the site is best classified as MG6 *Lolium perenne – Cynosurus cristatus* grassland. Perennial rye grass was the most abundant grass, and common bent, Yorkshire fog and crested dog's tail were also present. Constant forb species recorded were white clover (*Trifolium repens*), ribwort plantain, cat's ear (*Hypochaeris radicata*) and daisy (*Bellis perennis*). There were areas where bird's-foot trefoil was locally frequent (a species indicative of less nutrient-rich communities), but other constant grass and forb species clearly place this vegetation within the MG6 community.

This vegetation gave way to short-turf vegetation and areas of bare rock on the small plateau. Immediately above the rock headland of the coast, the MG6 community was transitional toward a narrow fringe of remnant maritime grassland with frequent red fescue, buck's-horn plantain and a variety of poor-fen species, including heath grass, devil's-bit scabious, and tormentil (*Potentilla erecta*). This vegetation did not fit well with any one of the NVC community descriptions. From the range of species, the area was considered to have been partially improved through agricultural management and described as a degraded example of the MC10c *Festuca rubra – Plantago* spp. maritime grassland, *Schoenus nigricans* sub-community.

A small area of waterlogged ground associated with the stream was mapped on the southern boundary of the site. The area was disturbed by grazing livestock, with evidence of poaching. Constant species included compact rush, Yorkshire fog, creeping buttercup, hairy willowherb (*Epilobium hirsutum*), cuckoo flower (*Cardamine pratensis*), silverweed and chickweed. This vegetation was not sampled due to the small size of the area, but has been tentatively assigned to the MG10 *Holcus lanatus – Juncus effusus* rush pasture community.

Figure 3.4 is an extract from the Arup report (Arup, 2010) detailing the range of vegetation recorded at the site.

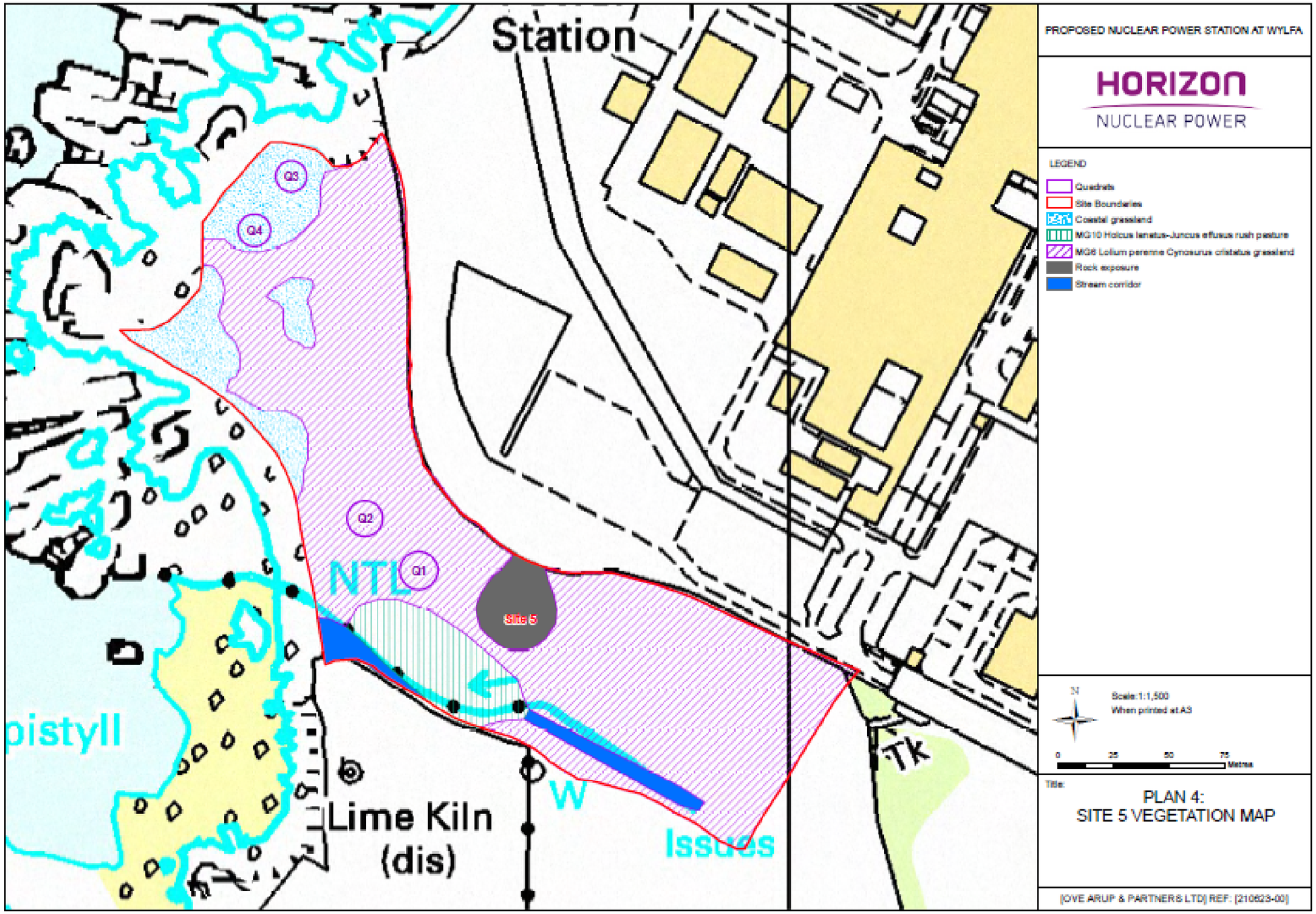

Figure 3.4 Site 5 – Vegetation Map (from Arup, 2010)

3.2.6 Site 6 – Trwyn Pencarreg and Felin Gafnan (from Arup, 2012)

Site 6 (Figure 1.1) was dominated by MG5 *Cynosurus cristatus – Centaurea nigra* grassland, also present was MG6 *Lolium perenne – Cynosurus cristatus* grasslands, rocky outcrops, scrub and U4 *Festuca ovina – Agrostris capillaris – Galium saxatile* grassland. The northern areas contained high quality H8d *Calluna vulgaris – Ulex gallii* heath, *Scilla verna* sub-community with dwarf shrubs, mainly heather (*Calluna vulgaris*), bell heather (*Erica cinerea*) and western gorse (*Ulex gallii*) and coastal habitats that were characterised by the presence of MC8 *Festuca rubra – Armeria maritima* and MC9 *Festuca rubra – Holcus lanatus* maritime grassland communities. Wetter (freshwater) vegetation communities were inland with M25 *Molinia caerulea – Potentilla erecta* mire found to the north of the site with cross-leaved heath (*Erica tetralix*) and creeping willow (*Salix repens*) and S27 *Carex rostrata – Potentilla palustris* tall-herb fen with tufted clubrush (*Isolepis cernua*) recorded to the south.

Full details are shown in Figure 3.5 which is an extract from the Arup report (Arup, 2012) detailing the range of vegetation communities recorded at the site.

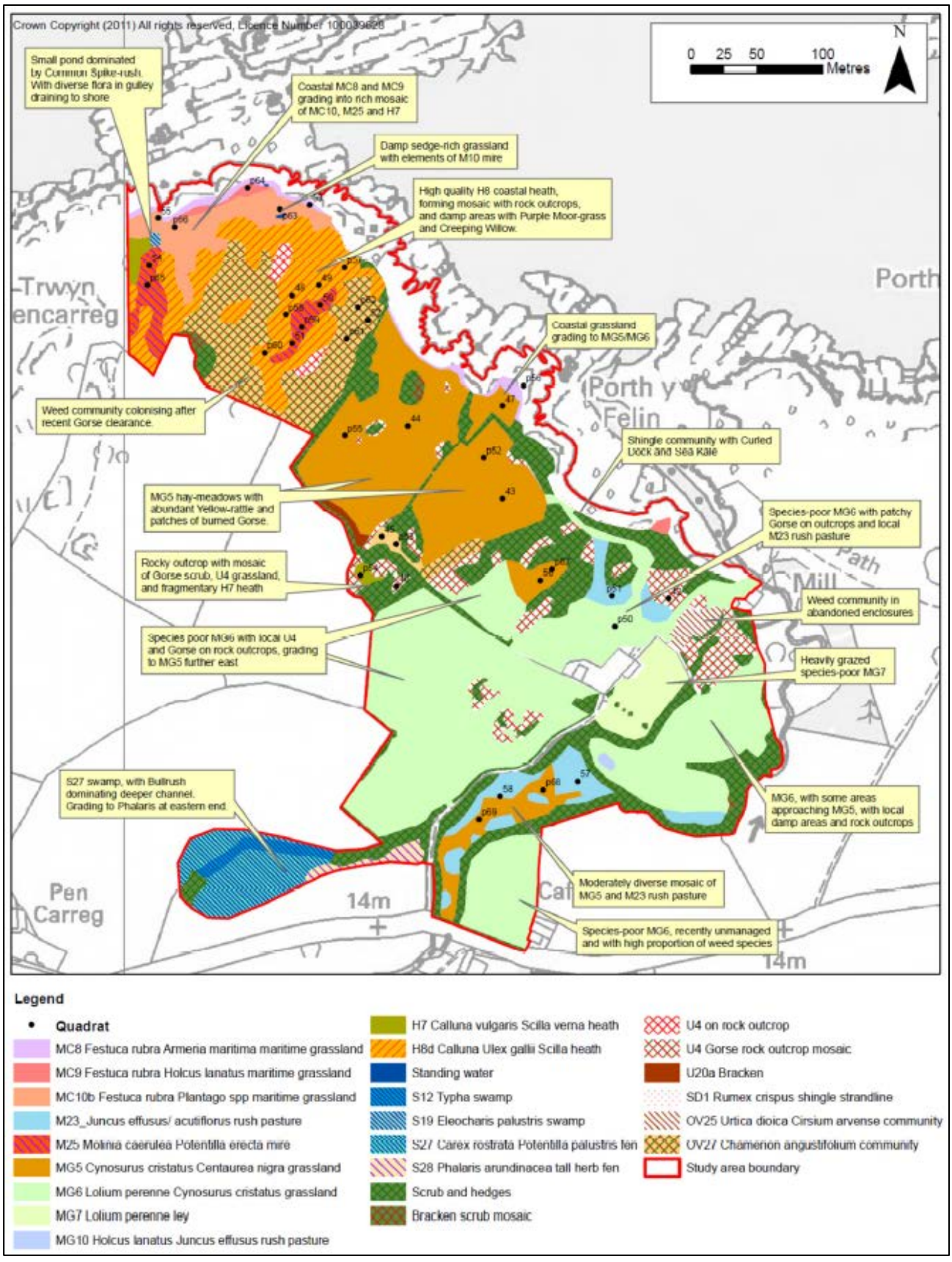

Figure 3.5 Site 6 – Vegetation Map (from Arup, 2012)

3.2.7 Site 7 – Wylfa Head, Ty-Croes, north of Tre'r Gof SSSI and Porth-y-wylfa to Penrhyn (from Arup, 2012)

Site 7 is a large area east of the Existing Power Station and includes:

- fields south-west of Tre'r Gof around the demolished property called Ty-Croes;
- fields north of Tre'r Gof SSSI;
- Wylfa Head; and
- Wylfa Head South.

These areas have been surveyed numerous times, and, as a result, there is overlap between Sites 3, 10 and 24, and 2015 coastal habitat sites 19a, 19b, 20, 21 and 22. The description below therefore only includes those areas that have not been covered by descriptions of the latter sites, i.e. fields around Ty-Croes, fields north of Tre'r Gof and inland areas of Wylfa Head.

The fields around Ty-Croes (Figure 3.6) were consistent with pasture grazing in the area with MG5 *Cynosurus cristatus – Centaurea nigra,* MG6 *Lolium perenne – Cynosurus cristatus* and MG7 *Lolium perenne* leys, and MG10 *Holcus lanatus – Juncus effusus* rush pasture in damper areas. M23 *Juncus effusus – Juncus acutiflorus* rush pasture was recorded in the very wet grassy areas. Rocky outcrops and disturbed areas were characterised by U4 *Festuca ovina – Agrostris capillaris – Galium saxatile* grassland and OV25 *Urtica dioica – Cirsium arvense*, respectively.

Fields north of Tre'r Gof SSSI (Figure 3.7) comprised a large expanse of MG6 *Lolium perenne – Cynosurus cristatus* grassland grading out to low diversity MG5 *Cynosurus cristatus – Centaurea nigra* and variants of MC9 *Festuca rubra – Holcus lanatus* maritime grassland communities on the coastal fringes (see Sites 19a, 19b, 20, 21 and 22 (Section 3.2.14)). An area of MG1 *Arrhenatherum elatius* grassland and W24 *Rubus fruticosus – Holcus lanatus* underscrub was located to the west and M22/M23 fen-meadow/rush pasture mosaic was recorded along the southern boundary.

Data recorded on coastal habitats at Wylfa Head in 2012 (Arup, 2012) have been superseded by more recent surveys undertaken in 2015 and are discussed in Section 3.2.15. Wylfa Head comprised a mosaic of bracken (*Pteridium aquilinum*), bramble (*Rubus fruticosus* agg.) and blackthorn (*Prunus spinosa*) with a narrow MC9 *Festuca rubra – Holcus lanatus* maritime grassland community at its base.

Wylfa Head South is described in greater detail as Site 3 in Section 3.2.3 and is omitted from the description of Site 7.

