PORTHCAWL WATERFRONT REGENERATION

INFORMATION FOR HABITATS REGULATIONS ASSESSMENT (HRA)

NOVEMBER 2025

Commissioned by:
Bridgend County Borough Council

Written by: Geoff Moxon MCIEEM

PORTHCAWL WATERFRONT REGENERATION

INFORMATION FOR HABITATS REGULATIONS ASSESSMENT (HRA)

November 2025

Bioscan Report No.
E2179R3

BIOSCAN (UK) Ltd
The Old Parlour
Little Baldon Farm
Little Baldon
Oxford OX44 9PU

Tel: (01865) 341321
E-mail: bioscan@bioscanuk.com

CONTENTS

APPENDICES

1. INTRODUCTION

1.1 Background

1.1.1 This document, prepared by Bioscan (UK) Limited, is a report to inform the screening and appropriate assessment stages of Habitats Regulations Assessment (HRA), in respect of potential effects on certain European and Internationally designated nature conservation sites, that could arise from the proposed Porthcawl Waterfront Regeneration project (the 'Proposed Development') promoted by Bridgend County Borough Council, on the land around Sandy Bay, Porthcawl.

1.1.2 The Proposed Development is centred at National Ordnance Survey (OS) grid reference SS823769 and incorporates a waterfront regeneration project, including new housing, recreation, open and green space and parking, together with new coastal defence works. **Appendix 2** shows the location of the Proposed Development, and **Appendix 1** shows the proposed site layout.

1.2 Legislation

1.2.1 The Conservation of Habitats and Species Regulations 2017[1] (the 'Habitats Regulations') provide for the protection of 'European Sites', which include Special Areas of Conservation (SACs) designated pursuant to the Habitats Directive[2], and Special Protection Areas (SPAs) classified under the Birds Directive[3]. The UK is also bound by the terms of the Ramsar Convention[4] and the Welsh Government has chosen to require that the same assessment procedures afforded to European Sites (as set out below) be applied to internationally designated Ramsar Sites[5], even though these are not European Sites as a matter of law.

1.2.2 The Habitats Regulations impose a duty on Local Planning Authorities (as 'competent authorities') to carefully consider whether any development proposals may have a significant effect on European Sites, either alone or in combination with other plans or projects. Regulation 63 states as follows:

> *"63.—(1) A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which—*
>
> *(a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and*
>
> *(b) is not directly connected with or necessary to the management of that site,*

[1] *Conservation of Habitats and Species Regulations 2017*. UK Statutory Instrument 2017 No.1012. Via: https://www.legislation.gov.uk/uksi/2017/1012/contents
[2] Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.
[3] Directive 2009/147/EC of the European Parliament and the Council of 30 November 2009 on the conservation of wild birds.
[4] Convention on Wetlands of International Importance especially as Waterfowl Habitat 1971 ('The Ramsar Convention').
[5] Planning Policy Wales (February 2021), supplemented by technical advice note (TAN) 5: nature conservation and planning.

must make an appropriate assessment of the implications for that site in view of that site's conservation objectives."

1.2.3 Subject to considerations of alternatives and imperative reasons of overriding public interest ('IROPI'), permission may only be given for a plan or project to proceed if the competent authority has ascertained that it is not likely to have a significant effect on the integrity of a European Site.

1.3 European Sites identified within potential Zone of Influence of Proposed Development

1.3.1 **Appendix 2** shows the European Sites within 10km of the Proposed Development.

1.3.2 The following European Sites have been identified as falling within 10km of the Proposed Development. Further information on each of these sites, including their approximate distance from the Proposed Development, is provided in the bullet points and within **Table 1** below:

- Kenfig SAC
- Cefn Cribwr Grasslands SAC
- Dunraven Bay SAC

1.3.3 There are no Special Protection Areas (SPAs) or Ramsar sites situated within 10km of the Proposed Development.

1.3.4 No potential impact pathways have been identified whereby significant effects could arise at European and Ramsar sites beyond 10km away from the Proposed Development.

Table 1: *European Sites within 10km of the Proposed Development*

Designation name	Designation status	Cited reasons for designation	Distance & direction from Proposed Development
Kenfig	Special Area of Conservation (SAC)	Annex I habitats which are primary reason for designation: fixed coastal dunes with herbaceous vegetation ("grey dunes"), dunes with Salix repens ssp. Argentea (Salicion arenariae), humid dune slacks, hard oligo-mesotrophic waters with benthic vegetation of Chara spp. Annex II species which are a primary reason for designation: petalwort *Petalophyllum ralfsii*, fen orchid *Liparis loeselii*. Annex I habitats (other qualifying features): Atlantic salt meadows (Glauco-Puccinellietalia maritimae) See designation information provided at **Appendix 3**.	800m east (with other part of designation 3.58km north-west)
Cefn Cribwr Grasslands	SAC	Annex I habitats which are a primary reason for designation: Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) Annex II species (other qualifying features): marsh fritillary butterfly *Euphydryas aurinia* See designation information provided at **Appendix 4**.	4.68km north-north-east (nearest component)
Dunraven Bay	SAC	Annex II species which are a primary reason for designation: shore dock *Rumex rupestris* See designation information provided at **Appendix 5**.	6.87km south-east

1.4 Purpose of this document

1.4.1 An Environmental Impact Assessment (EIA) has been undertaken to inform the planning application for the Proposed Development. An Environmental Statement (ES) has been prepared to document the EIA process and this considers the potential for the Proposed Development to give rise to significant effects on the environment, including negative / adverse effects on the European Sites defined in **Table 1** above.

1.4.2 As part of this process, an EIA scoping request was submitted to Bridgend County Borough Council in July 2025. A scoping response was received from the LPA in October 2025, and it is noted that Natural Resources Wales (NRW) also commented on the proposals. The following excerpt from this scoping response is of particular relevance to this assessment in confirming topics agreed to be scoped out of further assessment:

- Topics agreed to be scoped out of the assessment (**Appendix 6**).

1.4.3 With respect to cumulative effects the scoping response notes "*The SA proposes to scope out cumulative effects from the Environmental Statement, as the screening opinion identified no*

existing development, and / or approved development that was deemed likely to have cumulative effect alongside the proposed development as such agree with that this can be scoped out". On this basis, the review and assessment has been undertaken for the Proposed Development on its own, on the understanding that there are no other plans or projects which are considered to give rise to likely significant in-combination effects on the interest features of the European Sites.

1.4.4 This report seeks to draw this information together in order to provide sufficient technical information to enable Bridgend County Borough Council to discharge their functions under the Habitats Regulations, particularly in relation to Regulation 7 (competent authorities) and Regulation 63 (requirement to carry out an appropriate assessment) in connection with the Proposed Development.

2 LOCAL PLANNING CONTEXT AND RELATED HRAs

2.1 Bridgend Local Development Plan 2018-2033

2.1.1 Adopted local planning policy is set out within the Bridgend Local Development Plan[6]. This plan was adopted in March 2024. It contains the following policy which includes specific reference to European Sites:

SP17: Conservation and Enhancement of the Natural Environment

"The County Borough has a rich and varied biodiversity with a broad range of species, habitats and unique, rich landscapes. In particular, these include the nationally important Glamorgan Heritage Coast, the outstanding historic landscapes of Kenfig and Merthyr Mawr Warren, and other regionally and locally important areas. Development which will maintain and, wherever possible, enhance the natural environment of the County Borough will be favoured. Development proposals will not be permitted where they will have an adverse impact upon:

(1) The integrity of the County Borough's countryside;

(2) The character of its landscape;

(3) Its biodiversity and habitats; and

(4) The quality of its natural resources including water, air and soil.

Areas having a high and/or unique environmental quality will be protected and the following strategically important areas within the County Borough will specifically be protected from inappropriate development which directly or indirectly impacts upon them:

SP17(1) National Site Network Sites (including Special Areas of Conservation (SACs));

SP17(2) Sites of Special Scientific Interest (SSSIs);

SP17(3) Kenfig and Merthyr Mawr National Nature Reserves (NNRs);

SP17(4) The Glamorgan Heritage Coast;

SP17(5) Mynydd Margam Registered Historic Landscape.

The weight to be afforded to environmental designations in the determination of relevant planning applications will be based on their statutory or non-statutory status and geographic scale of designation.

Proposals likely to have direct or indirect adverse effects on Special Areas of Conservation (SACs), Special Protection Areas (SPAs) or Ramsar sites, must be subject to Habitat Regulations Assessment (HRA). This includes development proposals on allocated sites where

[6] Bridgend County Borough Council (2024). *Local Development Plan. Adopted 13th March 2024.* https://www.bridgend.gov.uk/residents/planning-and-building-control/local-development-plan/adopted-replacement-local-development-plan-2018-2033/

this plan indicates a project level HRA is required and any other development proposals likely to have adverse effects on SACs/SPAs/Ramsar sites. In addition, any proposals that could affect the habitat of marsh fritillary butterfly within 2km of Cefn Cribwr Grasslands SAC, as illustrated on the Policies Map, must be subject to HRA.

Development requiring HRA will only be allowed where it can be determined through HRA that:

(a) taking into account mitigation, the proposal would not result in adverse effects on the integrity of the SACs/SPAs/Ramsar sites, either alone or in combination with other plans or projects; or

(b) HRA proves there are no alternatives and that the development is of overriding public interest and appropriate compensatory measures are provided.

Proposals within or affecting a SSSI must demonstrate how they safeguard, support or where possible enhance identified special features of the designation.

The importance and features of Sites of Importance for Nature Conservation (SINCs) and local wildlife sites must also be considered as appropriate in the determination of relevant planning applications (refer to DNP5).