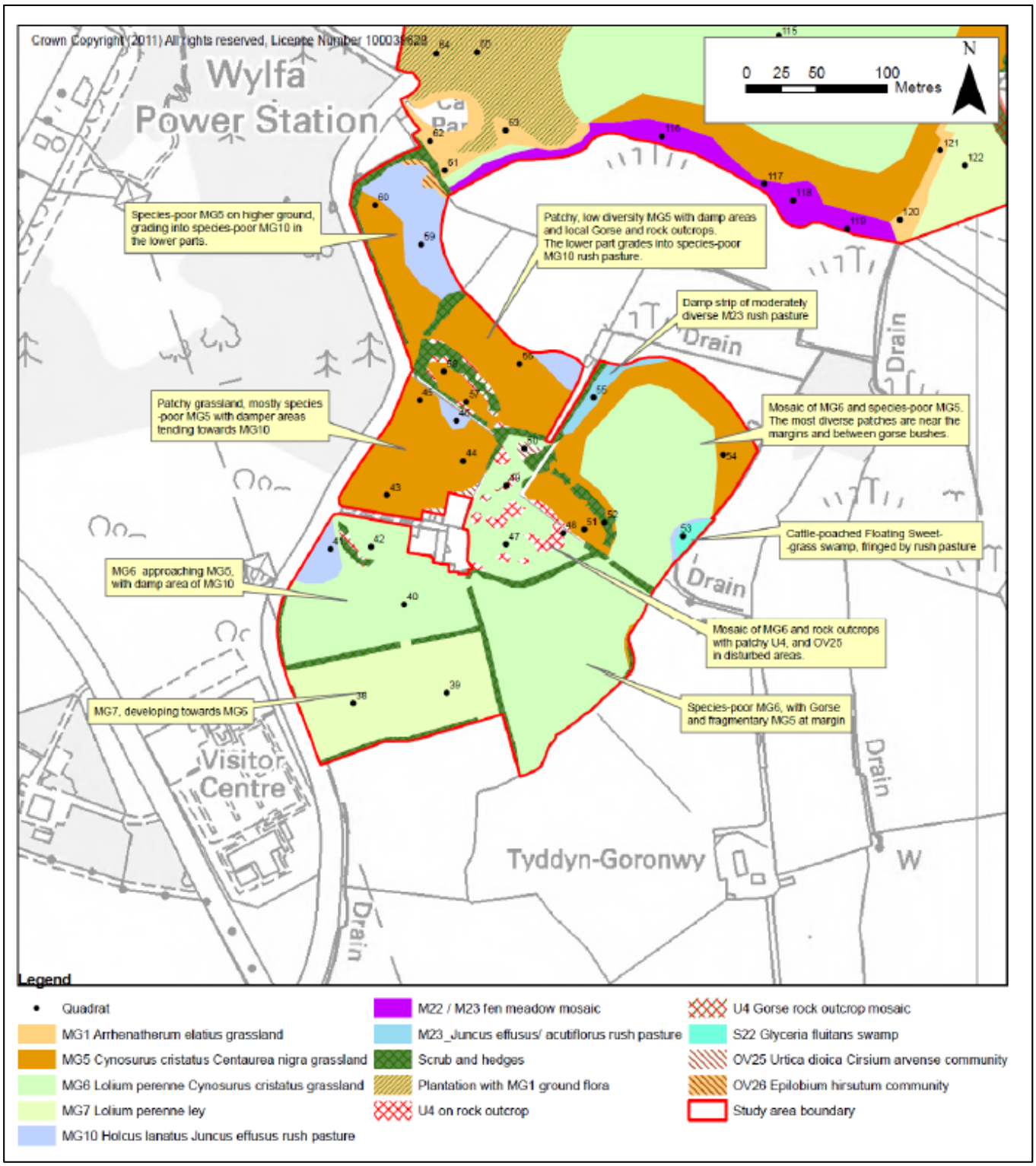

Figure 3.6 Site 7 – Ty-Croes Vegetation Map (from Arup, 2012)

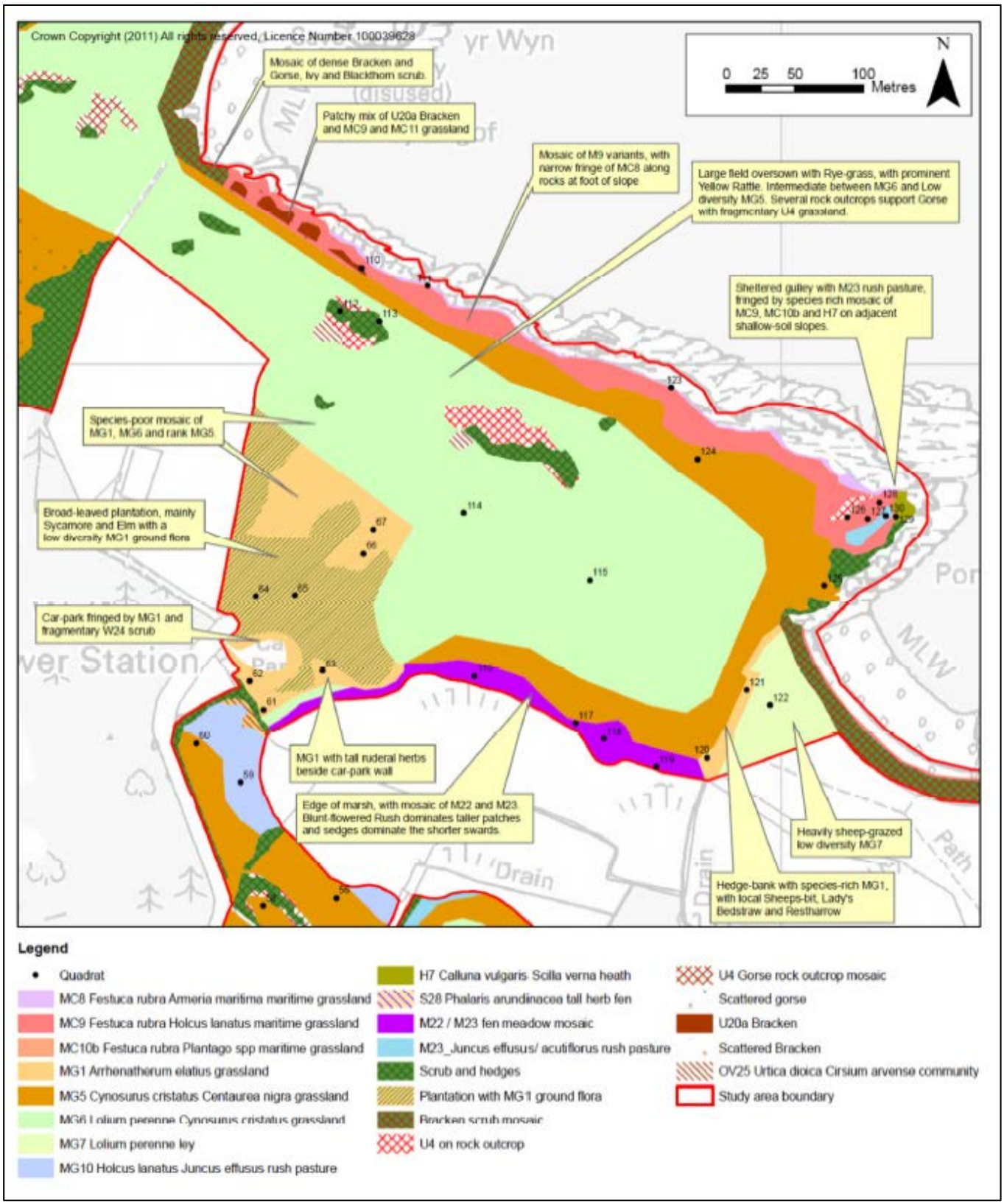

Figure 3.7 Site 7– North of Tre'r Gof SSSI Vegetation Map (from Arup, 2012)

3.2.8 Site 8 – Tre'r Gof SSSI (from Jacobs, 2013b)

Figure 3.8 details the habitats and vegetation communities recorded at Site 8 – Tre'r Gof SSSI. In summary, it was estimated that most of the habitats were either M22 *Juncus subnodulosus – Cirsium palustre* fen-meadow or M23 *Juncus effusus – Juncus acutiflorus* rush pasture. The exceptions to this were the areas identified as 'Habitat E' and 'Habitat F' that were considered to be S2 *Cladium mariscus* swamp and sedge-beds and W1 *Salix cinerea – Galium palustre* woodland, respectively.

Species of notable interest recorded during the survey included: tufted sedge (*Carex elata*), slender-leaved sedge (*Carex lasiocarpa*), saw-sedge (*Cladium mariscus*), black bog rush (*Schoenus nigricans*) and marsh fern.

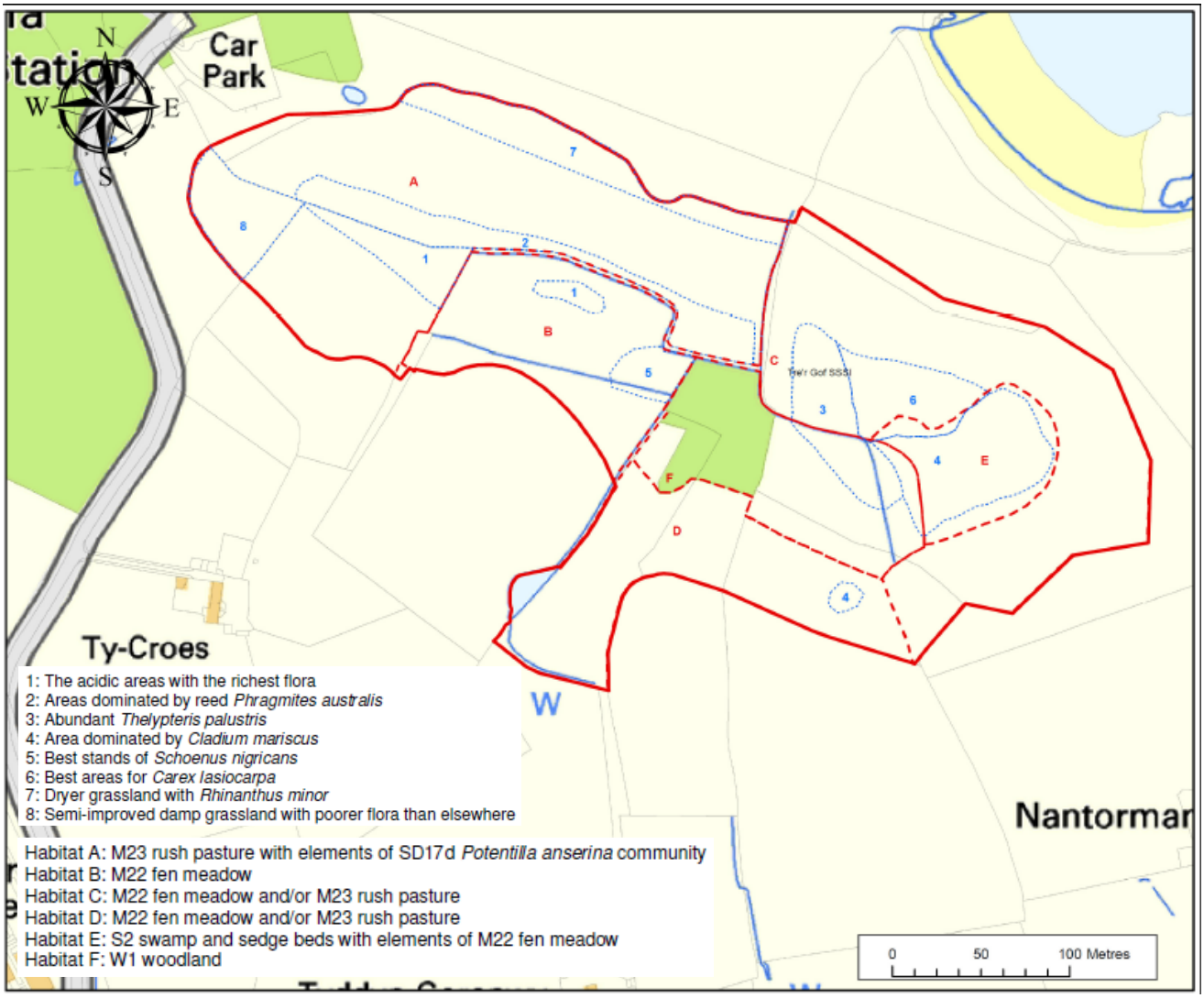

Figure 3.8 Site 8 – Tre'r Gof SSSI Vegetation Map (from Jacobs, 2013b)

3.2.9 Site 9 – Cae Gwyn SSSI (from Jacobs, 2013b)

Figure 3.9 details the habitats and vegetation communities recorded at Site 9 – Cae Gwyn SSSI, which is located outside of the Wylfa Newydd Development Area in the southern half of the study area.

The central high ground comprised scrub, acid grassland and rock outcrops, with an affinity to W23 *Ulex europaeus – Rubus fruticosus* scrub community.

A series of mires were recorded on the western and northern boundaries. These were assessed as having affinities with M25 *Molinia caerulea – Potentilla erecta* mire, M23 *Juncus effusus/acutiflorus – Galium palustre*

rush pasture and M9 *Carex rostrata – Calliergonella cuspidatum/giganteum* mire. Vegetation with an affinity to M29 *Hypericum elodes – Potamogeton polygonifolius* soakway was also possibly present as a mosaic. Royal fern (*Osmunda regalis*) and cranberry (*Vaccinium oxycoccos*) were notable species recorded in these vegetation types.

On the south-eastern side of this higher ground was a larger area of very high-quality mire (labelled C1 in Figure 3.9 below) with affinity to both M21 *Narthecium ossifragum – Sphagnum papillosum* valley mire community and M5 *Carex rostrata – Sphagnum squarrosum* mire. Visual assessment of this habitat suggested that a mosaic of the two communities was present; slender-leaved sedge and bog-sedge (*Carex limosa*) were recorded from here. M25 *Molinia caerulea – Potentilla erecta* mire was present to the west.

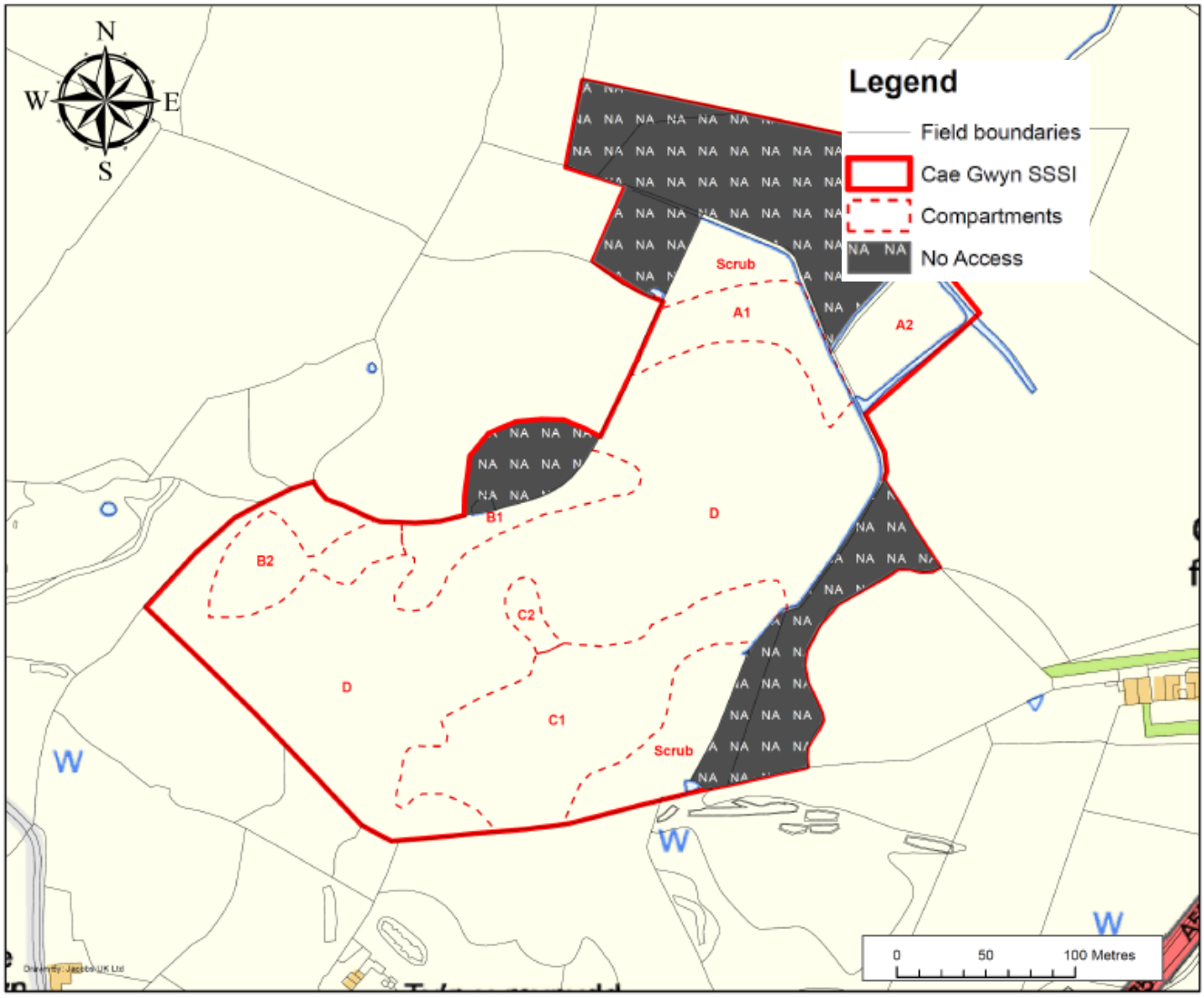

Figure 3.9 Cae Gwyn SSSI Vegetation Map (from Jacobs, 2013b)

3.2.10 Site 10 – Wylfa Head West (from Jacobs, 2013b)

The grasslands on the western side of Wylfa Head were heavily rabbit grazed with a typical turf height of around 5cm while the eastern side was ungrazed resulting in two separate plant communities. As such, the headland was split in to two sections: west and east. The west is discussed below while the data collected for the eastern side has been updated by a survey in 2015, which is discussed in full in Section 3.2.15. Figure 3.10 details the sampling points within each plant community on the eastern side of Wylfa Head. In summary, grassland communities were assessed as having good and consistent affinity with MC9 *Festuca rubra – Holcus lanatus maritime* grassland community.

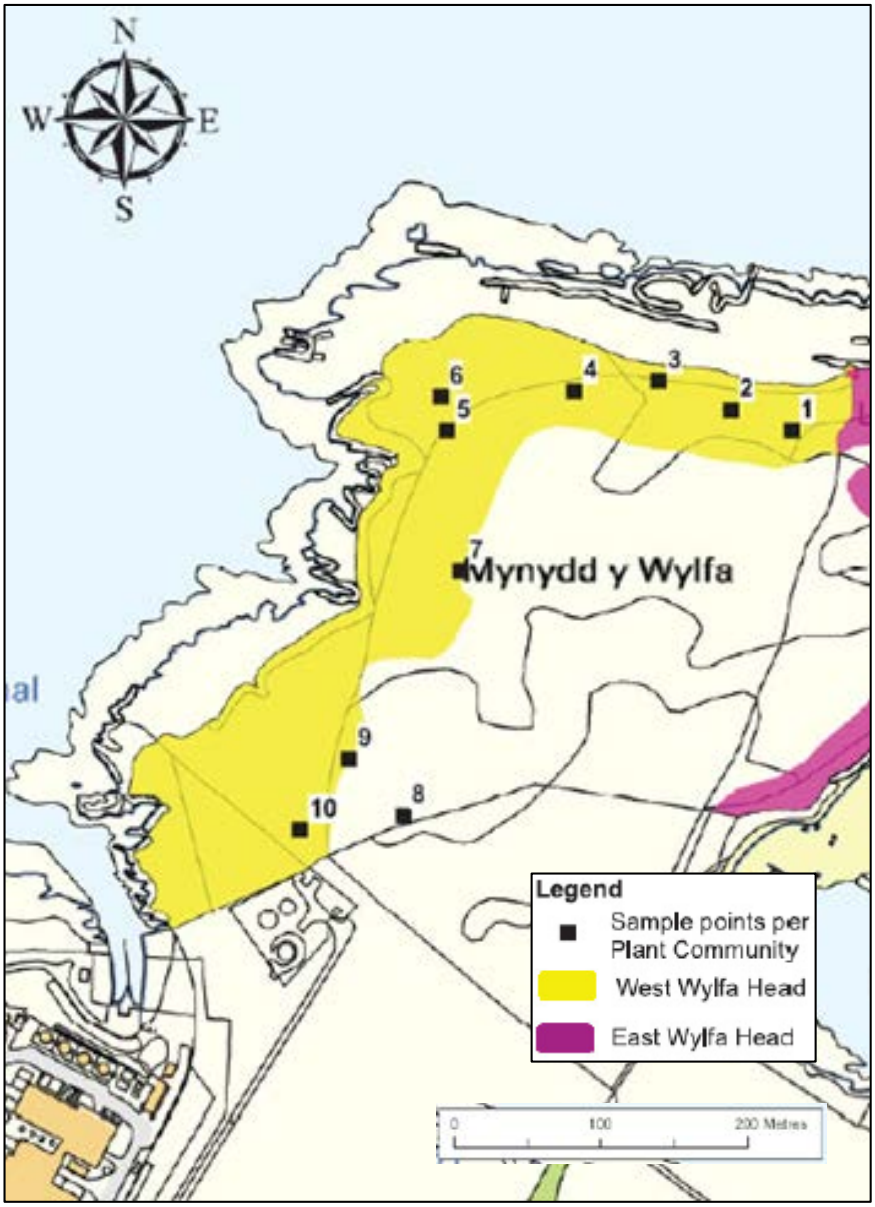

Figure 3.10 Site 10 – Wylfa Head Vegetation Map (from Jacobs, 2013b)

3.2.11 Site 11 – Trwyn Pencarreg (from Arup, 2013)

The NVC survey at inland Trwyn Pencarreg (Figure 1.1) indicated the community to have excellent affinity with H8 *Calluna vulgaris – Ulex gallii* heath. The NVC results, confirmed by 'Tablefit' analysis, validated this with a very good 'goodness of fit' score of 80. Such excellent results for 'best fit' under 'Tablefit' analysis are rarely obtained and indicate a homogenous habitat with a long period of management continuity without disturbance.

3.2.12 Site 12 – Mynydd Ithel (from Jacobs, 2014)

Grassland habitats at Mynydd Ithel (Figure 3.11) are floristically rich and differ greatly from the surrounding grasslands, which have been agriculturally improved and are floristically poor.

Figure 3.11 details the habitats and vegetation communities recorded at Site 12. All three agricultural grazing fields were best described as the mesotrophic grassland sub-community MG5a *Cynosurus cristatus – Centaurea nigra* grassland, *Lathyrus pratensis* sub-community. Additional habitat features within the three fields (Figure 3.11), included scrub, patches of nettle (*Urtica dioica*), a rocky outcrop and a wetter area where moonwort (*Botrychium lunaria*) was recorded.

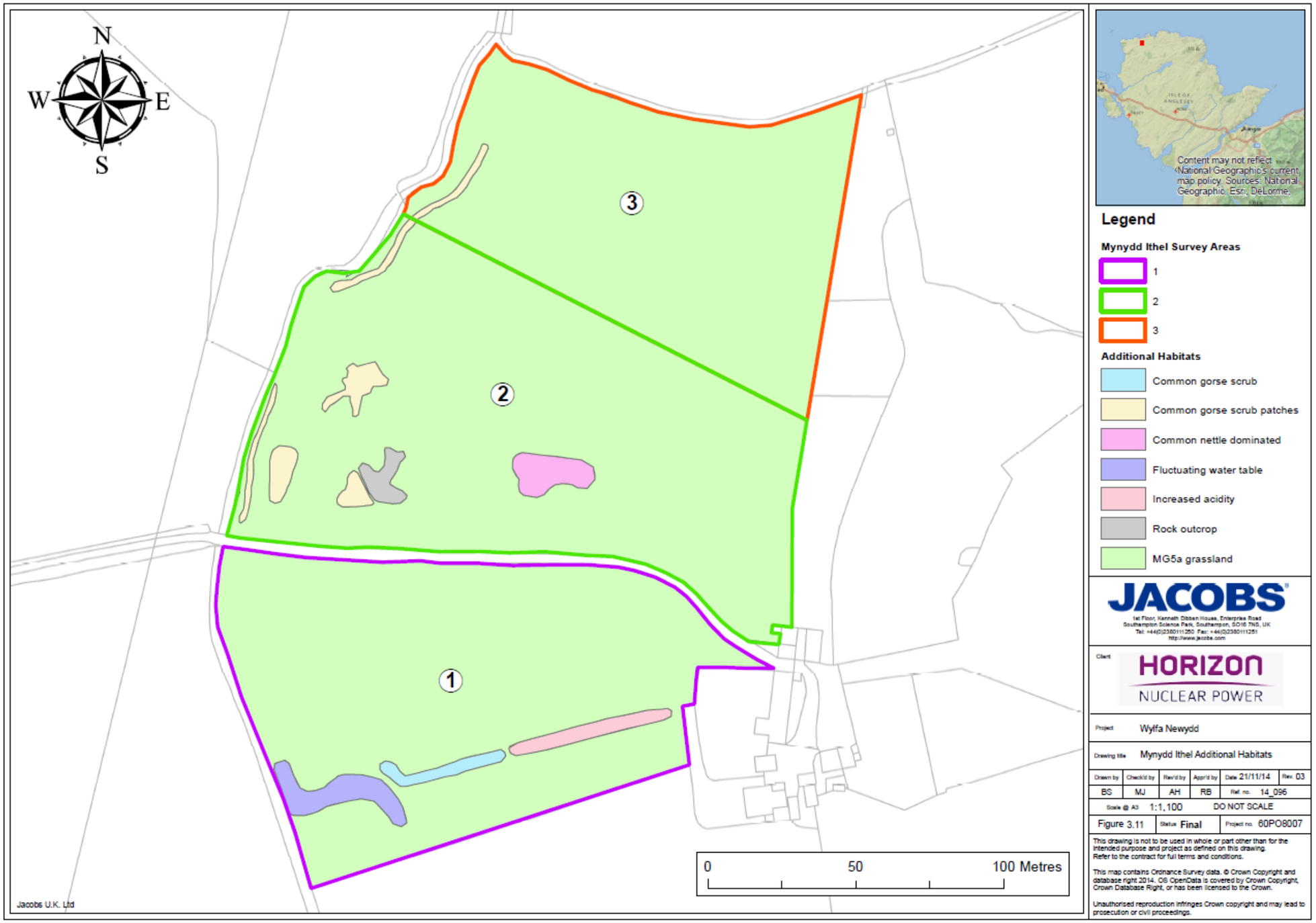

Figure 3.11 Mynydd Ithel Vegetation Map (from Jacobs, 2014)

3.2.13 Site 13 – Groes-fechan heathland (from Jacobs, 2014)

Figure 3.12 details the habitats and vegetation communities recorded at Groes-fechan. This single parcel of land was found to comprise plant communities with affinities to H8 *Calluna vulgaris – Ulex gallii* heathland. The species composition varied to a certain extent throughout the sward, creating a mosaic of habitats with mostly heather and western gorse dominating the central region of the compartment. Surrounding the central region, there were significant areas of habitat that did not conform strictly to the H8 community type. These included patches dominated by bracken and others dominated by common gorse (*Ulex europaeus*). The locations of these habitats are shown as Areas 2, 3 and 4 respectively in Figure 3.12. Several rock outcrops were also found to be present and these created a drier environment which was dominated by a cover of bryophytes and lichen. This is shown in Figure 3.12 as Area 5.

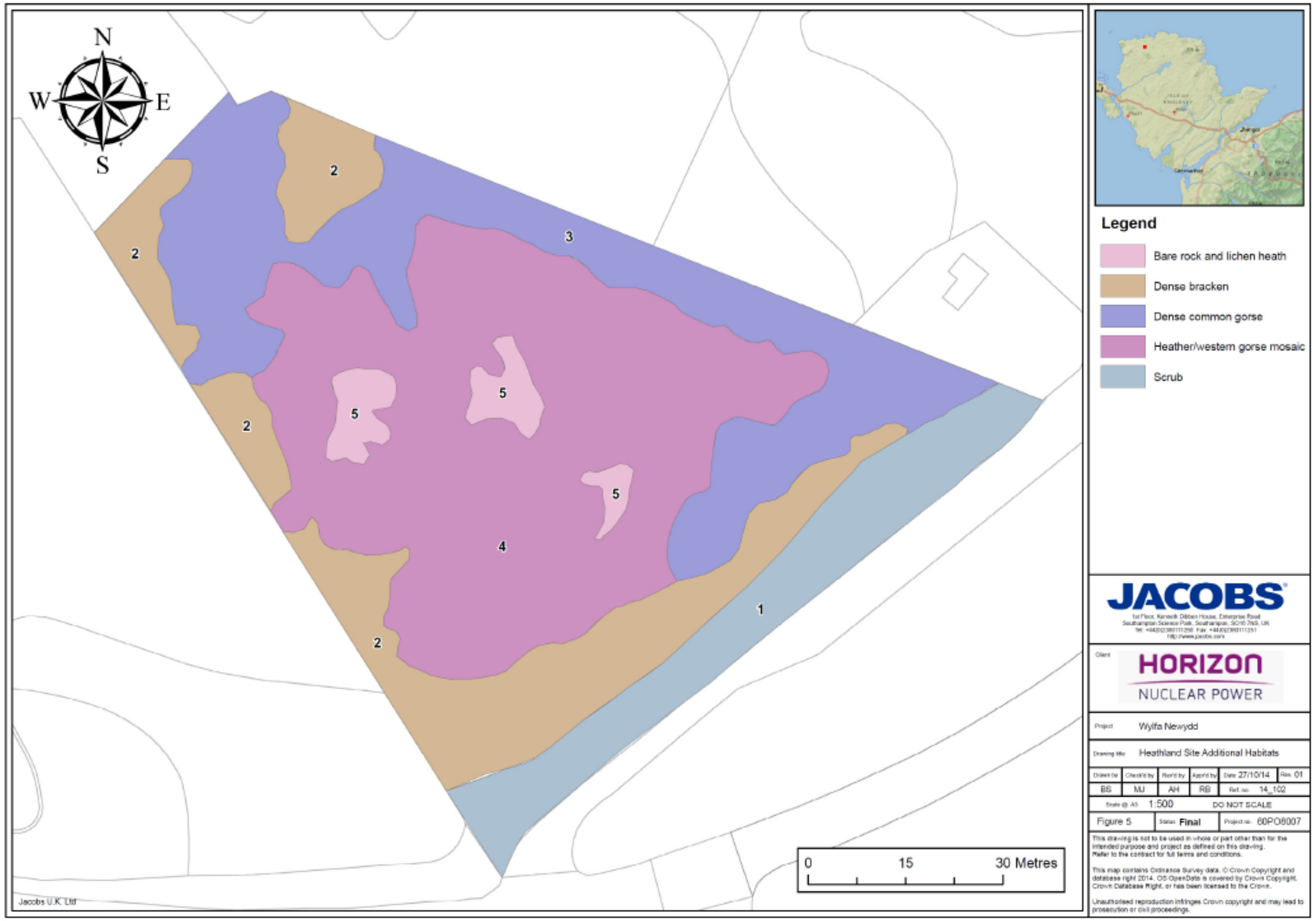

Figure 3.12 Groes-fechan Heathland Vegetation Map (from Jacobs, 2014)

3.2.14 Sites 14 to 23 (from Jacobs, 2015)

Figure 1.2 shows the coastal survey Sites 14 to 23. These coastal sites extended from the approximate mean high-tide mark up to 50m inland and included four habitat types:

- perennial vegetation of stony banks;
- wet coastal habitats;
- shingle beaches; and
- coastal rocks.

Perennial vegetation of stony banks

Vegetation types SD1 *Rumex crispus – Glaucium flavum* shingle community were recorded at Sites 14b, 17b, 17d and 17f. MC6 *Atriplex prostrate – Beta vulgaris* ssp. *maritima* sea-bird cliff community was recorded at Sites 16a, 16d and 22. These habitats resembled the Annex 1 habitat perennial vegetation of stony banks, a qualifying feature of the Cemlyn Bay SAC.