2.2 Habitats Regulations Assessments associated with Bridgend Local Development Plan

2.2.1 A Habitats Regulations Assessment for the Bridgend RLDP Deposit Plan was carried out by Stantec in May 2021.

2.2.2 For Kenfig SAC this document lists the following threats and pressures (those of potential relevance to the Proposed Development are shown in **bold** below):

- Changes in abiotic conditions
- Other ecosystem modification
- Abiotic (slow) natural processes
- Fishing and harvesting aquatic resources
- Human induced changes in hydraulic conditions
- Grazing
- Pollution to surface waters
- Hunting
- Problematic native species
- Mowing / cutting of grassland

- Soil pollution and solid waste
- Use of biocides, hormones and chemicals
- Outdoor sports and leisure activities, **recreational activities**
- **Air pollution, air-borne pollutants**
- Succession
- Invasive non-native species

2.2.3 The HRA concludes that the proposals within the Bridgend LDP Deposit Plan have potential to generate likely significant effects to Kenfig SAC from:

- **Air quality**
- Habitat loss
- Human induced changes in hydraulic conditions
- Pollution
- **Recreation**

2.2.4 It then notes "this has been addressed by incorporating mitigation measures into the LDP to protect European Sites and improve air quality. Taking into account the information available at this stage and the level of detail appropriate for LDP policies and proposals, it is concluded that the LDP is not likely to have a significant effect on Kenfig SAC, either alone or in-combination with other plans or projects".

2.2.5 For Cefn Cribwr Grasslands SAC the following threats and pressures are listed (those of potential relevance to the Proposed Development are shown in **bold** below):

- Grazing
- Succession
- **Air pollution, air-borne pollutants**
- Other ecosystem modifications
- Invasive non-native species
- Forestry activities
- Human induced changes in hydraulic conditions

2.2.6 The HRA concludes that the proposals within the Bridgend LDP Deposit Plan have potential to generate likely significant effects to Cefn Cribwr Grasslands SAC from:

- **Air quality**

- Habitat loss or disruption

- Human induced changes in hydraulic conditions or pollution to surface waters

2.2.7 It then notes “this has been addressed by incorporating mitigation measures into the LDP to protect European Sites and improve air quality. Taking into account the information available at this stage and the level of detail appropriate for LDP policies and proposals, it is concluded that the LDP is not likely to have a significant effect on Cefn Cribwr Grasslands SAC, either alone or in-combination with other plans or projects”.

3 DESCRIPTION OF THE PROPOSED DEVELOPMENT

3.1 Location and Context

3.1.1 A plan of the Proposed Development location is provided at **Appendix 2**, and the Proposed Development layout is shown at **Appendix 1**. The Proposed Development boundaries do not directly engage with any European Site or any other statutory nature conservation designation, and no direct land-take from any such designation is proposed. The geographical relationship between the application site (incorporating the Proposed Development) and relevant European Sites is shown at **Appendix 2** of this report, and the distances between the development site and the European Sites are recorded below at **Table 2.**

Table 2: *Distances of European Sites from the Proposed Development*

Designation name	Distance & direction from site
Kenfig SAC	800m east (with other part of designation 3.58km north-west)
Cefn Cribwr Grasslands SAC	4.68km north-north-east (nearest component)
Dunraven Bay SAC	6.87km south-east

3.2 Need

3.2.1 The development is proposed to meet a demand for the mix-use residential and retail regeneration of Porthcawl's Waterfront, integrated with the local area's natural assets and seaside location, and which seeks to maintain, preserve and where possible enhance those existing qualities as part of the proposed development.

3.2.2 The site is allocated in the Local Development Plan for mixed-use redevelopment under policies PLA1 and SP2(1). These policies allocate the Waterfront for the following land uses / purposes:

- 1,100 residential units
- 30% affordable housing
- 1.8ha 1 Form Entry Welsh Medium Primary School and 4 classroom block extension at existing English Medium Primary School
- Approx 2,000sqm food store (now delivered)
- Outdoor recreation facilities and public open space
- Active travel routes

3.3 Design Process

3.3.1 The design process has been driven by the objective of maximising the use of available land to deliver mixed-use development, while working within the framework of constraints imposed by the sand dunes, and a desire to avoid and/or minimise impacts on ecology as far as possible. This process is explored further under the 'Assessment of Alternatives' in **Chapter 5 of the ES**.

3.4 Summary Project Description

3.4.1 A full project description is contained within **Chapter 4 of the ES**.

3.4.2 The Proposed Development comprises the following outline proposals for the redevelopment of Porthcawl Waterfront:

- Up to 980 new homes,
- Approximately 20 ha of open space including a series of new significant public open spaces with different offers,
- 2.2 ha of land for educational use,
- Approximately 130,000 square feet of commercial and leisure floorspace including retail uses, a hotel, Lido and gym / wellbeing centre,
- Enhancement of Porthcawl harbour environment,
- New coastal defence works,
- A flexible meanwhile leisure use space (approximately 23,500 square feet),
- Approximately 6,500 square feet of flexible community / civic space,
- Provision of up to 600 public parking spaces within the site area,
- New spine road access from the Eastern Promenade to Sandy Bay,
- Enhancement of the Griffin Park and proposed new facilities including MUGA.

3.5 Avoidance Measures Embedded in Project Design

3.5.1 **Chapter 9 of the Environmental Statement (ES)** for the Porthcawl Waterfront Regeneration project describes how ecology has been a key consideration throughout the design process. Wherever possible, the proposed development has sought to minimise ecological impacts by preserving key habitats, and to minimise biodiversity losses. The main example of this is the retention by design of the mobile sand dunes, which are assessed to be the habitat with the highest ecological value within the application site. Where small pockets of sand dune habitat must by necessity be impacted (for example by the proposed infilling of Sandy Bay Bowl), these will all be translocated to retained areas close to existing sand dune. The development

will also stand well off from Rhych Point, preserving its species-rich maritime grassland, and rocky shoreline SINC. In addition, whilst it is essential to create a road link through the southern part of the Monster Park, the northern part of the Monster Park is being retained by design to minimise impacts on the local reptile population (it is noted that the road link was previously proposed to go through the centre of the Monster Park, but was moved to the southern edge to minimise landtake and allow the northern part of the Monster Park to be retained as a single habitat unit, rather than splitting it in half).

3.5.2 The proposed development has also sought to maximise onsite biodiversity enhancements within the space available. A key example of this is that where species-rich maritime grassland close to the sand dunes needs to be impacted, it will be stockpiled then spread onto other retained parts of the site wherever this is deemed feasible (thus preserving the sandy substrates and species-rich seedbank). In addition, the proposals will provide a broad green corridor through the centre of the development, which will extend from Griffin Park, through the northern part of the Monster Park, and into the sand dunes (with an underpass provided for use by wildlife where the green corridor will be bisected by the new link road). A continuous green buffer will also be provided around the edges of the Sandy Bay East area to facilitate movement of reptiles and other wildlife.

3.5.3 Such embedded avoidance measures are taken into account where appropriate in considering the potential for adverse effects on integrity at Stage 2 Appropriate Assessment in this HRA report.

3.6 Scoping & Consultation

3.6.1 An EIA scoping request was submitted to Bridgend County Borough Council in July 2025. A scoping response was received from the LPA in October 2025, and it is noted that Natural Resources Wales (NRW) also commented on the proposals. Topics agreed with the LPA to be scoped out of the assessment are shown at **Appendix 6**.

3.6.2 The key consideration of relevance to the HRA relates to in-combination effects. The scoping response notes "*The SA proposes to scope out cumulative effects from the Environmental Statement, as the screening opinion identified no existing development, and / or approved development that was deemed likely to have cumulative effect alongside the proposed development as such agree with that this can be scoped out*".

3.6.3 On this basis, the review and assessment has been undertaken for the Proposed Development on its own, on the understanding that there are no other plans or projects which are considered to give rise to likely significant in-combination effects on the interest features of the European Sites.

4 IN COMBINATION EFFECTS

4.1 Introduction

4.1.1 As noted above, the scoping response received from the LPA in October 2025 (which included input from NRW) notes: "*The SA proposes to scope out cumulative effects from the Environmental Statement, as the screening opinion identified no existing development, and / or approved development that was deemed likely to have cumulative effect alongside the proposed development as such agree with that this can be scoped out*".

4.1.2 On this basis, the review and assessment has been undertaken for the Proposed Development on its own, on the understanding that there are no other plans or projects which are considered to give rise to likely significant in-combination effects on the interest features of the European Sites.

5 HRA METHODOLOGY

5.1 Guidance and Common Standards Followed

5.1.1 The approach to be taken by competent authorities to formal assessments of potential impacts and effects arising on a European or Ramsar site from any proposals is set out within The Conservation of Habitats and Species Regulations 2017 ('the Habitats Regulations'). Further guidance on the ordered process and procedures for assessment is contained in a number of documents, in particular Planning Policy Wales (February 2021), supplemented by Technical Advice Note (TAN) 5: Nature Conservation and Planning.

5.1.2 The assessment also draws upon government guidance set in the Habitats Regulations Assessments: Protecting a European Site[7], non-statutory, private consultancy guidance published in The Habitats Regulations Handbook[8] and by the Chartered Institute of Ecology and Environmental Management (CIEEM)[9], and in specific advice notes published by The Planning Inspectorate (PINS)[10] in the wake of the 'People Over Wind/Sweetman' case,[11] and by CIEEM[12] further to the Dutch nitrogen case.