Wet coastal habitats

Wet coastal habitats indicated by NVC type SM16 *Festuca rubra* saltmarsh community, *Juncus gerardii* sub-community saltmarsh were characterised by abundant saltmarsh rush (*Juncus gerardii*) and sea milkwort (*Glaux maritima*). At Site 17g, a saltmarsh form of red fescue (*Festuca rubra*) was dominant. Distant sedge (*Carex distans*), glaucous sedge (*Carex flacca*) and sea rush (*Juncus maritimus*) were also recorded.

Shingle beaches

Sites 20 and 22 were entirely composed of shingle beaches, and Sites 14b, 16a, 16d, 17b, 17d and 17f also fell into this category. These habitats contained vegetation consistent with open vegetation and coastal shingle with some tendencies towards grassland and dry salt marsh. These habitats tended to grade into each other to some extent.

The commonest NVC community present at these locations was SD1 *Rumex crispus – Glaucium flavum* shingle community. Of the other surveyed sites that fall into this category, Sites 16a and 22 showed a poor Tablefit correlation for the MC6 *Atriplex prostrate – Beta vulgaris* ssp. *maritima* sea-bird cliff community, with most of the vegetation being found on low, eroding cliffs or the area of slumping below them. At both sites, species common to cliff faces, such as sheep's-bit scabious (*Jasione montana*), were recorded. At both survey locations, spear-leaved orache (*Atriplex prostrata*), sea beet (*Beta vulgaris* subspecies *maritimum*), curled dock (*Rumex crispus*) and sea mayweed (*Tripleurospermum maritimum*) were significant components of the vegetation.

Site 20 was identified as the mesotrophic grassland community MG11 *Festuca rubra - Agrostis stolonifera - Potentilla anserina* mesotrophic grassland, although this is unusual as only silverweed was present and neither of the grasses were. The dominance of spear-leaved orache at this site and the low number of taxa present would suggest that it is really a different community than indicated by the results. Visually, the site appeared more in line with the MC6 community than MG11 despite the abundance of goose-grass (*Galium aparine*) and the presence of silverweed.

Coastal rocks

The coastal rocks included all of Sites 15, 21 and 23 and the remaining sites. Visually, the communities at these sites were typical of the hard coastal cliffs of the north and west of Britain. Due to the acidic nature of many of the rocks, there was a tendency toward acidic grassland and maritime heath in many places. The dominant

NVC community of MC5 *Armeria maritima–Cerastium diffusum* ssp. *diffusum* maritime therophyte community and associated sub-communities were recorded here.

Site 23 was a very convincing MC1 *Crithmum maritimum – Spergularia rupicola* maritime rock-crevice community typical of exposed hard cliffs of the west coast of the UK. Thrift (*Armeria maritima*) was also abundant here, as it was throughout much of the coastal rocks in the whole study area.

Site 15 showed a very poor correlation with the MC5 maritime cliff community. This was perhaps due to the presence of several salt marsh plants including sedges, such as distant sedge (*Carex distans*) and long-bracted sedge (*C. extensa*), and heathland plants including mat-grass (*Nardus stricta*), heath milkwort (*Polygala serpyllifolia*) and western gorse. The presence of these species appears to have distorted the result of the analysis, but the abundance of thrift and the presence of such species as English stonecrop (*Sedum anglicum*), sea campion (*Silene uniflora*), sea pearlwort (*Sagina maritima*) and spring squill (*Scilla verna*) seem to suggest a maritime cliff community, possibly MC5 again.

Table 3.1 Sites 14 to 23 – Coastal Habitat NVC survey results

Site Name	Sites	Central Grid Ref.	Actual NVC community (Best fit)	Goodness of Fit[7]
Cemlyn Bay to Cerrig Brith	14a	SH 3394 9363	MC5 *Armeria maritima - Cerastium diffusum* ssp. *diffusum* maritime therophyte community and H7 *Calluna – Scilla verna* heath.	68 and 60 - both good
	14b	SH 3374 9334	SD1 *Rumex crispus – Glaucium flavum* shingle community.	92 - very good
	14c	SH 3369 9328	No meaningful result; best fit S23 Other water-margin vegetation.	26 - extremely poor
Cerrig Brith	15	SH 3418 9361	MC5c *Armeria maritima-Cerastium diffusum* ssp. *diffusum maritime* therophyte community, *Desmazeria marina* sub-community.	46 - very poor
Porth-y-Felin	16a	SH 3444 9338	MC6 *Atriplex prostrate – Beta vulgaris* ssp. *maritima* sea-bird cliff community[8].	52 - poor
	16b	SH 3443 9338	SM16 *Juncus gerardii* saltmarsh.	77 - good
	16c	SH 3440 9341	MC5 *Armeria maritima - Cerastium diffusum* ssp. *diffusum* maritime therophyte community.	81 - very good
	16d	SH 3434 9347	MC6 *Atriplex prostrate – Beta vulgaris* ssp. *maritima* sea-bird cliff community[9].	45 - very poor
	16e	SH 3427 9351	MC5 *Armeria maritima – Cerastium diffusum* and MC10 *Festuca rubra – Plantago* spp.	59 and 42 - both poor
Porth-y-pistyll	17a	SH 3469 9378	MG11 *Festuca rubra – Agrostis stolonifera – Potentilla anserina* mesotrophic grassland.	46 - poor

[7] Using 'tablefit' (Hill, 1996) as described in Section 2.2.6.
[8] The *Atriplex* species named for this community in Rodwell (1992) is *Atriplex hastata*, synonomous with the recorded taxon *Atriplex prostrata.*
[9] MG11b was also identified as a possible fit for Site 16d.

Site Name	Sites	Central Grid Ref.	Actual NVC community (Best fit)	Goodness of Fit[7]
	17b	SH 3478 9369	SD1 *Rumex crispus – Glaucium flavum* shingle community.	66 - fair
	17c	SH 3473 9353	MC5 *Armeria maritima – Cerastium diffusum* maritime cliff community.	58 - poor
	17d	SH 3470 9346	SD1 *Rumex crispus – Glaucium flavum* shingle community.	94 - very good
	17e	SH 3464 9349	MC5 *Armeria maritima – Cerastium diffusum* and MC6 *Atriplex prostrate – Beta vulgaris* ssp. *maritima* sea-bird cliff community.	70 - good and 56 - poor
	17f	SH 3454 9348	SD1 *Rumex crispus – Glaucium flavum* shingle community.	66 - fair
	17g	SH 3448 9304	SM16c *Festuca rubra* salt – marsh community, *Festuca rubra – Glaux maritima* sub-community	80 - very good
West of Existing Power Station	18a	SH 3481 9387	SM16 *Juncus gerardii* saltmarsh and SM15 *Juncus maritima – Triglochin maritima*.	60 - fair and 56 - poor
	18b	SH 3474 9384	MC5 *Armeria maritima – Cerastium diffusum* maritime cliff community.	70 - good
Wylfa Head Coast	19a	SH 3538 9448	MC5 *Armeria maritima – Cerastium diffusum* maritime cliff community.	59 - poor
	19b	SH 3581 9447	H7a *Calluna vulgaris – Scilla verna* heath (*Armeria maritima* subcommunity).	68 - fair
Porth yr Ogof	20	SH 3558 9422	MG11b *Festuca rubra – Agrostis – Potentilla anserina* (*Atriplex prostrata* subcommunity).	64 - fair
Porth yr Ogof to Porth-y-wylfa	21	SH 3580 9402	MC5 *Armeria maritima – Cerastium diffusum* maritime cliff community.	57 - poor
Porth-y-Wylfa	22	SH 3605 9375	MC6 *Atriplex prostrate – Beta vulgaris* ssp. *maritima* sea-bird cliff community.	55 - poor
Porth-y-Wylfa to Penrhyn	23	SH 3660 9379	MC1 *Crithmum maritimum – Spergularia rupicola* maritime cliff community.	77 - good

3.2.15 Wylfa Head East

Ten quadrats were set out on the eastern side of Wylfa Head. The results from this survey are summarised in Table 3.2. The study area and quadrat locations are shown in Figure 3.13.

The results, combined, produced a fair goodness of fit rating of 60 for MC9 *Festuca rubra – Holcus lanatus* maritime grassland community, with only a slightly poorer goodness of fit rating of 57 for MG5 *Cynosurus cristatus – Centaurea nigra* mesotrophic grassland. This combined result would suggest a variable mosaic of

the mesotrophic grassland and maritime grassland communities MG5 and MC9, respectively. However, Wylfa Head East is considered to be more variable and there are likely to be at least four habitat types present. The additional two are H7 *Calluna – Scilla verna* heath and MC8a *Festuca rubra – Armeria maritima* maritime grassland, typical sub-community.

Notable species recorded at Wylfa Head were lesser tufted sedge, chaffweed (*Anagallis minima*), lesser water plantain (*Baldellia ranunculoides*), yellow bartsia (*Parentucellia viscosa*), allseed (*Radiola linoides*), heath pearlwort (*Sagina subulata*), spring squill, petty whin (*Genista anglica*) and adder's-tongue (*Ophioglossum vulgatum*).

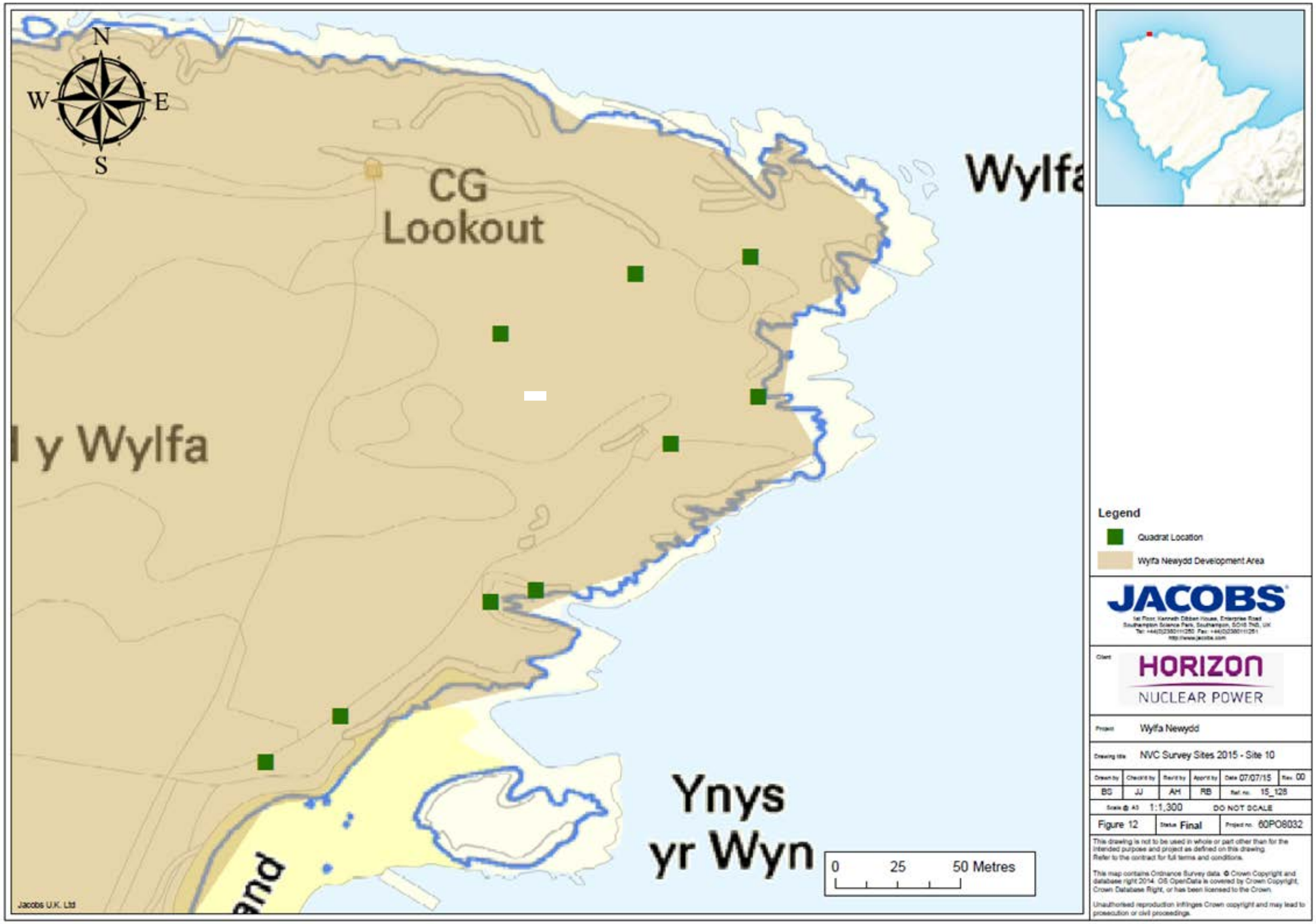

Figure 3.13 Site 24 – Wylfa Head East Quadrat Survey Locations (from Jacobs, 2015)

Table 3.2 : Wylfa Head East

Quadrat	Grid Reference	NVC Community (Best fit)	Goodness of Fit
1	SH 35687 94493	H7 *Calluna – Scilla verna* heath.	51 - poor
2	SH 35708 94443	MC9c *Festuca rubra – Holcus lanatus* maritime grassland community (*Achillea* subcommunity).	62 - fair
3	SH 35762 94467	MC9c *Festuca rubra – Holcus lanatus* maritime cliff community (*Achillea* subcommunity).	73 - very good
4	SH 35808 94474	MC8a *Festuca rubra – Armeria maritima* maritime cliff community.	53 - poor
5	SH 35811 94418	MC8a *Festuca rubra – Armeria maritima* maritime cliff community.	66 - fair
6	SH 35776 94399	MC5a *Armeria maritima – Cerastium diffusum* (*Aira praecox* subcommunity).	51 - poor
7	SH 35724 94336	MC9 *Festuca rubra – Holcus lanatus* maritime cliff community.	46 - very poor
8	SH 35704 94336	No meaningful result; best fit OV23 *Lolium perenne – Dactylis glomerata* community.	27 - very poor
9	SH 35644 94290	MC9c *Festuca rubra – Holcus lanatus* maritime cliff community (*Achillea* subcommunity).	72 - good
10	SH 35614 94272	MC9c *Festuca rubra – Holcus lanatus* maritime cliff community (*Achillea* subcommunity).	72 - good
Combined best result		**MC9 *Festuca rubra – Holcus lanatus* maritime cliff community.**	**60 - fair**
Alternative best result		**MG5 *Cynosurus cristatus – Centaurea nigra* mesotrophic grassland.**	**57 - poor**

3.2.16 Uncommon plant species

Sea kale is a notable species and was recorded in 12 locations during the 2015 audit of the study area. These were in Sites 15, 16 and 17 between Cerrig Brith and Porth-y-pistyll, as shown in Figure 3.14 and Table 3.3.

Table 3.3 : Sea Kale Locations

Grid reference	Number of plants	Grid reference	Number of plants
SH 34176 93621	2	SH 34785 93686	3
SH 34339 93430	10	SH 34788 93678	3
SH 34354 93416	5	SH 34740 39486	1
SH 351 942	10	SH 34556 93485	10
SH 34786 93693	4	SH 34550 93486	6
SH 2480 893868	18	SH 34578 93486	1

No sea radish, brackish water-crowfoot or beaked tasselweed (characteristic species of perennial vegetation of stony banks) was recorded within any of the survey areas. No plant species listed under Section 42 of the NERC Act 2006 were recorded.