5.2 Assessment Process

5.2.1 The assessment process works sequentially through the following stages:

Stage 1 (Screening)

5.2.2 This considers the scope for Likely Significant Effects (LSE) to occur based on a broad scale risk analysis taking into account factors such as the spatial relationship between impact sources and designated sites (including functionally linked habitats and species), the magnitude of changes predicted in atmospheric, coastal/estuarine, freshwater and hydromorphological systems (drawing on outputs from other specialist studies) and whether there are physical or other relationships between source and receptor that could provide an impact vector. Stage 1 screening for likely significant effects considers the project both alone and in-combination with other projects. If it can be confidently predicted on the basis of objective information that there are no likely significant effects, then subsequent HRA stages are not required.

---

[7] Welsh Government (3 March 2021). *Habitats Regulations Assessments: Protecting a European Site.* Via: https://www.gov.wales/sites/default/files/pdf-versions/2021/3/4/1614860989/habitats-regulations-assessments-protecting-european-site.pdf

[8] Tyldesley & Chapman (2013). *The Habitats Regulations Assessment Handbook* (Aug 2018 edn). UK: DTA Publications Ltd.

[9] CIEEM (September 2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd edition.* Chartered Institute of Ecology and Environmental Management, Winchester. Via: https://cieem.net/wp-content/uploads/2018/08/ECIA-Guidelines-2018-Terrestrial-Freshwater-Coastal-and-Marine-V1.1Update.pdf

[10] The Planning Inspectorate (August 2022). *Advice Note 10: HRA relevant to nationally significant infrastructure projects (version 9).* Via: https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-ten/

[11] The Planning Inspectorate (09 May 2018). PINS Note 05/2018 Consideration of avoidance and reduction measures in Habitats Regulations Assessment: *People over Wind, Peter Sweetman v Coillte Teoranta*. Via: https://www.edp-uk.co.uk/assets/pins-note-052018.pdf

[12] CIEEM (2021). *Advice on Ecological Assessment of Air Quality Impacts*. Chartered Institute of Ecology and Environmental Management. Winchester, UK. Via: https://cieem.net/wp-content/uploads/2020/12/Air-Quality-advice-note.pdf

5.2.3 The April 2018 judgment of the Court of Justice of the European Union (CJEU) in *People over Wind & Sweetman*[13] ruled that it is not permissible to take account of measures intended to avoid or reduce the harmful effects of the plan or project on a European Site at the Stage 1 Screening stage. The approach adopted in this HRA report is in line with the CJEU judgment that such measures can only be taken into account as part of Stage 2 Appropriate Assessment.

5.2.4 The 'Dutch nitrogen case' relates to assessment of air quality impacts, where the CJEU judgement[14] was that where one has to demonstrate the absence of air quality effects which are adverse to site integrity, the integrity test would be failed whenever critical loads are exceeded. However, in the UK assessment approaches, particularly at Stage 1 (Screening), concentrate on the change in levels/loads arising from a proposed plan or project (either alone or in combination) irrespective of whether critical loads or levels are already being exceeded at a receptor site.

Stage 2 (Appropriate Assessment)

5.2.5 If Stage 1 cannot rule out Likely Significant Effects, an assessment of the implications of the project for the site/s' conservation objectives is carried out to examine the potential for Adverse Effects on Integrity (AEOI) of European/Ramsar sites. The conservation objectives for each European/Ramsar Site are defined and published by Natural England, and are footnoted within this report in the chapters that follow (and additionally reproduced at **Appendices 2-7**). As the Appropriate Assessment (AA) is to be undertaken by the competent authority (in this case, PCC), we have included in this report sufficient information to enable PCC to discharge its Stage 2 obligations.

5.2.6 HRA Stages 3 and 4 are required if Stage 2 concludes that the project will adversely affect the integrity of the site/s, or when adverse effects on integrity cannot be ruled out with sufficient certainty.

Stage 3 (Assessment of alternative solutions)

5.2.7 Stage 3 requires consideration of alternatives, which may include, for example, feasible design changes aligned with the objectives of the Proposed Development to eliminate the source of LSE/AEOI.

Stage 4 (Assessment where no alternative solutions are possible and adverse impacts remain)

5.2.8 Stage 4 is engaged where alternative solutions to avoid LSE/AEOI are not possible and is concerned with assessing whether the project is justified by 'Imperative Reasons of Overriding

[13] CJEU (12 April 2018). *People Over Wind and Sweetman v Coillte Teoranta* (C-323/17). Via: https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:62017CJ0323

[14] CJEU (7 November 2018). *Coöperatie Mobilisation for the Environment UA and Vereniging Leefmilieu v College van gedeputeerde staten van Limburg and College van gedeputeerde staten van Gelderland* (C-293/17 and C-294/17). Via: https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:62017CJ0293

Public Interest' (IROPI) and, if so, what compensatory measures can be put in place in relation to the affected habitat.

6 ASSESSMENT OF IMPLICATIONS FOR KENFIG SAC

6.1 Characteristics of the Designation

6.1.1 **Qualifying features.** Citation information is reproduced at **Appendix 3** and summarised below.

6.1.2 Kenfig SAC qualifies under Article 4(4) of the Habitats Directive[15] by supporting:

6.1.3 The following Annex I habitats which are a primary reason for designation:

- Fixed coastal dunes with herbaceous vegetation ("grey dunes")
- Dunes with Salix repens ssp. Argentina (Salicion arenariae)
- Humid dune slacks
- Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.

6.1.4 The following Annex II species which are a primary reason for designation:

- Petalwort *Petalophyllum ralfsii*
- Fen orchid *Liparis loeselii*

6.1.5 The following Annex I habitats which are other qualifying features:

- Atlantic salt meadows (Glauco-Puccinellietalia maritimae)

6.1.6 **Conservation Objectives.** The Conservation Objectives for Kenfig SAC are as follows (see also **Appendix 3** for further detail):

Humid Dune Slacks and Dunes with Salix repens ssp. argentea (Salicion arenariae)

The vision for this feature is for it to be in favourable conservation status, with all of the following conditions satisfied:

- Dunes with *Salix repens* and humid dune slacks will occur as part of the dune system, their location will be determined by natural processes and appropriate grazing management.
- A range of successional stages will be found in both features.
- Factors affecting the features will be under control.

Performance indicators (see **Appendix 3** for further detail) are based on A1 extent, A2 quality, F1 livestock grazing, F2 water level & water quality, F3 natural coastal processes, F4

[15] Transposed into UK law via the Conservation of Habitats and Species Regulations 2017 (as amended) (the 'Habitats Regulations').

recreational and visitor pressure, F5 scrub encroachment, F6 air quality, owner/occupier objectives.

Performance indicators of particular relevance to the Proposed Development are expanded on below:

- Recreational and visitor pressure:
  Vehicles or pressure from visitors including camping can cause damage or loss of dune slack vegetation, compaction and erosion.
  Illegal off road motorcycling and use of 4x4s is a particular problem at Kenfig SSSI.
  Uncontrolled horse riding at Merthyr Mawr may cause damage to vegetation and protected species.
- Air quality:
  Several features on the Kenfig part of the SAC are potentially sensitive to air quality impacts, either directly from high levels of ethylene/ethane or indirectly through changes to water chemistry through deposition of atmospheric nitrogen. Atmospheric nitrogen oxide (NOx) levels may be exceeded due to proximity of several nearby sources including industrial (steel works/chemical works/power station), agricultural (chicken farms – ammonia), old landfill sites (methane), transport (M4) and wind blown particulates (adjacent tips).
  The current air pollution assessment criteria for Kenfig SAC are taken from the Environment Agency (EA) Review of Consents (RoC) data and the APIS website (www.apis.ac.uk/index.html). Critical loads are assigned for habitats. For species the broad habitat is used as a surrogate. All SAC features are nutrient sensitive, whilst humid dune slacks, fixed dunes with herbaceous vegetation, and *L. loeselii* are also acid sensitive.

Fixed Dunes with Herbaceous Vegetation ('Grey Dunes')

The vision for this feature is for it to be in favourable conservation status, with all of the following conditions satisfied:

- Fixed dunes with herbaceous vegetation (grey dunes) will occur where older, shifting dunes become more stabilised and in early successional stages become colonised by lichens and other species indicative of the transition from less mobile habitat.
- The habitat will encompass a range of successional stages throughout the area, determined by patterns of natural factors and grazing.
- Grey dunes will comprise a significant part of the dune system but will increase and decrease in extent as natural processes determine the landscape of the dune systems.
- All factors are under management control.

Performance indicators (see **Appendix 3** for further detail) are based on A1 extent, A2 quality, F1 livestock grazing, F2 natural coastal processes, F3 recreational and visitor pressure, F4 scrub encroachment, F5 air quality, F6 owner/occupier objectives.

The expanded performance indicators for recreational and visitor pressure, and for air quality, are the same as set out for the features above.

Hard Oligo-Mesotrophic Waters with Benthic Vegetation of Chara spp.

The vision for this feature is for it to be in favourable conservation status, with all of the following conditions satisfied:

- Submerged *Chara* beds (mainly *Chara aspera* and *C. virgata*) growing in relatively shallow water form the predominant submerged macrophyte vegetation throughout most of the lake.
- *Chara* occur at more than 50% frequency along regular surveillance transects within the Western and Central arms.
- Charophyte species and uncommon pondweeds such as *Potamogeton gramineus* and *P. x nitens* are present in other embayments and pools, including *Tolypella glomerata* in dune pools.
- The lake is spring-fed so nutrient levels remain low. One of the main nutrients (phosphorus) reaches no more than 25 micrograms per litre in regular sampling areas. Nitrogen levels in the water are low (less than 1 milligram per litre) and declining or stable.
- The lake water is clear, but well vegetated with dense beds of submerged and marginal plants. A Secchi disc is visible on the lake bed in the deepest part of the lake (2.6m).
- Water depth is relatively stable, fluctuating naturally with groundwater.
- Reed, swamp and fringing bur-reed are restricted to shallow zones – covering not more than 10% of the site.
- All factors affecting the achievement of these conditions are under control.