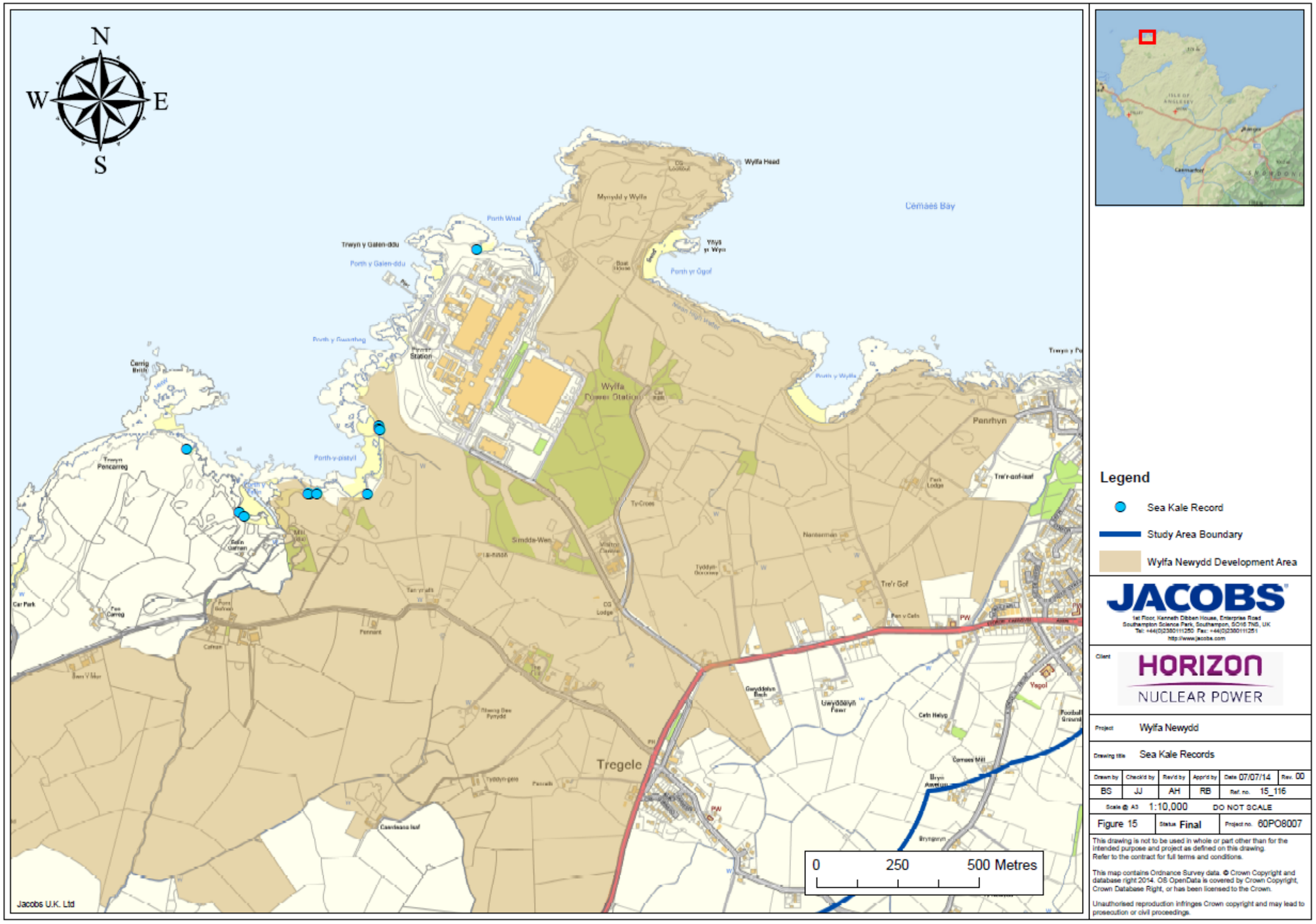

Figure 3.14 Location of Sea Kale Plants Recorded during 2015 surveys (from Jacobs, 2015)

4. Discussion

4.1 Notable Species

No plant species listed in Schedule 5 of The Conservation of Habitats and Species Regulations 2010 (as amended) were recorded during the surveys or identified during the desk study. Bluebell was identified in the desk study and found in the study area. This species is listed in Schedule 8 of The Wildlife and Countryside Act 1981 (as amended) but is protected against unlawful sale only.

A number of notable vascular plants (but with no legal protection) were identified during the desk study and are listed in Appendix A. These species are listed in LBAPs (Anglesey, Conwy, Denbighshire, Flintshire and Gwynedd) or have been described as 'locally important' by plant recording experts. The locations of the records are on Figure 3.1. Of these species, bluebell, marsh fern, petty whin and allseed were also recorded during the field survey. The majority of other notable species provided in the Cofnod data were located in habitats that are not found in the survey area or were records from before 1995. Additional records of notable species were also made during the field surveys and are detailed below.

According to the *New Atlas of the British and Irish Flora* (Preston *et al.*, 2002), some species recorded at Wylfa Head were not particularly common or widespread in the UK as a whole. These species were tufted sedge species, chaffweed, lesser water plantain, yellow bartsia, allseed, heath pearlwort and spring squill. Yellow bartsia was a particularly significant discovery as it was considered absent from the Isle of Anglesey in 2000 (Preston *et al.*, 2002).

Four species recorded at Trwyn Pencarreg were not particularly common or widespread in the UK as a whole (Preston *et al.*, 2002). These species included the previously mentioned lesser water plantain, black bog rush and spring squill. A fourth species falling into this category was tufted clubrush; this is a scarce coastal plant widespread along western coasts from the Outer Hebrides to the Isle of Wight and probably commonest on the coasts of Wales, including Anglesey.

According to the New Atlas of the British and Irish Flora (Preston *et al.*, 2002), five species recorded at Tre'r Gof SSSI are not particularly common or widespread in the UK. These were tufted sedge, slender-leaved sedge, saw-sedge, black bog rush and marsh fern. All of these species are present elsewhere on Anglesey, marsh fern is present in at least four sites in the study area and all of the others are even more widespread and common on the island.

At Cae Gwyn SSSI, four scarce plants were recorded. These species were royal fern, cranberry, slender-leaved sedge and bog sedge. These species are widespread on Anglesey (Preston *et al.*, 2002) with the exception of cranberry for which Cae Gwyn SSSI appears to be its only site.

Sea kale, an uncommon plant in the UK, was recorded in 12 locations between Cerrig Brith and Porth-y-pistyll, as shown in Figure 3.14. These plants were recorded approximately 700m north-east of the population known to be present at Cemlyn Bay where sea kale is found along much of the length of the foreshore (Sneddon and Randall, 1993). Additional sea kale has been recorded at Site 6 and north of the Existing Power Station, approximately 1.9km from Cemlyn Bay. These areas are separated by habitat unsuitable for sea kale producing a barrier effect such that it is unlikely that there are any direct interactions between the different populations. A total of 54 sea kale plants were recorded during the survey suggesting any minor loss of individual sea kale plants in the Wylfa Newydd Development Area is unlikely to have a significant impact on the wider distribution along the coast of Anglesey. Sea kale distribution on Anglesey is shown in Figure 4.1.

Plate 1 Sea kale at Cemlyn Bay (from Jacobs, 2013a)

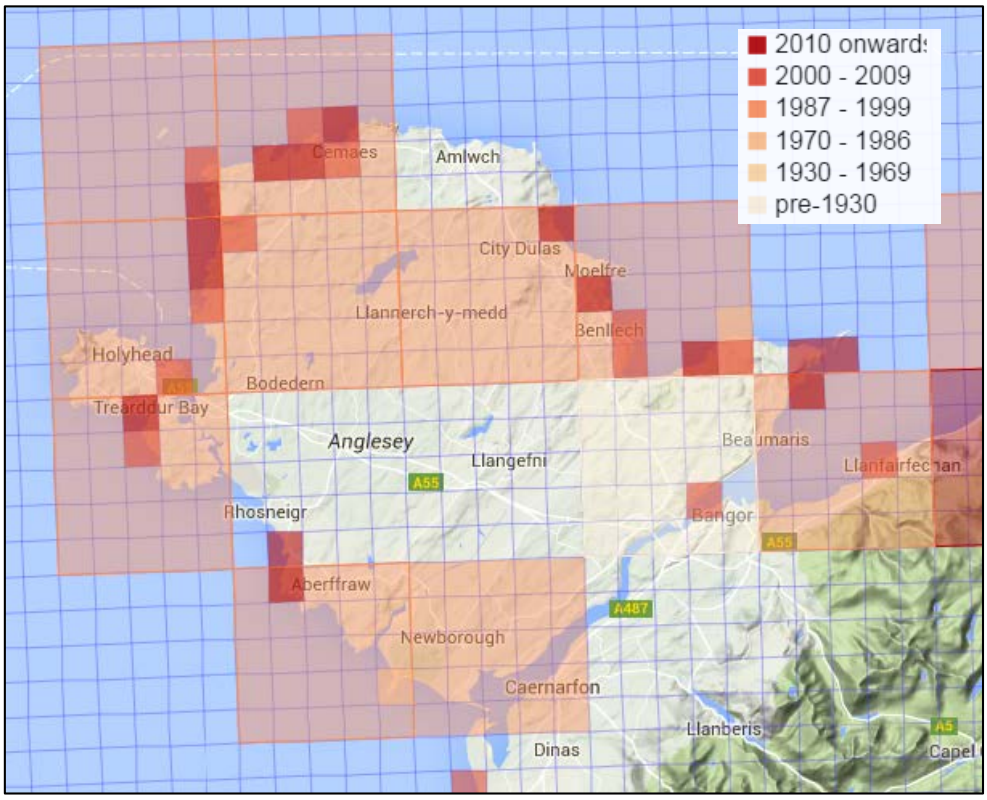

Figure 4.1 Distribution of Sea kale along Anglesey Coast (BSBI, 2015)

All of the bryophyte species found during survey were common and/or widespread, at least in upland parts of the UK, according to Atherton, Bosanquet and Lawley (2010).

4.2 Habitats of Conservation Interest

The NVC groups recorded in the study area have been collated in the following section into their respective Section 42 habitat types, which are of conservation importance. The locations of these habitats are shown in Figure 4.3.

4.2.1 Lowland grassland

The MG5 *Cynosurus cristatus – Centaurea nigra* grassland NVC category identified across the study area is recognised as 'lowland grassland', a habitat that is listed under Section 42 of the NERC Act 2006.

This habitat was identified at five sites across the study area: Site 3 and Site 24 at Wylfa Head; Site 6 – Trwyn Pencarreg and Felin Cafnan; Site 7 – Fields at Ty-Croes; and at Site 12 – Mynydd Ithel. The total area of MG5 grassland within the study area equates to approximately 14.3ha (2% of study area). The three fields at Mynydd Ithel represent the largest component at 3.8ha, approximately 27% of the total MG5 grassland that can be found within the study area, outside of the Wylfa Newydd Development Area.

Much of the lowland grassland habitat on Anglesey is fragmented and interspersed with other semi-improved natural habitats and improved grassland. However, on the exposed west and north coasts, a series of sites supports some of the finest maritime grassland on the island (WBP, 2014), including areas south of Cemlyn Bay. The lowland grassland types identified in the study area are located outside of the priority lowland grasslands and heathland identified by the Wales Biodiversity Partnership (WBP), as shown in Figure 4.2.

Figure 4.2 Priority Lowland Grassland and Heathland (Wales Biodiversity Partnership, 2014)

4.2.2 Lowland heath

The H8 *Calluna vulgaris – Ulex gallii* heath NVC category is recognised as "Lowland Heath", which is a habitat of principle importance for conservation that is listed under Section 42 of the NERC Act 2006.

Dry lowland heath is fragmented and sparsely represented in the study area. In addition to the land parcel at Site 13 – Groes-fechan, H8 can be found at one other site in the study area: at Site 6 – Trwyn Pencarreg and Felin Gafnan (Arup, 2012). The total area of H8 heath within the study area equates to approximately 2.1ha (0.3% of the study area). The land parcel at Groes-fechan represents a smaller component at 0.4ha, approximately 23% of the total H8 lowland heath that can be found in the study area.

The compartment at Site 13 – Groes-fechan can probably be regarded as not being as important as the coastal heathland found at Site 6 – Trwyn Pencarreg and Felin Gafnan, as it is in the early stages of succession and is showing signs of encroachment by both bracken and common gorse. On the other hand, the heathland at Trwyn Pencarreg is listed as part of the Anglesey coastal grassland/heathland inventory (WBP, 2014), which, when combined with other sites on Anglesey, account for 5% of this habitat remaining in Britain. Both sites are located outside of the Wylfa Newydd Development Area.

One of the 10 quadrats surveyed on Wylfa Head in 2015 produced an NVC result indicative of heathland habitat (H7 *Calluna vulgaris – Scilla verna* heath community). This result had a poor (51%) goodness of fit, suggesting either a highly fragmented and isolated remnant habitat type or a transition to a different community.

4.2.3 Lowland fens

The sparsely represented swamp communities recorded at Site 6 – Felin Gafnan and the Site 8 – Tre'r Gof SSSI are considered 'lowland fens: a habitat of principle importance for conservation that is listed under Section 42 of the NERC Act 2006. In addition, the S2 *Cladium* swamp and sedge-beds recorded at Tre'r Gof SSSI (see Figure 4.3) are also listed as H7210 (Calcareous fens with *Cladium mariscus*) under Annex 1 of the Habitat Regulations (JNCC, 2007).

The mire communities at Site 9 – Cae Gwyn SSSI (M9 *Carex rostrata – Calliergonella cuspidatum/giganteum* mire and M5 *Carex rostrata – Sphagnum squarrosum* mire) are also included in the Section 42 list.

There are approximately 470ha of fen habitat on Anglesey with all larger areas designated as SSSI, including SAC and Ramsar sites, as exemplified by the designation at Site 8 – Tre'r Gof SSSI. Smaller areas of undesignated, isolated habitat were found at Site 6. Although these habitats are rare in the study area, they contribute to less than 1% of lowland fen habitat identified on Anglesey as a whole.

Lowland fens identified at Site 6 – Felin Gafnan and Site 9 – Cae Gwyn SSSI are located outside of the Wylfa Newydd Development Area while Site 8 – Tre'r Gof SSSI is located within this area.

4.2.4 Purple moor grass and rush pastures

The M23 *Juncus effusus/acutiflorus* rush pasture identified at Site 9 – Cae Gwyn SSSI, as well as the M25 *Molinia caerulea – Potentilla erecta* mire at Site 6 – Trwyn Pencarreg and Felin Cafnan, are recognised as 'purple moor grass and rush pastures', a habitat of principle importance for conservation that is listed under Section 42 of the NERC Act 2006. These habitat types are both located outside of the Wylfa Newydd Development Area.

4.2.5 Wet woodland

The W1 *Salix cinerea – Galium palustre* woodland NVC category identified at Tre'r Gof SSSI is recognised as "Wet Woodland", a habitat listed under Section 42 of the NERC Act 2006. This habitat is sparse across the study area but is considered widespread across the UK.

4.2.6 Maritime cliff and slopes

All of the coastal grassland slopes and cliff edges in the study area are considered to be "Maritime Cliff and Slopes", a habitat listed under Section 42 of the NERC Act 2006. This habitat extends along the entire coastal aspect of the study area.

4.2.7 Perennial vegetation of stony banks

Perennial vegetation of stony banks is an Annex I habitat type that is comparable to the Section 42 habitat of 'coastal vegetated shingle'. The two NVC types recorded in the study area that constitute perennial vegetation of stony banks were SD1 *Rumex crispus – Glaucium flavum* shingle community and MC6 *Atriplex prostrate – Beta vulgaris* ssp. *maritima* sea-bird cliff community (JNCC, 2004).

SD1 was identified at Sites 14b, 17b, 17d and 17f, with MC6 recorded at sites 16a, 16b and 22 (see Figure 4.3). The NVC type, Tablefit correlation and interpretation of significance for these communities are provided in Table 4.1.

Table 4.1 Summary of survey sites with potential to support perennial vegetation of stony bank communities MC6 and SD1

Site	NVC Type	TABLEFIT correlation	Interpretation of significance
14b	SD1	Poor	Site 14d is outside of the Power Station Site and is separated from it by the headland that includes Cerrig Brith. The site substrate and associated communities are, therefore, unlikely to be affected by the Project.
16a	MC6	Poor	Site 16a has a poor affiliation to the MC6 community and it is more likely to be a community in flux than truly representative of MC6.
16d	MC6	Very poor	Site 16b has a very poor affiliation to the MC6 community and it is more likely to be a community in flux than truly representative of MC6.
17b	SD1	Fair	Site 17b is discussed in greater detail below.
17d	SD1	Very good	Site 17d is discussed in greater detail below.
17f	SD1	Fair	Site 17f is discussed in greater detail below.
22	MC6	Very good	Site 22 is outside of the Power Station Site and is sheltered from it by being in Porth-y-Wylfa. The site substrate and its habitats are, therefore, unlikely to be affected by the Project.

It is considered that Sites 14b, 16a, 16d and 22 are not of significant importance for the reasons given in Table 4.1 and are not discussed further in terms of affecting the determination of the value and sensitivity of the habitats in the study area. However, Sites 17b, 17d and 17f in Porth-y-pistyll do support habitats that resemble those of the description of the SD1 habitat and therefore Annex 1 habitat type H1220.

The Porth-y-pistyll sites with SD1 habitat are 0.8 ha, 0.4ha and 0.6ha respectively: a total of 1.8ha. In the nearby shingle bar community of the Cemlyn Bay SAC, the perennial vegetation of stony banks represents 3.1% of the 46ha total (JNCC, 2015a) and so is approximately 1.3ha in size. This means that there are a total of 2.1ha of H1220 perennial vegetation of stony banks habitat if the areas in the study area are combined with those present in Cemlyn Bay SAC, and the 1.8ha within Porth-y-pistyll represents 58% of the total. However, in national terms the amount of perennial vegetation of stony bank vegetation in the study area is not considered to be significant.

In national terms, there are some 4000ha of stable or semi-stable vegetated shingle around the coast of the UK (JNCC, 2015b). This would suggest that 1.8ha is highly unlikely to be significant on anything other than a local scale. This is supported when comparing the other SACs for which perennial vegetation of stony banks is listed, either as a reason for selection (see Table 4.2), or being present but not as a reason for selection (see Table 4.3). Table 4.2 shows that the smallest area for which perennial vegetation of stony banks is used as a primary selection feature is over 45 times larger than that present at Cemlyn Bay SAC (see Morcambe Bay SAC). Furthermore, Table 4.3 shows that sites with areas of perennial vegetation of stony banks that are between 100 and 335 times larger than those at Cemlyn Bay SAC exist but still have not been used as reasons for site selection (see Strangford Lough SAC and Solway Firth SAC respectively).

Table 4.2 UK SACs where perennial vegetation of stony banks is a primary reason for selection

SAC name	Total area (ha)	Proportion of shingle habitat	Area of shingle (ha)
Chesil and the Fleet (JNCC, 2015c)	1,632	32%	522
Culbin Bay (JNCC, 2015d)	613	20%	123
Dungeness (JNCC, 2015e)	3,224	64%	2,063
Lower River Spey – Spey Bay (JNCC, 2015f)	653	16%	104
Morecambe Bay (JNCC, 2015g)	61,506	0.1%	62
North Norfolk Coast (JNCC, 2015h)	3,207	19.1%	613
Orfordness – Shingle Street (JNCC, 2015i)	901	40%	360

Table 4.3 UK SACs where perennial vegetation of stony banks is present but is not a reason for selection

SAC name	Total area (ha)	Proportion of shingle habitat	Area of shingle (ha)
Cemlyn Bay	46	3.1%	1.3
Minsmere to Walberswick Heaths and Marshes (JNCC, 2015j)	1,266	15%	190
Solent Maritime (JNCC, 2015k)	11,325	3%	340
Solway Firth (JNCC, 2015l)	43,637	<1%	437 (max)
Strangford Lough (JNCC, 2015m)	13,599	<1%	136 (max)

In a more local context, Porth-y-pistyll is close to Cemlyn Bay SAC and, by sharing similar habitats, there may be the potential for interaction between the sites. In terms of significance of these effects, the previous paragraphs suggest that Porth-y-pistyll is of very limited value. Therefore, only changes in interactions that lead to deleterious impacts to the SAC would be of concern. No such interactions have been identified but the potential for Porth-y-pistyll to act as a source population of pioneer species does exist. This would be of benefit to the habitats of Cemlyn Bay SAC should recolonisation be required following a catastrophic denudation of the bar, e.g. as a result of a violent storm. However, the geography of the area means that Porth-y-pistyll is separated from Cemlyn Bay SAC by 1.2km overland, and by sea it is separated by the Trwyn Pencarreg headland and Cerrig Brith rocks. These factors would undoubtedly hinder potential dispersal of viable plant material between areas, and would be reduced further by prevailing westerly winds. The similar habitats at Site 14b could also fulfil this function and would be more likely to do so as it is closer and lacks a geographical barrier to dispersal.

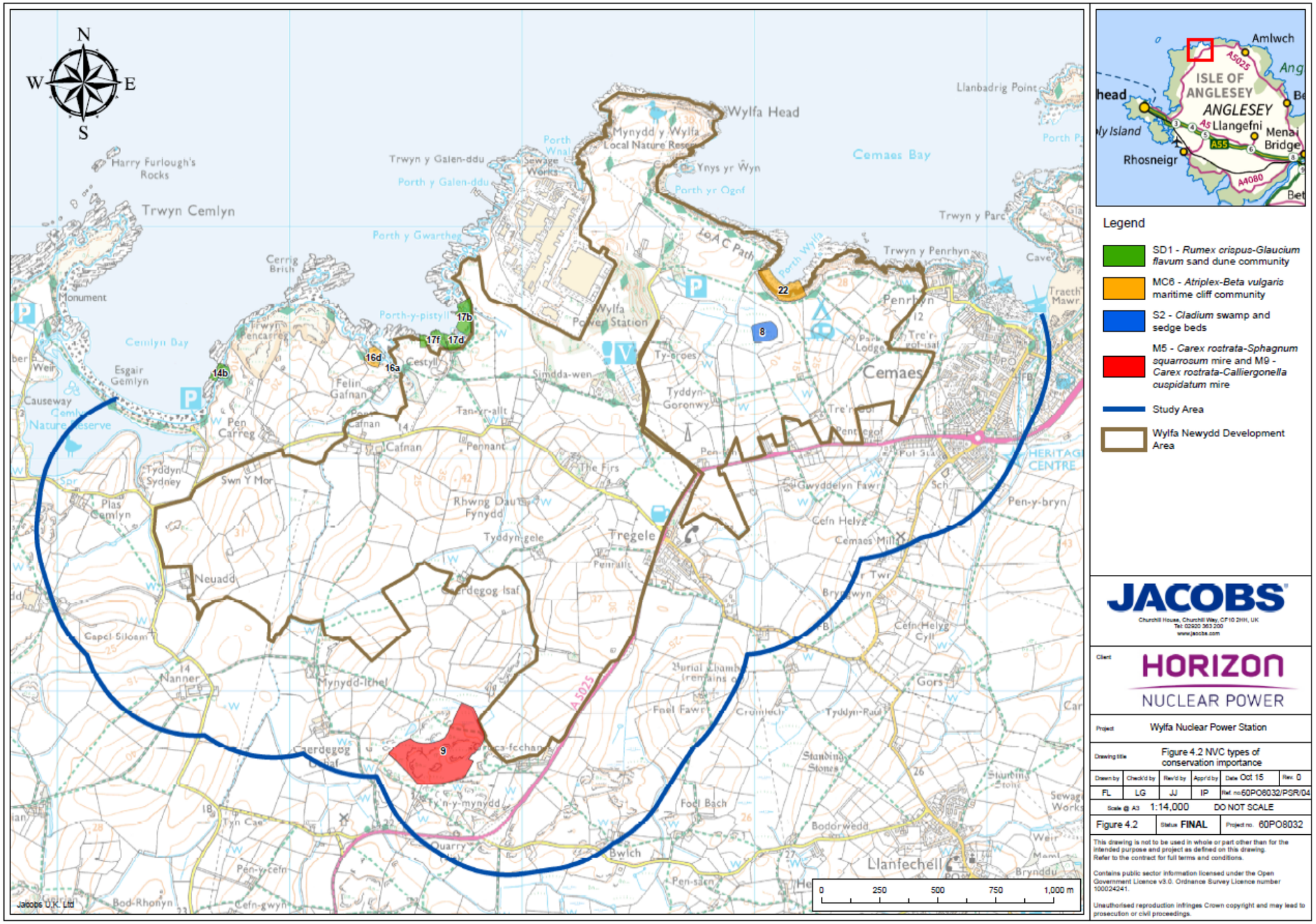

Figure 4.3 Habitats of conservation importance

5. Conclusions

The majority of vegetation communities identified were reasonably common and widespread in the north and west of the UK. The exceptions were:

- M5 *Carex rostrata – Sphagnum squarrosum* and M9 *Carex rostrata – Calliergon cuspidatum/giganteum* mire communities at Cae Gwyn SSSI;
- S2 *Cladium mariscus* swamp and sedge-beds at Tre'r Gof SSSI; and
- SD1 *Rumex crispus – Glaucium flavum* shingle community and MC6 *Atriplex prostrate – Beta vulgaris* ssp. *maritima* sea-bird cliff community at Porth-y-pistyll and Cemlyn Bay.

These NVC vegetation types of conservation importance were fragmented with limited distribution across the study area. Many of these habitats were located outside the Wylfa Newydd Development Area.

The NVC surveys of Wylfa Head and Trwyn Pencerrag showed both sites support varied plant communities with several uncommon native species. The coastal grasslands at Wylfa Head were primarily MC9 *Festuca rubra – Holcus lanatus* communities, and, at Trwyn Pencarreg, the dominant habitat was *Ulex gallii* heathland. These habitats were assessed as common types in the UK and the maritime grassland communities present are likely to be widespread along western coasts. Further detailed surveys at Wylfa Head East suggested that the dominant NVC community was MC9 maritime cliff community, associated with more sheltered coastal rocks than is typical of the Wylfa Head area as a whole. The NVC analysis also supported the visual assessment of a high degree of variability across the site, and the more exposed, and heavily rabbit-grazed, areas of the site showed a tendency towards other maritime cliff communities such as MC5 and MC8. In general, the vegetation community here was distinctly that of maritime cliff vegetation as opposed to mesotrophic grassland. These habitats are considered to be of medium conservation value.

Tre'r Gof SSSI has maintained its botanical interest and diversity, although much of the surrounding landscape has been agriculturally improved. The habitats found were very different in character from their surroundings and, as such, they represent unique examples of their type within the study area and are considered to have a high conservation value.

Cae Gwyn SSSI proved to be both more fragmented and also more acidic in character than Tre'r Gof SSSI, with a considerable small scale variation in NVC vegetation types indicative of the presence of small basic flushes. Most of the NVC communities identified at Cae Gwyn SSSI were either widespread and/or common nationally or common on Anglesey but much rarer elsewhere. The exception being M5 *Carex rostrata – Sphagnum squarrosum* mire community which is scarce both nationally and on Anglesey. Cae Gwyn SSSI is considered to have a high conservation value.

The surveys showed that the fields at Mynydd Ithel are important ecologically due to their isolation and percentage cover of the study area. Although the plants present in the fields are common and widespread, it is the diversity of plant species within the community as a whole that provides ecological value.

Combined with its limited extent of only 0.4 ha, unfavourable condition and isolation from Trwyn Pencarreg, the heathland at Groes-fechan is considered to be of less ecological importance than the coastal heathland found at Trwyn Pencarreg.

The coastal vegetated shingle representative of the Annex 1 habitat perennial vegetation on stony banks was identified in four locations in the study area. Three of these could be affected by the Project and are all in Porth-y-pistyll. This habitat type is considered to have a high level of conservation importance. However, the extent of the habitat type in the Wylfa Newydd Development Area is 1.8 ha, which represents only 10% of the total in the local area and an extremely small fraction of the UK total. The limited number of sea kale plants supported by the sites in Porth-y-pistyll, and the absence of the other key species, supports further the argument to suggest that the SD1/H1220 habitats present are of limited value.

Bluebell was the only legally protected plant species recorded in the study area. No additional notable species were recorded. However, a number of locally important species were recorded: adder's-tongue, allseed, chaffweed, heath pearlwort, lesser water plantain, petty whin, spring squill, sea kale, tufted sedge and yellow bartsia.

Finally, across all surveyed sites it was noted that no vascular plant species were found described as non-native to the UK in the New Atlas of the British and Irish Flora (Preston *et al.*, 2002). This is indicative of a long period of habitat continuity combined with a very low past human impact.