Performance indicators (see **Appendix 3** for further detail) are based on A1 extent of standing water, A2 extent of aquatic plant beds, A3 vegetation composition: macrophyte community composition (species indicative of condition), A4 vegetation composition (negative indicator species), F1 water quality and agricultural run-off, F2 hydrology, F4 sediment load, F5 fishery management, F6 introduced alien/exotic species, F7 changes in access and recreation.

Performance indicators of particular relevance to the Proposed Development are expanded on below:

- Changes in access and recreation:
  Kenfig Pool has a high recreational worth, educational interest and landscape value.
  Close contact with the local community is also important to encourage interest in the site and to explain management issues that have to be tackled.

Atlantic Salt Meadows (Glauco-Puccinellietalia maritimae)

The vision for this feature is for it to be in favourable conservation status, with all of the following conditions satisfied:

- The quality of the saltmarsh is within specified limits.
- There is no increase in erosion along the length of the transition from salt marsh to sand dune.
- The saltmarsh flora will continue to include the following scarce species; *Limonium binervosum,* and *Frankenia laevis*.
- Light grazing by rabbits and / or stock will continue to be tolerated within limits.
- The damaging effects of pony riding will have been reduced or eliminated.

Performance indicators (see **Appendix 3** for further detail) are based on A1 extent, A2 quality, F1 livestock grazing, F2 nitrogen deposition, F3 river bank erosion / sediment deposition, F4 trampling by horses, F5 pollution, F6 *Frankenia laevis.*

Performance indicators of potential relevance to the Proposed Development are expanded on below:

- Trampling by horses:
  The saltmarsh is regularly used by pony riders, both individual riders and strings of up to 20+ horses from the trekking centre at Ogmore Castle Farm. Riders tend to stay to the upper edge of the saltmarsh in the southern half, and follow the route of the sewage pipeline in the northern half. However, tracks made by pony riders straying from this route and occasional vehicles (off road vehicles, coastguard, farm and sewage works staff) are clearly visible on other areas of the saltmarsh.
  It is agreed that there has been a loss of habitat since 1991, due to an increase in use of the track that runs along the western edge of the marsh by horse riders. Comparison of 1991 and 2000 aerial photographs show a decrease in vegetation cover and an increase in the amount of bare sand, principally within the middle marsh. The increased use has occurred as the result of an attempt to reduce the amount of erosion throughout the dune system by ensuring the majority of use is targeted to this one track. In many ways this represents a decision to prioritise features of conservation interest across the site. Targets have been set within the performance indicators to ensure that this track does not become too wide – there is potential for riders to encroach further into the marsh, particularly during wet conditions when the track can be more difficult to negotiate.

Petalwort Petalophyllum ralfsii

The vision for this feature is for it to be in favourable conservation status, with all of the following conditions satisfied:

- The species will be found where conditions are suitable in sufficient numbers to form a viable and sustainable population.
- The population will vary from year to year depending on conditions, especially in drier years, but the long-term population will remain steady and sustainable.
- Suitable dune slacks will have patches of bare ground that is being colonised by jelly lichens (*Collema* spp) and *Barbula* mosses.
- The factors affecting the feature are under control.

Performance indicators (see **Appendix 3** for further detail) are based on A1 extent & distribution, A2 habitat quality, F1 habitat, F2 recreation and access, F3 air quality.

Performance indicators of potential relevance to the Proposed Development are expanded on below:

- Recreation and access:
  Horse riding across the dunes at Merthyr Mawr has previously resulted in tracks passing through one of the main slacks where *Petalophyllum* occurs. This track has been 'diverted' through use of restrictions.
  In one slack where *Petalophyllum* is found, pedestrian visitor pressure is 'creating' suitable habitat at the edge of paths through trampling. This may also allow for spread of the species to other areas of suitable habitat within the slack.
  At Kenfig, scrambling bikes are cutting deep tracks through former *Petalophyllum* habitat. Although some return to bare ground would benefit this species, tracks in many places are deep and ridged, and do not give rise to suitable habitat.

The expanded performance indicators for air quality are the same as set out for the features above.

Fen Orchid Liparis loeselii

The vision for this feature is for it to be in favourable conservation status, with all of the following conditions satisfied:

- Sufficient suitable habitat is present to support the populations.
- The factors affecting the feature are under control.

Performance indicators (see **Appendix 3** for further detail) are based on A1 extent & distribution, A2 species population, F1 habitat, F2 recreation and access.

Performance indicators of potential relevance to the Proposed Development are expanded on below:

- Recreation and access:
  At Kenfig, scrambling bikes are cutting deep tracks through *Liparis* habitat. Although some return to bare ground would benefit this species, tracks in many places are deep and ridged, and do not give rise to suitable habitat.

6.2 Potential Sources of Impact/Effect

6.2.1 Consideration is given below to potential vectors or pathways via which the Proposed Development could theoretically affect Kenfig SAC, and topics where such potential does not exist. The potential for significant effects to actually be realised via these vectors is dealt with in section 6.3.

6.2.2 **Direct impacts.** At a range of 800m, there is no pathway by which direct impacts could occur.

6.2.3 **Impacts on functionally linked habitats.** Potential impacts on functionally linked habitats are considered further at section 6.3.

6.2.4 **Recreational pressure.** Recreational pressure from the Proposed Development is considered further at section 6.3.

6.2.5 **Air quality effects.** Air quality effects from the Proposed Development are considered further at section 6.3.

6.2.6 **Coastal effects.** The proposals include new sea defences along the northern edge of Sandy Bay. While it is considered very unlikely, there is an outside possibility of this having knock-on erosion effects further around the coast, which could potentially affect Kenfig SAC. As such, on a highly precautionary basis, coastal effects are considered further at section 6.3.

6.2.7 **Hydrological effects.** At a range of 800m from the Proposed Development, and with no hydrological connection, no pathway for any hydrological effects is considered to exist.

6.2.8 **Noise.** The worst-case scenario for construction noise relates to the noisiest expected construction activities having a noise level of 80dB at 10m, and 56dB at 150m (with the latter being quieter than a normal conversation, or a dishwasher). At a range of 800m it is not considered that there is any pathway for noise impacts to occur. This is also true for post development noise, which is expected to be quieter than the noisiest activities during the construction phase.

6.2.9 **Other Impacts.** Given that the designating features of Kenfig SAC are all habitat and plant based, at a range of 800m no indirect impacts from other indirect sources such as lighting or dust are anticipated.

6.3 Assessment of Potential Effects (Stage 1: Screening)

6.3.1 The following paragraphs provide an assessment of the potential for likely significant effects on Kenfig SAC to arise via the potential vectors discussed above.

6.3.2 **Impacts on functionally linked habitats.**

6.3.3 Consideration was given as to whether or not the sand dune habitat within the application site could have any functional linkage with Kenfig SAC. Firstly, in terms of habitats, it was noted that none of the habitats for which Kenfig SAC is designated (fixed dunes with herbaceous vegetation ("grey dunes"), dunes with Salix repens ssp. Argentina (Salicion arenariae), humid dune slacks, hard oligo-mesotrophic waters with benthic vegetation of Chara spp., Atlantic salt meadows) occur within the application site sand dunes, with these instead comprising mobile sand dunes ("yellow dunes"). Secondly, it was noted that neither of the two plant species for which Kenfig SAC is designated (petalwort *Petalophyllum ralfsii* and fen orchid *Liparis loeselii*) have been recorded within the application site. On this basis, together with the 800m separation between the application site and Kenfig SAC (across a large caravan park), it is assessed that there is not any scope for impacts on functionally linked habitats.

6.3.4 **Recreational pressure.** The Proposed Development is expected to deliver up to 980 new homes. Given the associated population increase at Porthcawl, this is taken forward for Appropriate Assessment.

6.3.5 **Air quality effects.** The western component of Kenfig SAC is within 200m of a road where the traffic is expected to increase by more than 1000 trips per day (in this case the M4 motorway). As such, this is taken forward for Appropriate Assessment.

6.3.6 **Coastal effects.** Coastal effects from the new sea wall are deemed very unlikely, yet potentially possible, so are taken forward for Appropriate Assessment on a highly precautionary basis.

6.4 Assessment of Potential Effects (Stage 2: Appropriate Assessment)

6.4.1 **Recreational pressure.** The conservation objectives for Kenfig SAC note that humid dune slacks, dunes with *Salix repens ssp. argentea* and grey dunes are vulnerable to visitor pressures, in particular camping, illegal off road motorcycling and use of 4x4s, and uncontrolled horse riding. The Atlantic salt meadows and petalwort are noted to be vulnerable to trampling by horses. Petalwort and fen orchid are vulnerable to scrambling bikes.

6.4.2 It is also noted that part of Kenfig SAC comprises a National Nature Reserve, actively managed for recreation.

6.4.3 A search of internet resources was carried out to seek quantitative information on visitor pressures at Kenfig SAC to support this assessment. However, no such quantitative studies could be located, so a qualitative assessment has been made below.

6.4.4 Firstly, Kenfig SAC is separated from the application site by a large holiday / caravan park (as well as residential development along Beach Road adjoining the SAC), and as such is expected to already be subject to a high degree of recreational pressure. Part of the site is managed as a National Nature reserve, and there is a visitor car park provided to the north, enabling visitors to gain access. However, Newton car park on the eastern side of the holiday park, adjoining the SAC, links directly to the Wales Coast Path, which acts to direct much of the recreational pressure through the SAC via a well-defined route (and this would also apply to any increases in recreational usage arising from the proposed development).

6.4.5 Secondly, it is understood from meetings with the Kenfig SAC ranger that trampling of vegetation by pedestrians is one of the lesser concerns at the site (except in localised sensitive areas away from footpaths), with greater problems being experienced from illegal off road motorcycling, 4x4s, uncontrolled horse riding and camping. Rather the main focus of the reserve management is the re-profiling of dunes to create movement in the sand (along with scrub control and grazing). Other impacts, such as littering, are understood to have a more minor effect (though litter control is still listed as a key management issue on the overlapping Merthyr Mawr SSSI management statement).

6.4.6 Thirdly, the proposed areas of residential development directly abut Sandy Bay beach, so new residents would have an excellent recreational facility on their doorstep, and one which is considered likely to be much more of a draw for new residents than regular excursions into the dune systems of Kenfig SAC (a round trip of 1.6km away, and further if not walking through the middle of the caravan park). In addition, the Proposed Development would itself provide significant additional recreational areas for the benefit of new residents, with approximately 20 ha of open space including a series of new significant public open spaces with different offers, and new shops, cafes and leisure activities. This is considered likely to act to greatly reduce additional recreational pressure on Kenfig SAC resulting from the new development.

6.4.7 Fourthly, it is noted that there are several SINCs closer to the application site than Kenfig SAC, together with many other undesignated recreational areas such as Griffin Park, and the proximity of these is considered likely to make these more of a regular draw for new residents than Kenfig SAC.

6.4.8 On the basis of the above, it is assessed that increases in recreational pressure at Kenfig SAC from the Proposed Development would likely be minimal. In the context of Kenfig SAC as a whole (including the western component which is much further away from the application site, at a distance of 3.58km), the minor increases in recreational pressure are expected to have **No Adverse Effect on Integrity**.

6.4.9 **Air quality effects.** The following assessment is based on information obtained from the ES air quality chapter.

6.4.10 In terms of the construction phase, air quality effects are assessed to be temporary, short-term and not significant.

6.4.11 For the completed scheme, the eastern portion of Kenfig SAC is situated more than 200m away from any road where the proposed development is anticipated to cause an increase in traffic of over 1000 journeys per day, and on this basis was scoped out of the air quality modelling process.

6.4.12 However, the western component of Kenfig SAC is situated within 200m of a road where the Proposed Development is anticipated to cause an increase in traffic of over 1000 journeys per day. In this case the road in question is the M4 motorway. A series of points with increasing distance from the motorway were included in the air quality study.

6.4.13 Effects from NOx were assessed to be negligible.

6.4.14 Effects from acid deposition were assessed to be negligible.

6.4.15 Effects from NH_3 increases were modelled to just exceed 1% of the Critical Level of 1µg/m^3 for the closest study point to the M4 motorway (modelled to be 1.1% of the Critical Level). For all the other study points effects from NH_3 were assessed to be negligible.

6.4.16 Effects from nitrogen deposition were modelled to exceed the 1% Lower Critical Load of 5 kg N/ha/year for the three closest study points to the M4 motorway (up to approximately 50m away from the M4). For all the other study points effects from nitrogen deposition were assessed to be negligible.

6.4.17 It is emphasised that only those parts of the SAC closest to the M4 motorway (up to approximately 50m away) are affected by the above non-negligible air quality effects.

6.4.18 It is also noted for context that these affected locations all show exceedances of critical levels for NH_3 and critical loads for nitrogen deposition in the future baseline (2033 without development). In other words, even in the absence of the Proposed Development, these areas would be expected to suffer significant air quality effects regardless due to their proximity to the M4 motorway.

6.4.19 In addition, it is noted that the habitats at this location closest to the M4 are some 2.34km away from the coastline, and situated along the M4 corridor. Satellite imagery gives the impression that the habitats along this strip within 50m of the motorway mainly comprise woodland, scrub and grassland, with an apparent paucity of open sand or the habitats such as grey dunes for which Kenfig SAC is designated.

6.4.20 On the basis of the above, and given that critical levels and loads are only just exceeded, and in a location which only comprises a relatively narrow corridor (50m for a site which extends 2.34km from the coast) at the furthest edge away from the coastline, and in an area which appears from satellite imagery to have a paucity of habitats for which Kenfig SAC is designated, and to be restricted to a location which has existing air quality issues from its proximity to the M4 motorway, it is considered that there would be **No Adverse Effect on Integrity** of Kenfig SAC considered as whole.

6.4.21 **Coastal Effects.** The assessment below is taken from the ES chapter on coastal processes.

6.4.22 Construction was scoped out of modelling on the basis of it being temporary and likely predominantly land based, with no materials delivered by sea, no working at sea, and no dredging.

6.4.23 In relation to the operation of the sea wall post development, the ES chapter on coastal processes makes the following assessments:

- Magnitude of change to wave conditions is negligible
- Magnitude of change to flow conditions is negligible
- Magnitude of change to sediment transport is negligible
- Magnitude of impact on the beach is negligible

6.4.24 On this basis No Likely Significant Effect is anticipated, and it is assessed that there would be **No Adverse Effect on Integrity** of Kenfig SAC from coastal effects.

7 ASSESSMENT OF IMPLICATIONS FOR CEFN CRIBWR GRASSLANDS SAC

7.1 Characteristics of the Designation

7.1.1 **Qualifying features.** Citation information is reproduced at **Appendix 4** and summarised below.

7.1.2 Cefn Cribwr Grasslands SAC qualifies under Article 4(4) of the Habitats Directive[16] by supporting:

7.1.3 The following Annex I habitats which are a primary reason for designation:

- Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)

7.1.4 The following Annex II species which are other qualifying features:

- Marsh fritillary butterfly *Euphydryas aurinia*

7.1.5 **Conservation Objectives.** A brief summary of the key Conservation Objectives for Cefn Cribwr Grasslands SAC follows (see **Appendix 4** for further details):

Molinia Meadows on Calcareous, Peaty or Clayey-Silt Laden Soils (Molinion caeruleae)

The vision for this feature is for it to be in favourable conservation status, with all of the following conditions satisfied:

- *eu-Molinion* marshy grassland will occupy between 50% and 55% of the total site area.
- The remainder of the site will be other semi-natural habitat or areas of permanent pasture.
- The following plants will be common in the *eu-Molinion* marshy grassland: purple moor-grass *Molinia caerulea*; meadow thistle *Cirsium dissectum; Carex hostiana; Carex pulicaris;* devil's bit scabious *Succisa pratensis*; carnation sedge *Carex panicea*; saw wort *Serratula tinctoria* and tormentil *Potentilla erecta*.
- Cross-leaved heath *Erica tetralix* and common heather *Calluna vulgaris* will also be common in some areas.
- Rushes and species indicative of agricultural modification, such as perennial rye-grass *Lolium perenne* and white clover *Trifolium repens* will be largely absent from the *eu-Molinion* marshy grassland.
- Scrub species such as willow *Salix* (excluding *Salix repens*) and birch *Betula* will also be largely absent from the *eu-Molinion* marshy grassland.
- All factors affecting the achievement of the foregoing conditions are under control.

[16] Transposed into UK law via the Conservation of Habitats and Species Regulations 2017 (as amended) (the 'Habitats Regulations').

Performance indicators (see **Appendix 4** for further detail) are based on A1 extent of *Eu Molinion* grassland, A2 condition of the *Eu Molinion* grassland, F1 livestock grazing, F2 hydrological regime, F3 adjacent land use.

Marsh Fritilliary Butterfly Euphydrya aurinia

The vision for this feature is for it to be in favourable conservation status, with all of the following conditions satisfied:

- The site will contribute towards supporting a sustainable metapopulation of the marsh fritillary in the Cefn Cribwr area. This will require a minimum of 50ha of suitable habitat, of which at least 10ha must be in good condition, although not all is expected to be found within the SAC. Some will be on nearby land within a radius of about 2km.
- The population will be viable in the long term, acknowledging the extreme population
- fluctuations of the species.
- Habitats on the site will be in optimal condition to support the metapopulation.
- At least 40ha within the SAC & associated SSSI will be marshy grassland suitable for
- supporting marsh fritillary, with *Succisa pratensis* present and only a low cover of scrub.
- At least 8ha will be marsh fritillary breeding habitat in good condition, dominated by purple moor-grass *Molinia caerulea*, with *S. pratensis* present throughout and a vegetation height of 10-20cm over the winter period.
- Suitable marsh fritillary habitat is defined as stands of grassland where *Succisa pratensis* is present and where scrub more than 1 metre tall covers no more than 10% of the stands.
- Optimal marsh fritillary breeding habitat will be characterised by grassland where the
- vegetation height is 10-20 cm, with abundant purple moor-grass *Molinia caerulea*, frequent "large-leaved" devil's-bit scabious *Succisa pratensis* suitable for marsh fritillaries to lay their eggs and only occasional scrub. In peak years, a density of 200 larval webs per hectare of optimal habitat will be found across the site. (Fowles 20042)
- The marshy grassland will be well sheltered by hedgerows and mature trees.
- All factors affecting the achievement of the foregoing conditions are under control.