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Appendix A. Cofnod Plant Species Records

Key:

ANG:	Isle of Anglesey
CITES:	Convention on International Trade in Endangered Species
CON:	Conwy
DEN:	Denbighshire
FLI:	Flintshire
GWY:	Gwynedd
HDir:	EU Habitats Directive
LBAP:	Local Biodiversity Action Plan
LI:	Locally Important Species – identified by the County Recorder as being of particular importance in the specified Vice-County
RD1:	Red Data Book listing for the UK based on IUCN guidelines
RD2:	Red Data Book listing for the UK not based on IUCN guidelines
SNP:	Snowdonia
UKBAP:	UK Biodiversity Action Plan Priority Species
WCA8:	Wildlife and Countryside Act Schedule 8
WVP:	IUCN Threat Listing of Welsh Vascular Plants

Scientific Name	Common name	Status List	Grid Reference	Location	Date
Apium graveolens	Wild celery	LI[VC52]	SH 3293	Cemlyn	1994
Apium graveolens	Wild celery	LI[VC52]	SH 331932	Cemlyn	Before September 1990
Armeria maritima	Sea pink	LBAP[ANG]	SH 330932	Cemlyn	2008
Armeria maritima	Sea pink	LBAP[ANG]	SH 3314893316	Cemlyn	02/06/2012
Armeria maritima	Sea pink	LBAP[ANG]	SH 331932	Cemlyn Bay	06/06/1989 – 07/06/1989
Armeria maritima	Sea pink	LBAP[ANG]	SH 331932	Cemlyn	Before September 1990
Armeria maritima	Sea pink	LBAP[ANG]	SH 33579312	Anglesey	15/11/2003
Armeria maritima	Sea pink	LBAP[ANG]	SH 3393	Cemlyn	2009
Armeria maritima	Sea pink	LBAP[ANG]	SH 3393	Cemlyn	Aug-98
Armeria maritima	Sea pink	LBAP[ANG]	SH 3393	Cemlyn	16/06/1986 – 28/06/1986
Armeria maritima	Sea pink	LBAP[ANG]	SH 3393	Cemlyn	23/04/2010 – 08/08/2010
Armeria maritima	Sea pink	LBAP[ANG]	SH 3393	Cemlyn	23/05/2001 – 26/07/2001
Armeria maritima	Sea pink	LBAP[ANG]	SH 3393	Cemlyn	April 2011 – August 2011
Armeria maritima	Sea pink	LBAP[ANG]	SH 3393	Cemlyn	Spring 1999 – Summer 1999
Armeria maritima	Sea pink	LBAP[ANG]	SH 355944	Mynydd y Wylfa	13/07/1983
Armeria maritima	Sea pink	LBAP[ANG]	SH 355944	Tre'r Gof SSSI and	1986 approx

				Mynydd y Wylfa	
Armeria maritima subsp. *maritima*	Thrift	LBAP[ANG]	SH 3293993356	Cemlyn	02/06/2012
Armeria maritima subsp. *maritima*	Thrift	LBAP[ANG]	SH 32949356	Cemlyn; north car park	03/06/2012
Armeria maritima subsp. *maritima*	Thrift	LBAP[ANG]	SH 3303293555	Cemlyn	02/06/2012
Armeria maritima subsp. *maritima*	Thrift	LBAP[ANG]	SH 3311193874	Cemlyn	02/06/2012
Atriplex laciniata	Frosted orache	LBAP[GWY]	SH 3393	Cemlyn	Aug-98
Atriplex laciniata	Frosted orache	LBAP[GWY]	SH 3393	Cemlyn	Spring 1999 – Summer 1999
Atriplex littoralis	Grass–leaved orache	LBAP[CON, GWY]	SH 3393	Cemlyn	Jul-98
Atriplex littoralis	Grass–leaved orache	LBAP[CON, GWY]	SH 3393	Cemlyn	Aug-98
Atriplex pedunculata	Pedunculate sea–purslane	RD1, RD2, UKBAP, WCA8	SH 331932	Cemlyn	Before September 1990
Atriplex portulacoides	Sea–purslane	LBAP[GWY]	SH 328931	Cemlyn	25/05/1981 – 17/08/1981
Atriplex portulacoides	Sea–purslane	LBAP[GWY]	SH 3303293555	Cemlyn	02/06/2012
Atriplex portulacoides	Sea–purslane	LBAP[GWY]	SH 332932	Cemlyn	25/05/1981 – 17/08/1981
Atriplex portulacoides	Sea–purslane	LBAP[GWY]	SH 3393	Cemlyn	Aug-98
Atriplex portulacoides	Sea–purslane	LBAP[GWY]	SH 3393	Cemlyn	23/05/2001 – 26/07/2001
Atriplex portulacoides	Sea–purslane	LBAP[GWY]	SH 3393	Cemlyn	Spring 1999 – Summer 1999
Baldellia ranunculoides	Lesser water–plantain	RD1, LBAP[GWY]	SH 358936	SSSI: Tre'r Gof	01/08/1983
Bidens cernua	Nodding bur–marigold	LBAP[GWY]	SH 360916	Cors Cromlech	14/06/1983
Bromopsis erecta	Upright brome	LBAP[CON], LI[VC52]	SH 355944	Mynydd y Wylfa	13/07/1983
Bromopsis erecta	Upright brome	LBAP[CON], LI[VC52]	SH 355944	SSSI: Tre'r Gof; Mynydd y Wylfa	1986 approx
Bromus racemosus	Smooth brome	LBAP[GWY], LI[VC52]	SH 3393	Cemlyn	Spring 1998 – Summer 1998
Bromus secalinus	Rye brome	RD1, RD2, WVP	SH 331932	Cemlyn Bay	06/06/1989 – 07/06/1989
Calliergon giganteum	Giant spear–moss	LBAP[CON, FLI]	SH 3691	Llanfechell, west of	1981
Caloplaca granulosa	Caloplaca granulosa	RD1, RD2	SH 3794	Llanbadrig Churchyard, Anglesey	1995
Carduus crispus	Welted thistle	LI[VC52]	SH 331934	SSSI: Cemlyn Bay	Summer 1999
Carduus crispus	Welted thistle	LI[VC52]	SH 3393	Cemlyn	23/05/2001 – 26/07/2001
Carex acutiformis	Lesser pond–sedge	LBAP[GWY]	SH 360916	Cors Cromlech	14/06/1983
Carex arenaria	Sand sedge	LBAP[CON]	SH 331932	Cemlyn	Before September 1990
Carex diandra	Lesser tussock–sedge	RD1, LBAP[GWY]	SH 36019362	Tre'r Gof	02/07/2004
Carex distans	Distant sedge	LBAP[CON]	SH 331932	Cemlyn	Before September 1990
Carex disticha	Brown sedge	LBAP[CON, GWY]	SH 331932	Cemlyn	Before September 1990
Carex limosa	Bog–sedge	LBAP[CON], LI[VC52]	SH 346918	SSSI: Cae Gwyn	17/08/1978
Carex limosa	Bog–sedge	LBAP[CON], LI[VC52]	SH 347918	Cae Gwyn	1980
Carex limosa	Bog–sedge	LBAP[CON], LI[VC52]	SH 3491	Cae Gwyn	01/09/1999
Carex pallescens	Pale sedge	LI[VC52]	SH 3491	Cae Gwyn	1970 – 1986

Carex viridula subsp. oedocarpa	Common yellow–sedge	LBAP[DEN]	SH 355944	Mynydd y Wylfa	13/07/1983
Carex viridula subsp. oedocarpa	Common yellow–sedge	LBAP[DEN]	SH 355944	SSSI: Tre'r Gof; Mynydd y Wylfa	1986 approx
Carex viridula subsp. oedocarpa	Common yellow–sedge	LBAP[DEN]	SH 358936	SSSI: Tre'r Gof	01/08/1983
Centaurium littorale	Seaside centaury	RD2, LBAP[ANG, CON, FLI, GWY]	SH 3393	Trwyn Cemlyn	01/09/2001
Cerastium arvense	Field mouse–ear	WVP, LI[VC52]	SH 3393	Cemlyn	23/05/2001 – 26/07/2001
Cladium mariscus	Great fen–sedge	LBAP[GWY]	SH 358936	SSSI: Tre'r Gof	01/08/1983
Cladium mariscus	Great fen–sedge	LBAP[GWY]	SH 359936	Tre'r Gof	1980
Climacium dendroides	Tree–moss	LBAP[CON]	SH 360916	Cors Cromlech	14/06/1983
Cochlearia anglica	English scurvygrass	LBAP[GWY]	SH 331932	Cemlyn	Before September 1990
Cochlearia anglica	English scurvygrass	LBAP[GWY]	SH 3393	Cemlyn	Aug-98
Cochlearia anglica	English scurvygrass	LBAP[GWY]	SH 3393	Cemlyn	Spring 1997 – Summer 1997
Crambe maritima	Sea kale	LBAP[ANG, CON]	SH 3314893316	Cemlyn	02/06/2012
Crambe maritima	Sea kale	LBAP[ANG, CON]	SH 3314893316	Cemlyn	25/05/1981 – 17/08/1981
Crambe maritima	Sea kale	LBAP[ANG, CON]	SH 331932	Cemlyn Bay	06/06/1989 – 07/06/1989
Crambe maritima	Sea kale	LBAP[ANG, CON]	SH 331932	Cemlyn	Before September 1990
Crambe maritima	Sea kale	LBAP[ANG, CON]	SH 332932	SSSI: Cemlyn Bay	Before 1996
Crambe maritima	Sea kale	LBAP[ANG, CON]	SH 334931	Cemlyn	03/06/2012
Crambe maritima	Sea kale	LBAP[ANG, CON]	SH 33579312	Anglesey	Nov-03
Crambe maritima	Sea kale	LBAP[ANG, CON]	SH 33579312	Anglesey	15/11/2003
Crambe maritima	Sea kale	LBAP[ANG, CON]	SH 337934	Cemlyn, below Pen Carreg	02/06/2002
Crambe maritima	Sea kale	LBAP[ANG, CON]	SH 3393	Cemlyn	Aug-98
Crambe maritima	Sea kale	LBAP[ANG, CON]	SH 3393	Cemlyn	16/06/1986 – 28/06/1986
Crambe maritima	Sea kale	LBAP[ANG, CON]	SH 3393	Cemlyn shingle ridge	23/05/2001 – 26/07/2001
Crambe maritima	Sea kale	LBAP[ANG, CON]	SH 3393	Cemlyn	Spring 1995 – Summer 1995
Crambe maritima	Sea kale	LBAP[ANG, CON]	SH 3393	Cemlyn	Spring 1999 – Summer 1999
Crepis biennis	Rough Hawk's–beard	WVP, LBAP[CON]	SH 331932	Cemlyn	Before September 1990
Crepis paludosa	Marsh Hawk's–beard	LI[VC52]	SH 3393	Cemlyn; road to Tyn Llan.	23/05/2001 – 26/07/2001
Crepis paludosa	Marsh Hawk's–beard	LI[VC52]	SH 3393	Cemlyn	Spring 1999 – Summer 1999
Dactylorhiza incarnata subsp. pulchella	Early marsh–orchid	CITES, LBAP[CON, DEN, GWY], LI[VC52]	SH 35979366	Tre'r Gof	02/07/2004
Drosera rotundifolia	Round–leaved sundew	LBAP[ANG]	SH 346918	SSSI: Cae Gwyn	17/08/1978
Drosera rotundifolia	Round–leaved sundew	LBAP[ANG]	SH 358936	SSSI: Tre'r Gof	01/08/1983
Elatine hexandra	Six–stamened waterwort	LBAP[ANG, CON, GWY], LI[VC52]	SH 3490	Llyn Llygeirian, nr. Causeway	1970 – 1986
Elatine hydropiper	Eight–stamened waterwort	RD2, LBAP[ANG, GWY]	SH 3490	Llyn Llygeirian	13/07/1983

Eleocharis uniglumis	Slender spike–rush	LBAP[CON, GWY]	SH 331932	Cemlyn	Before September 1990
Elytrigia atherica	Sea couch	LI[VC52]	SH 331932	Cemlyn Bay	06/06/1989 – 07/06/1989
Elytrigia atherica	Sea couch	LI[VC52]	SH 331932	Cemlyn	Before September 1990
Elytrigia atherica	Sea couch	LI[VC52]	SH 3393	Cemlyn	1994
Elytrigia atherica	Sea couch	LI[VC52]	SH 3393	Cemlyn	Aug-98
Elytrigia juncea	Sand couch	LBAP[CON]	SH 331932	Cemlyn	Before September 1990
Erophila majuscula	Hairy whitlowgrass	LI[VC52]	SH 3794	Llanbadrig	14/06/1998
Euphorbia paralias	Sea spurge	CITES, LBAP[CON]	SH 3393	Cemlyn	Aug-98
Eurhynchium praelongum	Common feather–moss	LBAP[CON]	SH 331932	Cemlyn Bay	06/06/1989 – 07/06/1989
Galium mollugo	Hedge bedstraw	LI[VC52]	SH 3311193874	Cemlyn	23/05/2001 – 26/07/2001
Galium mollugo	Hedge bedstraw	LI[VC52]	SH 3393	Cemlyn	Spring 1999 – Summer 1999
Galium mollugo	Hedge bedstraw	LI[VC52]	SH 3793	Cemaes by–pass	1991
Genista anglica	Petty whin	RD1, LBAP[GWY]	SH 35679449	Wylfa Head	20/05/2007
Glaucium flavum	Yellow horned–poppy	LI[VC52]	SH 3314893316	Cemlyn	02/06/2012
Glaucium flavum	Yellow horned–poppy	LI[VC52]	SH 3314893316	Cemlyn	25/05/1981 – 17/08/1981
Glaucium flavum	Yellow horned–poppy	LI[VC52]	SH 331932	Cemlyn	Before September 1990
Glaucium flavum	Yellow horned–poppy	LI[VC52]	SH 332934	Cemlyn	26/07/2005
Glaucium flavum	Yellow horned–poppy	LI[VC52]	SH 3393	Cemlyn	Aug-98
Glaucium flavum	Yellow horned–poppy	LI[VC52]	SH 3393	Cemlyn; Weir end of ridge.	23/05/2001 – 26/07/2001
Glaucium flavum	Yellow horned–poppy	LI[VC52]	SH 3393	Cemlyn	April 2011 – August 2011
Glaucium flavum	Yellow horned–poppy	LI[VC52]	SH 3393	Cemlyn	Spring 1999 – Summer 1999
Gnaphalium sylvaticum	Heath cudweed	RD1, WVP	SH 342932	Cafnan Marsh	22/07/1983
Hippuris vulgaris	Mare's–tail	WVP, LI[VC52]	SH 3393	Cemlyn; on road to east car park.	23/05/2001 – 26/07/2001
Hyacinthoides non–scripta	Bluebell	WCA8, LBAP[ANG, CON, FLI, SNP]	SH 328931	Cemlyn	25/05/1981 – 17/08/1981
Hyacinthoides non–scripta	Bluebell	WCA8, LBAP[ANG, CON, FLI, SNP]	SH 3293993356	Cemlyn	02/06/2012
Hyacinthoides non–scripta	Bluebell	WCA8, LBAP[ANG, CON, FLI, SNP]	SH 331932	Cemlyn	Before September 1990
Hyacinthoides non–scripta	Bluebell	WCA8, LBAP[ANG, CON, FLI, SNP]	SH 333932	Cemlyn	25/05/1981 – 17/08/1981
Hyacinthoides non–scripta	Bluebell	WCA8, LBAP[ANG, CON, FLI, SNP]	SH 3393	Cemlyn	16/06/1986 – 28/06/1986
Hyacinthoides non–scripta	Bluebell	WCA8, LBAP[ANG, CON, FLI, SNP]	SH 3393	Cemlyn	23/05/2001 – 26/07/2001
Hyacinthoides non–scripta	Bluebell	WCA8, LBAP[ANG, CON, FLI, SNP]	SH 3393	Cemlyn	Spring 1999 – Summer 1999
Inula crithmoides	Golden samphire	RD2, LBAP[ANG, GWY]	SH 3293	W. of Cemlyn Point	1978
Jasione montana	Sheep's–bit	WVP	SH 328931	Cemlyn	25/05/1981 – 17/08/1981
Jasione montana	Sheep's–bit	WVP	SH 331932	Cemlyn	Before September 1990
Jasione montana	Sheep's–bit	WVP	SH 332932	Cemlyn	25/05/1981 – 17/08/1981