Performance indicators (see **Appendix 4** for further detail) are based on A1 density of larval webs, A2 distribution of larval webs, F1 extent & quality of the marshy grassland as habitat for marsh fritillary, F2 livestock grazing, F3 shelter belts, F4 hydrological regime, F5 burning.

Other Features

Additional conservation objectives are also set out for:

- Non-SAC marshy grassland
- Neutral grassland
- Viper's grass *Scorzonera humilis*
- Marsh fern *Thelypteris palustris*
- Bog myrtle *Myrtica gale*

7.2 Potential Sources of Impact/Effect

7.2.1 Consideration is given below to potential vectors or pathways via which the Proposed Development could theoretically affect Cefn Cribwr Grasslands SAC, and topics where such potential does not exist. The potential for significant effects to actually be realised via these vectors is dealt with in section 7.3.

7.2.2 **Direct impacts.** At a range of 4.68km, there is no pathway by which direct impacts could occur.

7.2.3 **Impacts on functionally linked habitats.** The application site lacks any *Molinia* meadow habitat, and is 4.68km distant, so no functional linkage of this habitat type is deemed possible. However, consideration of whether or not there could be any impacts on marsh fritillary butterfly associated with these habitats from the Proposed Development is given at section 7.3.

7.2.4 **Recreational pressure.** Recreational pressure from the Proposed Development is considered further at section 7.3.

7.2.5 **Air quality effects.** Air quality effects from the Proposed Development are considered further at section 7.3.

7.2.6 **Hydrological effects.** At a range of 4.68km from the Proposed Development, and with no hydrological connection, no pathway for any hydrological effects is considered to exist.

7.2.7 **Noise.** The worst-case scenario for construction noise relates to the noisiest expected construction activities having a noise level of 80dB at 10m, and 56dB at 150m (with the latter being quieter than a normal conversation, or a dishwasher). At a range of 4.68km it is not considered that there is any pathway for noise impacts to occur. This is also true for post development noise, which is expected to be quieter than the noisiest activities during the construction phase.

7.2.8 **Other Impacts.** It is not considered that marsh fritillary butterfly would have vulnerabilities to other indirect sources such as lighting or dust from the application site, particularly at a range of 4.68km.

7.3 Assessment of Potential Effects (Stage 1: Screening)

7.3.1 The following paragraphs provide an assessment of the potential for likely significant effects on Cefn Cribwr Grasslands SAC to arise via the potential vectors discussed above.

7.3.2 **Impacts on functionally linked habitats.**

7.3.3 Marsh fritillary butterfly typically stays within a limited area, with adults rarely flying more than 50-100 metres (though some can disperse up to 5km, or even further, in 'good' years). Given that the application site is situated 4.68km away however, and more so that it is separated from Cefn Cribwr Grasslands SAC by the urban area of Porthcawl, it is considered extremely unlikely that any marsh fritillary butterflies would make this journey. Lastly, and

crucially, marsh fritillary butterflies require abundant devil's-bit scabious as their foodplant, a plant species which has not been recorded within the application site. On this basis it is not considered that there is any significant scope for impacts on marsh fritillary butterflies arising from the Proposed Development.

7.3.4 **Recreational pressure.** Although the Proposed Development is expected to deliver up to 980 new homes, the Cefn Cribwr Grasslands SAC sites are understood to be privately owned and grazed (though some parts incorporate PROWs). None of the conservation objectives above make any mention of recreational pressure as a concern. As such recreational pressure is not taken forward for Appropriate Assessment.

7.3.5 **Air quality effects.** Cefn Cribwr SAC is within 200m of a road where the traffic is expected to increase by more than 1000 trips per day. As such, this is taken forward for Appropriate Assessment.

7.4 Assessment of Potential Effects (Stage 2: Appropriate Assessment)

7.4.1 **Air quality effects.** The following assessment is based on information obtained from the ES air quality chapter.

7.4.2 In terms of the construction phase, air quality effects are assessed to be temporary, short-term and not significant.

7.4.3 For the completed scheme, Cefn Cribwr Grasslands SAC is situated within 200m of a road where the Proposed Development is anticipated to cause an increase in traffic of over 1000 journeys per day.

7.4.4 Effects from NOx were assessed to be negligible.

7.4.5 Effects from acid deposition were assessed to be negligible.

7.4.6 Effects from NH_3 were assessed to be negligible.

7.4.7 Effects from nitrogen deposition were assessed to be negligible.

7.4.8 As such there would be No Likely Significant Effect, and **No Adverse Effect on Integrity** of Cefn Cribwr Grasslands SAC.

8 ASSESSMENT OF IMPLICATIONS FOR DUNRAVEN BAY SAC

8.1 Characteristics of the Designation

8.1.1 **Qualifying features.** Citation information is reproduced at **Appendix 5** and summarised below.

8.1.2 Dunraven Bay SAC qualifies under Article 4(4) of the Habitats Directive[17] by supporting:

8.1.3 The following Annex II species which are a primary reason for designation:

- Shore dock *Rumex rupestris*

8.1.4 **Conservation Objectives.** A brief summary of the key Conservation Objectives for Dunraven Bay SAC follows (see **Appendix 5** for further details):

Rumex rupestris (Shore Dock)

The vision for this feature is for it to be in favourable conservation status, with all of the following conditions satisfied:

- There are at least 10 mature plants at the site.
- The plant present are flowering and setting seed.
- The population is stable and viable in the long term.

Performance indicators (see **Appendix 5** for further detail) are based on A1 extent of *Rumex rupestris*, A2 condition of *Rumex rupestris*, F1 erosion and cliff fall, F2 scrub.

8.2 Potential Sources of Impact/Effect

8.2.1 Consideration is given below to potential vectors or pathways via which the Proposed Development could theoretically affect Dunraven Bay SAC, and topics where such potential does not exist. The potential for significant effects to actually be realised via these vectors is dealt with in section 8.3.

8.2.2 **Direct Impacts.** At a range of 6.87km, there is no pathway by which direct impacts could occur.

8.2.3 **Impacts on functionally linked habitats.** Shore dock has not been recorded in the application site, conditions are not suitable for it, and the site is 6.87km distant. On this basis it is not considered that there could be any functional linkage.

8.2.4 **Recreational pressure.** Recreational pressure from the Proposed Development is considered further at section 8.3.

[17] Transposed into UK law via the Conservation of Habitats and Species Regulations 2017 (as amended) (the 'Habitats Regulations').

8.2.5 **Air quality effects.** At a range of 6.87km, the site is located considerably further than 200m from any road where the Proposed Development is anticipated to cause an increase in traffic. On this basis air quality effects are scoped out.

8.2.6 **Coastal effects.** The proposals include new sea defences along the northern edge of Sandy Bay. While it is considered very unlikely, there is an outside possibility of this having knock-on erosion effects further around the coast, which could potentially affect Dunraven Bay SAC. As such, on a highly precautionary basis, coastal effects are considered further at section 8.3.

8.2.7 **Hydrological effects.** At a range of 6.87km from the Proposed Development, and with no hydrological connection, no pathway for any hydrological effects is considered to exist.

8.2.8 **Noise.** The worst-case scenario for construction noise relates to the noisiest expected construction activities having a noise level of 80dB at 10m, and 56dB at 150m (with the latter being quieter than a normal conversation, or a dishwasher). At a range of 6.87km it is not considered that there is any pathway for noise impacts to occur. This is also true for post development noise, which is expected to be quieter than the noisiest activities during the construction phase.

8.2.9 **Other Impacts.** Given that shore dock is static, at a range of 6.87km no indirect impacts from other indirect sources such as lighting or dust are anticipated.

8.3 Assessment of Potential Effects (Stage 1: Screening)

8.3.1 The following paragraphs provide an assessment of the potential for likely significant effects on Dunraven Bay SAC to arise via the potential vectors discussed above.

8.3.2 **Recreational pressure.** The Proposed Development is expected to deliver up to 980 new homes. However, Dunraven SAC is managed for tourism, and there is no mention of recreational pressures as a threat to shore dock in the conservation objectives (likely because it grows at the base of cliffs away from parts of the SAC with higher levels of visitor pressure). On this basis, together with the 6.87km distance from the Proposed Development to Dunraven Bay SAC, it is not considered that there would be any significant adverse effect from recreational pressure.

8.3.3 **Coastal effects.** Coastal effects from the new sea wall are deemed very unlikely, yet potentially possible, so are taken forward for Appropriate Assessment on a highly precautionary basis.

8.4 Assessment of Potential Effects (Stage 2: Appropriate Assessment)

8.4.1 **Coastal effects.** The assessment below is taken from the ES chapter on coastal processes.

8.4.2 Construction was scoped out of modelling on the basis of it being temporary and likely predominantly land based, with no materials delivered by sea, no working at sea, and no dredging.

8.4.3 In relation to the operation of the sea wall post development, the ES chapter on coastal processes makes the following assessments:

- Magnitude of change to wave conditions is negligible
- Magnitude of change to flow conditions is negligible
- Magnitude of change to sediment transport is negligible
- Magnitude of impact on the beach is negligible

8.4.4 Furthermore, Dunraven Bay SAC is 6.87km away from the Proposed Development.

8.4.5 On the basis of the above No Likely Significant Effect is anticipated, and it is assessed that there would be **No Adverse Effect on Integrity** of Dunraven Bay SAC from coastal effects.

9 OVERALL CONCLUSIONS

9.1.1 This document is intended to assist Bridgend County Borough Council, as competent authority, with the process of conducting HRA of the application for the Proposed Development.

9.1.2 The overall conclusion is that the Proposed Development is compliant with relevant policy and legislation in respect of the due protection of European Sites. This assessment concludes that there is no adverse effect on the integrity of the assessed European Sites resulting from the Proposed Development, either alone or in combination with other plans and projects (with in-combination effects having been scoped out of the assessment).

Appendix 1.

Proposed Development Site Layout


KEY
01 8 Lane Outdoor Pool
02 Gym and Studio
03 Flexible Community Space
04 Hotel
05 Outdoor Arena
06 Hillsboro Surface Level Car Park
07 Hillsboro Pocket Park
08 Bus Station
09 Splash Park
10 Funfair
11 MUGA
12 Coney Beach Public Car Park
13 New Linear Park
14 Pump Track
15 Monster Park Treetop Adventure Walk
16 Mini Golf
17 Sandy Bay Park
18 Retained and Enhanced Dunes
19 Land Allocated for Educational Use
20 Community Garden
21 Sea and Beach Facility
22 Community Pavilion
Sand
Sandy Bay
Mean High Water
Mean Low Water
East Pier
Rock
Boulders
Slipway
Emergency Telephone
A4106
DOCK STREET
WELL STREET
JOHN STREET
HILLSBORO PLACE
THE SQUARE
THE PROMENADE
EASTERN PROMENADE
WELLFIELD AVENUE
BUNGALOW AVENUE
NEW ROAD
POPLAR ROAD
Museum
Tower
Coastguard Lookout
Pier Hotel
Car Park
Awel-y-mor Community Centre
N

NOTES:

NOT FOR SITE PURPOSES: This drawing is a general arrangement plan only and is not intended for site purposes.

SCALE: Do not scale from this drawing.

SETTING OUT: All setting out, levels, dimensions to be agreed on site. Do not use the information on this drawing without checking all dimensions on site. Any discrepancies between drawings, specifications and site works are to be reported to The Urbanists. Order of construction and setting out is to be agreed on site.

CHECK: This drawing must be the latest revision, read in conjunction with all other drawings, details, specifications and schedules. All dimensions are in millimetres unless otherwise stated. Where and contradicition or uncertainty arises between the drawings and/or the schedule of works, it is the contractor's responsibility to seek verification from The Urbanists before proceeding. No claims will be met by The Urbanists, where the contractor continues work in absence of such confirmation.

No.	Date	By	Revision Notes
A	13/10/2025		

PROJECT STATUS:

S3 (SUITABLE FOR REVIEW)

theurbanists

Client Bridgend County Borough Council & Welsh Government

Project Porthcawl Waterfront Regeneration

Title Illustrative Masterplan Option C (Wider Plan)

Project ID	Organiser	Block	Level	Type	Role	Dwg	Rev.	Status
2316	URB	XX	XX	SK	UD	C001	A	DRAFT

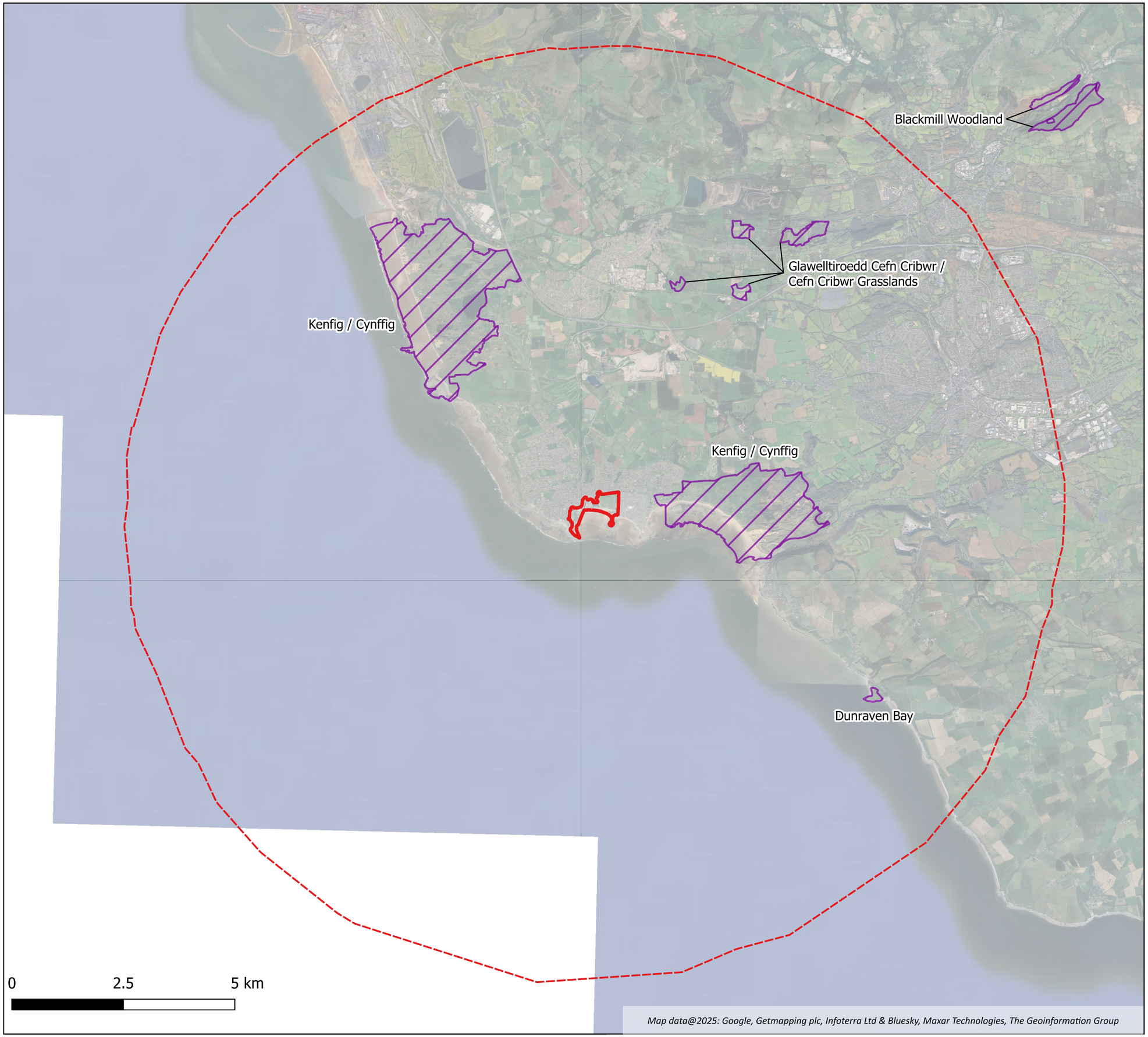
Drawn TS Date 13/10/2025 Checked JD Scale 1:1250

The Urbanists (Cardiff) - The Creative Quarter - 8A Morgan Arcade - CF10 1AF
The Urbanists (Bristol) - Generator Building - Finzels Reach - BS1 6BX
T: 029 2023 6133 E: info@theurbanists.net W: www.theurbanists.net

Appendix 2.

Proposed Development Location &

European Statutory Designated Sites within 10km



Key

- Site boundary
- 10km buffer from site boundary
- Special Areas of Conservation (SAC)

Title

Site location, and European Statutory Nature Conservation Designations (10km radius)

Project	Client
Porthcawl CPO, Bridgend	Bridgend Council

Drawing No.	Revision	Project No.
Appendix 2	-	E2179

Drawn	Checked	Date
SF	GM	October 2025

Bioscan (UK) Ltd

The Old Parlour
Little Baldon Farm
Little Baldon
Oxford
OX44 9PU

+44 (0) 1865 341321
bioscan@bioscanuk.com
www.bioscanuk.com

Appendix 3.

Kenfig SAC:

JNCC Page, Register Entry, Conservation Objectives, Standard Data Form and SSSI Information

Special Areas of Conservation

Kenfig/ Cynffig

Designated Special Area of Conservation (SAC)

Country	Wales
Unitary Authority	East Wales
Centroid*	SS790813
Latitude	51.5183
Longitude	-3.7447
SAC EU Code	UK0012566
Status	Designated Special Area of Conservation (SAC)
Area (ha)	1189.14

* This is the approximate central point of the SAC. In the case of large, linear or composite sites, this may not represent the location where a feature occurs within the SAC.

Location of Kenfig/ Cynffig SAC

General site character

- Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins) (19%)
- Salt marshes, Salt pastures, Salt steppes (1%)
- Coastal sand dunes, Sand beaches, Machair (63%)
- Shingle, Sea cliffs, Islets (4%)
- Inland water bodies (Standing water, Running water) (2.5%)
- Bogs, Marshes, Water fringed vegetation, Fens (0.5%)
- Heath, Scrub, Maquis and Garrigue, Phygrana (7.5%)
- Broad-leaved deciduous woodland (2.5%)

Download the Standard Data Form for this site (PDF <100kb)

Note When undertaking an appropriate assessment of impacts at a site, all features of European importance (both primary and non-primary) need to be considered.

Annex I habitats that are a primary reason for selection of this site

- **2130 "Fixed coastal dunes with herbaceous vegetation (""grey dunes"")" * Priority feature**
  Kenfig is a largely intact dune system in south Wales with extensive areas of **fixed dune** vegetation with red fescue *Festuca rubra* and lady's bedstraw *Galium verum* and semi-fixed dune grassland with marram *Ammophila arenaria* and red fescue. There is also a relatively large area of more acidic vegetation dominated by sand sedge Carex *arenaria*, sheep's-fescue *Festuca ovina* and common bent *Agrostis capillaris*.