Jasione montana	Sheep's–bit	WVP	SH 3393	Cemlyn	Aug-98
Jasione montana	Sheep's–bit	WVP	SH 3393	Cemlyn	Spring 1998 – Summer 1998
Jasione montana	Sheep's–bit	WVP	SH 339934	SSSI: Cemlyn Bay; Trwyn Pencarreg	24/05/1991
Jasione montana	Sheep's–bit	WVP	SH 355944	Mynydd–y–Wylfa	13/07/1983
Jasione montana	Sheep's–bit	WVP	SH 355944	SSSI: Tre'r Gof; Mynydd y Wylfa	1986 approx
Juncus castaneus	Chestnut rush	RD1, RD2	SH 331932	Cemlyn	Before September 1990
Juncus gerardii	Saltmarsh rush	LBAP[CON]	SH 331932	Cemlyn Bay	06/06/1989 – 07/06/1989
Juncus gerardii	Saltmarsh rush	LBAP[CON]	SH 331932	Cemlyn	Before September 1990
Juncus maritimus	Sea rush	LBAP[CON]	SH 331932	Cemlyn	Before September 1990
Juncus subnodulosus	Blunt–flowered rush	LBAP[GWY]	SH 358936	SSSI: Tre'r Gof	01/08/1983
Juncus subnodulosus	Blunt–flowered rush	LBAP[GWY]	SH 358936	SSSI: Tre'r Gof	24/07/1985
Juncus subnodulosus	Blunt–flowered rush	LBAP[GWY]	SH 359936	Tre'r Gof	1980
Leontodon hispidus	Rough hawkbit	LI[VC52]	SH 331932	Cemlyn Bay	06/06/1989 – 07/06/1989
Leontodon hispidus	Rough hawkbit	LI[VC52]	SH 333932	Cemlyn	25/05/1981 – 17/08/1981
Leontodon hispidus	Rough hawkbit	LI[VC52]	SH 3393	Cemlyn; on the ridge (Esgair).	23/05/2001 – 26/07/2001
Linum bienne	Pale flax	LI[VC52]	SH 3593	Existing Power Station	1997
Mentha aquatica	Water mint	LBAP[ANG]	SH 333929	Cemlyn	25/05/1981 – 17/08/1981
Mentha aquatica	Water mint	LBAP[ANG]	SH 3393	Cemlyn	Spring 1998 – Summer 1998
Mentha aquatica	Water mint	LBAP[ANG]	SH 3393	Cemlyn	Spring 1999 – Summer 1999
Mentha aquatica	Water mint	LBAP[ANG]	SH 342932	Cafnan Marsh	22/07/1983
Mentha aquatica	Water mint	LBAP[ANG]	SH 342932	Cafnan Farm	1986 approx
Mentha aquatica	Water mint	LBAP[ANG]	SH 346918	SSSI: Cae Gwyn	17/08/1978
Mentha aquatica	Water mint	LBAP[ANG]	SH 358936	SSSI: Tre'r Gof	01/08/1983
Mentha aquatica	Water mint	LBAP[ANG]	SH 358936	SSSI: Tre'r Gof	24/07/1985
Mentha aquatica	Water mint	LBAP[ANG]	SH 360916	Cors Cromlech	14/06/1983
Mentha aquatica	Water mint	LBAP[ANG]	SH 373914	Carrog Isa, Afon Meddanen	22/07/1999
Mertensia maritima	Oysterplant	RD1, RD2, WVP, LBAP[CON]	SH 3293	Cemlyn	1914
Microbryum starckeanum	Starke's pottia	RD2, LBAP[CON, DEN]	SH 3693	Cemaes Bay	1973
Oenanthe lachenalii	Parsley water–dropwort	LBAP[CON, GWY]	SH 328931	Cemlyn	25/05/1981 – 17/08/1981
Oenanthe lachenalii	Parsley water–dropwort	LBAP[CON, GWY]	SH 331932	Cemlyn	Before September 1990
Oenanthe lachenalii	Parsley water–dropwort	LBAP[CON, GWY]	SH 3393	Cemlyn; road by Bryn Aber.	23/05/2001 – 26/07/2001
Oenanthe lachenalii	Parsley water–dropwort	LBAP[CON, GWY]	SH 3393	Cemlyn	Spring 1999 – Summer 1999
Osmunda regalis	Royal fern	LI[VC52]	SH 346918	SSSI: Cae Gwyn	17/08/1978
Osmunda regalis	Royal fern	LI[VC52]	SH 347918	Cae Gwyn	1980
Osmunda regalis	Royal fern	LI[VC52]	SH 3491	Cae Gwyn	01/09/1999

Padina pavonica	Peacock's tail	RD2, S42, UKBAP	SH 3393	Cemlyn	Spring 1999 – Summer 1999
Persicaria bistorta	Common bistort	LBAP[GWY]	SH 3393	Cemlyn	Aug-98
Plagiomnium elatum	Tall thyme–moss	LBAP[CON, FLI]	SH 360916	Cors Cromlech	14/06/1983
Plantago media	Hoary plantain	LI[VC52]	SH 3393	Cemlyn	23/05/2001 – 26/07/2001
Plantago media	Hoary plantain	LI[VC52]	SH 3393	Cemlyn	Spring 1998 – Summer 1998
Plantago media	Hoary plantain	LI[VC52]	SH 3393	Cemlyn	Spring 1999 – Summer 1999
Puccinellia maritima	Common saltmarsh–grass	LBAP[CON]	SH 331932	Cemlyn	Before September 1990
Puccinellia maritima	Common saltmarsh–grass	LBAP[CON]	SH 3393	Cemlyn	Aug-97
Puccinellia maritima	Common saltmarsh–grass	LBAP[CON]	SH 3393	Cemlyn	Aug-98
Radiola linoides	Allseed	RD1, LBAP[GWY]	SH 35719451	Wylfa Head	20/05/2007
Ranunculus baudotii	Brackish water–crowfoot	LBAP[GWY], LI[VC52]	SH 3293	Cemlyn	15/10/1987
Ranunculus fluitans	River water–crowfoot	LBAP[CON], LI[VC52]	SH 3793	Afon Wygyr, Cemaes	Jun-99
Ranunculus trichophyllus	Thread–leaved water–crowfoot	LBAP[GWY], LI[VC52]	SH 358936	SSSI: Tre'r Gof	01/08/1983
Ranunculus trichophyllus	Thread–leaved water–crowfoot	LBAP[GWY], LI[VC52]	SH 359936	Tre'r Gof	1980
Raphanus raphanistrum subsp. maritimus	Sea radish	LBAP[GWY], LI[VC52]	SH 3393	Trwyn Cemlyn	1971
Rhinanthus minor	Yellow–rattle	LBAP[ANG]	SH 331932	Cemlyn	Before September 1990
Rhinanthus minor	Yellow–rattle	LBAP[ANG]	SH 3393	Cemlyn	16/06/1986 – 28/06/1986
Rhinanthus minor	Yellow–rattle	LBAP[ANG]	SH 346918	SSSI: Cae Gwyn	17/08/1978
Rhinanthus minor	Yellow–rattle	LBAP[ANG]	SH 360916	Cors Cromlech	14/06/1983
Ruppia cirrhosa	Spiral tasselweed	RD1, RD2, WVP	SH 33369314	Cemlyn	22/08/2006
Ruppia maritima	Beaked Tasselweed	WVP, LI[VC52]	SH 331932	Cemlyn	Before September 1990
Ruppia maritima	Beaked tasselweed	WVP, LI[VC52]	SH 331934	SSSI: Cemlyn Bay	Sep-87
Salicornia europaea	Common glasswort	LBAP[CON, GWY]	SH 331932	Cemlyn	Before September 1990
Salicornia europaea	Common glasswort	LBAP[CON, GWY]	SH 3393	Cemlyn	Aug-97
Salicornia europaea	Common glasswort	LBAP[CON, GWY]	SH 3393	Cemlyn	Aug-98
Salicornia europaea	Common glasswort	LBAP[CON, GWY]	SH 3393	Cemlyn; on the ridge (Esgair).	23/05/2001 – 26/07/2001
Salicornia europaea	Common glasswort	LBAP[CON, GWY]	SH 3393	Cemlyn	Spring 1999 – Summer 1999
Salix pentandra	Bay willow	WVP	SH 342932	Cafnan Marsh	22/07/1983
Salix pentandra	Bay willow	WVP	SH 342932	Cafnan Farm	1986 approx
Samolus valerandi	Brookweed	LBAP[CON]	SH 358936	SSSI: Tre'r Gof	01/08/1983
Sarcocornia perennis	Perennial wlasswort	RD2, WVP	SH 3393	Cemlyn	Spring 1999 – Summer 1999
Scapania lingulata	Tongue earwort	RD2	SH 3594	Cemaes Bay	14/06/1986
Schoenoplectus lacustris	Common club–rush	LBAP[GWY]	SH 360916	Cors Cromlech	14/06/1983
Schoenoplectus tabernaemontani	Grey club–rush	LBAP[CON]	SH 331932	Cemlyn	Before September 1990
Senecio erucifolius	Hoary ragwort	LBAP[GWY], LI[VC52]	SH 3393	Cemlyn; road br Bryn Aber.	23/05/2001 – 26/07/2001

Senecio erucifolius	Hoary ragwort	LBAP[GWY], LI[VC52]	SH 3393	Cemlyn	Spring 1999 – Summer 1999
Senecio erucifolius	Hoary ragwort	LBAP[GWY], LI[VC52]	SH 3593	nr. Cemaes	1987 – 1999
Serratula tinctoria	Saw–wort	LBAP[CON]	SH 360916	Cors Cromlech	14/06/1983
Sparganium erectum subsp. erectum	Branched bur–reed	WVP	SH 360916	Cors Cromlech	14/06/1983
Sparganium erectum subsp. neglectum	Branched bur–reed	WVP	SH 342932	Cafnan Farm	1986 approx
Sparganium erectum subsp. neglectum	Branched Bur–reed	WVP	SH 358936	SSSI: Tre'r Gof	01/08/1983
Spergula arvensis	Corn spurrey	RD1, WVP, LBAP[GWY]	SH 328932	Cemlyn	30/08/2005
Spergularia media	Greater sea–spurrey	LBAP[CON]	SH 328931	Cemlyn	25/05/1981 – 17/08/1981
Spergularia media	Greater sea–spurrey	LBAP[CON]	SH 332932	Cemlyn	25/05/1981 – 17/08/1981
Spergularia media	Greater sea–spurrey	LBAP[CON]	SH 3393	Cemlyn	Aug-98
Spergularia media	Greater sea–spurrey	LBAP[CON]	SH 3393	Cemlyn	16/06/1986 – 28/06/1986
Spergularia media	Greater sea–spurrey	LBAP[CON]	SH 3393	Cemlyn; path to memorial + ridge.	23/05/2001 – 26/07/2001
Spergularia media	Greater sea–spurrey	LBAP[CON]	SH 3393	Cemlyn	Spring 1999 – Summer 1999
Spergularia rupicola	Rock sea–spurrey	LBAP[CON]	SH 331932	Cemlyn	Before September 1990
Spergularia rupicola	Rock sea–spurrey	LBAP[CON]	SH 3393	Cemlyn; path to heathland + ridge.	23/05/2001 – 26/07/2001
Spergularia rupicola	Rock sea–spurrey	LBAP[CON]	SH 3393	Cemlyn	Spring 1999 – Summer 1999
Spergularia rupicola	Rock sea–spurrey	LBAP[CON]	SH 355944	Mynydd y Wylfa	13/07/1983
Spergularia rupicola	Rock sea–spurrey	LBAP[CON]	SH 355944	SSSI: Tre'r Gof; Mynydd y Wylfa	1986 approx
Spiranthes spiralis	Autumn lady's–tresses	CITES, RD1, LBAP[CON, GWY]	SH 33029360	Trwyn Cemlyn	1997
Spiranthes spiralis	Autumn lady's–tresses	CITES, RD1, LBAP[CON, GWY]	SH 331934	SSSI: Cemlyn Bay	03/09/1977
Stachys arvensis	Field woundwort	RD1, WVP, LBAP[GWY]	SH 328932	Cemlyn	30/08/2005
Suaeda vera	Shrubby sea–blite	RD2	SH 3393	Cemlyn	Aug-97
Suaeda vera	Shrubby sea–blite	RD2	SH 3393	Cemlyn	Aug-98
Tephroseris integrifolia	Field fleawort	RD1, RD2	SH 3393	Cemlyn	Spring 1998 – Summer 1998
Thelypteris palustris	Marsh fern	RD2, LBAP[ANG, GWY]	SH 358936	SSSI: Tre'r Gof	01/08/1983
Thelypteris palustris	Marsh fern	RD2, LBAP[ANG, GWY]	SH 35949356	Tre'r Gof	02/07/2004
Thelypteris palustris	Marsh fern	RD2, LBAP[ANG, GWY]	SH 359936	Tre'r Gof	1980
Thelypteris palustris	Marsh fern	RD2, LBAP[ANG, GWY]	SH 36009362	Tre'r Gof	02/07/2004
Trifolium ornithopodioides	Bird's–foot clover	LBAP[ANG], LI[VC52]	SH 32869327	Cemlyn	02/06/2012
Trifolium ornithopodioides	Bird's–foot clover	LBAP[ANG], LI[VC52]	SH 32989372	Cemlyn	11/07/1998
Trifolium ornithopodioides	Bird's–foot clover	LBAP[ANG], LI[VC52]	SH 3311193874	Cemlyn	02/06/2012
Trifolium ornithopodioides	Bird's–foot clover	LBAP[ANG], LI[VC52]	SH 3393	Cemlyn	Spring 1997 – Summer 1997
Trifolium ornithopodioides	Bird's–foot clover	LBAP[ANG], LI[VC52]	SH 34249352	nr. Cestyll	02/06/2002
Trifolium subterraneum	Subterranean clover	LBAP[GWY], LI[VC52]	SH 3393	Cemlyn	Spring 1997 – Summer 1997

Trifolium subterraneum	Subterranean clover	LBAP[GWY], LI[VC52]	SH 3393	Cemlyn	Spring 1999 – Summer 1999
Typha angustifolia	Lesser bulrush	LI[VC52]	SH 331932	Cemlyn	Before September 1990
Ulex gallii	Western gorse	LBAP[ANG, CON, SNP]	SH 339934	SSSI: Cemlyn Bay; Trwyn Pencarreg	24/05/1991
Ulex gallii	Western gorse	LBAP[ANG, CON, SNP]	SH 340936	SSSI: Cemlyn Bay; Trwyn Pencarreg	24/05/1991
Ulex gallii	Western gorse	LBAP[ANG, CON, SNP]	SH 346918	SSSI: Cae Gwyn	17/08/1978
Ulex gallii	Western gorse	LBAP[ANG, CON, SNP]	SH 355944	Mynydd y Wylfa	13/07/1983
Ulex gallii	Western gorse	LBAP[ANG, CON, SNP]	SH 355944	SSSI: Tre'r Gof; Mynydd y Wylfa	1986 approx
Utricularia minor	Lesser bladderwort	LBAP[CON, GWY], LI[VC52]	SH 3491	Cae Gwyn	01/09/1999
Vaccinium oxycoccos	Cranberry	LI[VC52]	SH 346918	SSSI: Cae Gwyn	17/08/1978
Vaccinium oxycoccos	Cranberry	LI[VC52]	SH 347918	Cae Gwyn	1980
Vaccinium oxycoccos	Cranberry	LI[VC52]	SH 3491	Cae Gwyn	01/09/1999
Verbena officinalis	Vervain	LBAP[GWY], LI[VC52]	SH 35659380	Wylfa Head	05/08/2002
Veronica anagallis–aquatica	Blue water–speedwell	LBAP[CON]	SH 333929	Cemlyn	25/05/1981 – 17/08/1981
Vicia lutea	Yellow–vetch	RD1, RD2	SH 3393	Cemlyn	Spring 1998 – Summer 1998
Vicia tetrasperma	Smooth tare	LBAP[GWY]	SH 328932	Cemlyn; Causeway	02/06/2012
Vicia tetrasperma	Smooth tare	LBAP[GWY]	SH 3293993356	Cemlyn	02/06/2012
Viola reichenbachiana	Early dog–violet	LI[VC52]	SH 3393	Cemlyn	Spring 1999 – Summer 1999
Weissia perssonii	Persson's stubble–moss	RD2	SH 3594	Wylfa Head	1986