- **2170 Dunes with Salix repens ssp. argentea (Salicion arenariae)**
  Kenfig contains one of the largest series of dune slacks in Wales. The dune slacks are species-rich and there are extensive areas of **dunes with *Salix repens* ssp. *argentea***, which represent a mature phase in dune slack development. This site is in the central part of the range of this community on the west coast and is a highly representative example of this habitat type.

- **2190 Humid dune slacks**
  Kenfig in south Wales contains the most important example of **Humid dune slacks** in the UK, owing to the extent of the habitat type and the conservation of its structure and function. These calcareous dune slacks are also amongst the most species-rich in the UK, supporting communities dominated by a variety of mosses and a number of rare plants, notably **1903 Fen orchid *Liparis loeselii***, for which the site is also selected. Some of the dune slacks on the site are still in the early successional stage of development.

- **3140 Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.**

Kenfig Pool is a shallow lake system within the extensive sand dune system of Kenfig, alongside Swansea Bay in south Wales. The water chemistry is indicative of a coastal, alkaline lake with a moderate nutrient status. High alkalinity, conductivity, sodium and chloride values reflect this marine influence. Elevated calcium values are probably derived from marine shell remains in the sandy substrate. Large stands of common reed *Phragmites australis* are found on the pool's seaward side. Grey club-rush *Scirpus lacustris* ssp. *tabernaemontani*, sea club-rush *Scirpus maritimus*, branched bur-reed *Sparganium erectum* and yellow iris *Iris pseudacorus* are also present. A sheltered bay supports a plant association dominated by shining pondweed *Potamogeton lucens* and curled pondweed *P. crispus*. Hairlike pondweed *P. trichoides* is locally dominant in the north end and the south end has abundant rigid hornwort *Ceratophyllum demersum*, Canadian waterweed *Elodea canadensis*, fan-leaved water-crowfoot *Ranunculus circinatus*, spiked water-milfoil *Myriophyllum spicatum* and the charophytes *Chara aspera* var. *aspera* and *Nitella flexilis* var. *flexilis*. Shoreweed *Littorella uniflora* can be found growing in association with *C. aspera* and the aquatic moss *Fontinalis antipyretica* along the sandy shore section. *C. aspera* also dominates the substrate off the grazed landward shoreline, to a depth of approximately 1.5 m.

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site

- **1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)**

Annex II species that are a primary reason for selection of this site

- **1395 Petalwort** *Petalophyllum ralfsii*
  Kenfig is one of two sites selected for **petalwort *Petalophyllum ralfsii*** in south Wales and supports a large population of the species, numbering thousands of thalli. The calcareous dune system has many dune slacks that include the early successional, open slack vegetation this species requires.

- **1903 Fen orchid** *Liparis loeselii*
  Kenfig on the south Wales coast holds the largest populations of **fen orchid *Liparis loeselii*** in the UK, comprising about 50% of the UK resource. Management of the site is directed towards the maintenance and enhancement of the populations of fen orchid. The variety that occurs here, as at Whiteford Burrows, is var. *ovata*, which is currently known to occur only in Wales and on the coast of Brittany, as well as in the past at Braunton Burrows, Devon, England.

Annex II species present as a qualifying feature, but not a primary reason for site selection

- Not Applicable

Tel: 01733 562626 Fax: 01733 555948. Contact us: Enquiry form

Conservation (Natural Habitats, &c.) Regulations 1994 (SI 1994 No. 2716),
fel y'u diwygiwyd / as amended.

COFNOD YN Y GOFRESTR O SAFLEOEDD EWROPEAIDD I GYMRU

ENTRY IN THE REGISTER OF EUROPEAN SITES FOR WALES

(Rheoliad / Regulation 11.2)

***ENW'R SAFLE*:**
***SITE NAME*:** Kenfig / Cynffig

***MATH O SAFLE*:** Ardal Cadwraeth Arbennig (ACA)
***SITE TYPE*:** Special Area of Conservation (SAC)

***CÔD Y SAFLE*:**
***SITE CODE*:** UK0012566

***HANES DYNODIAD*:**

***Dyddiad y trosglwyddwyd i'r Comisiwn Ewropeaidd (Rheoliad 7.4)*:**
Ebrill 2003

***Dyddiad y mabwysiadwyd fel safle o bwysigrwydd cymunedol (Council Directive 92/42/EEC, Erthygl 4.2)*:**
7 Rhagfyr 2004

***Dyddiad dynodi*:**
13 Rhagfyr 2004

***Dynodwyd gan (Rheoliad 8.1)*:**
Cynulliad Cenedlaethol Cymru

***LLEOLIAD*:**

Awdurdod unedol:
Pen-y-bont ar Ogwr, Vale of Glamorgan, Castell-Nedd Port Talbot

***Cyfesurynnau*:**
Hydred 03 44 41 Gor, Lledred 51 31 06 Gog
Cyfeirnod Grid Cenedlaethol Arolwg Ordnans: SS790813

Gweler hefyd y map(iau) amgaeëdig, nad ydynt yn ffurfio rhan o'r cofnod hwn.

***DESIGNATION HISTORY*:**

***Date transmitted to the European Commission (Regulation 7.4)*:**
April 2003

Date adopted as a site of community importance (Council Directive 92/42/EEC, Article 4.2):
7 December 2004

***Date designated*:**
13 December 2004

Designated by (Regulation 8.1):
National Assembly for Wales

***LOCATION*:**

Unitary authority:
Bridgend, Vale of Glamorgan, Neath Port Talbot

***Coordinates*:**
Longitude 03 44 41 W, Latitude 51 31 06 N
Ordnance Survey National Grid Reference: SS790813

See also the accompanying map(s), which do not form part of this entry.

MATHAU O GYNEFIN A/NEU RYWOGAETHAU Y DYNODIR Y SAFLE O'U PLEGID:
HABITAT TYPES AND/OR SPECIES FOR WHICH THE SITE IS DESIGNATED:

		Enw cyffredin	**Common name**	**Term Gwyddonol**	**Scientific term**
1	*	Glaswelltir twyni	Dune grassland	Twyni sefydlog gyda llystyfiant o lysiau ("twyni llwydion")	Fixed dunes with herbaceous vegetation ("grey dunes")
2		Dolydd ar forfeydd arfordir y gorllewin	Atlantic salt meadows	Dolydd ar forfeydd arfordir y gorllewin (*Glauco-Puccinellietalia maritimae)*	Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
3		Twyni gyda chorhelyg	Dunes with creeping willow	Twyni gyda *Salix repens,* is-rywogaeth *argentea (Salicion arenariae)*	Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*)
4		Llynnoedd neu byllau sy'n gyfoethog o galsiwm neu fasau eraill, ond sy'n aml yn brin o faeth	Calcium-rich nutrient-poor lakes, lochs and pools	Dyfroedd oligo-mesotriffig caled gyda llystyfiant gwaelodol o 'r rhywogaeth *Chara*	Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp.
5		Llaciau twyni llaith	Humid dune slacks	Llaciau twyni llaith	Humid dune slacks
6		Tegeirian y fign	Fen orchid	*Liparis loeselii*	
7		Petalophyllum ralfsii	Petalwort	*Petalophyllum ralfsii*	

*Mae'n dynodi mathau o gynefin neu rywogaeth y rhoddir blaenoriaeth iddynt (a ddiffinnir yn Erthyglau 1(d) ac 1(h) o Council Directive 92/43/EEC).

*Denotes a priority habitat type or species (defined in Articles 1(d) and 1(h) of Council Directive 92/43/EEC).

***GWNAED Y COFNOD HWN*:**
14 Mehefin 2005

***THIS ENTRY MADE*:**
14 June 2005

***GAN*:**
Trish Fretten, ar ran Gweinidog dros yr Amgylchedd, Cynllunio a Chefn Gwlad, Cynulliad Cenedlaethol Cymru

***BY*:**
Trish Fretten, on behalf of the Minister for Environment, Planning and Countryside, National Assembly for Wales

***LLOFNOD*:** ***SIGNATURE*:**

***DYDDIAD(AU) COFNODION BLAENOROL AR GYFER Y SAFLE HWN*:**
Dim

***DATE(S) OF PREVIOUS ENTRIES FOR THIS SITE*:**
None

Cyngor Cefn Gwlad Cymru
Countryside Council for Wales

Kenfig / Cynffig

Map 1 / 1

Côd Safle y GE
EC Site Code **UK0012566**

Ardal Cadwraeth Arbennig (ACA)
Special Area of Conservation (SAC)

Arwynebedd cyfan
Total area **1,191.67 ha**

Hydred **Longitude**	03° 44' 41"	Gorllewin **West**	G/N
Lledred **Latitude**	51° 31' 06"	Gogledd **North**	

N.G. Mae'r ffigurau Lledred/Hydred i gyd wedi deillio o System Geodesig y Byd 84 (WGS 84)

N.B. All Latitude/Longitude figures have been derived from World Geodetic System 84 (WGS 84).

Tafluniad map: Y Grid Cenedlaethol Prydeinig
Projection: British National Grid

Rhif diweddaraf **Version number** **6** **22/02/2005**

Graddfa **Scale** **1 : 50,000**

Noder: Data wedi ei gipio ar raddfa 1:2,500, rhoddwyd ar raddfa 1:50,000.
Mae mapiau graddfa-fawr swyddogol ar gael gan CCGC.

Note: Data captured at 1:2,500 scale, placed on 1:50,000 scale.
A definitive large scale map is available on request from CCW.

Noder: Gall ffin newid lle mae'n dilyn llinell Marc Penllanw Cymhedrol ac/neu linell Marc Distyll Cymhedrol.

Note: Where the boundary follows the lines of Mean High and/or Mean Low Water Marks it is subject to change.

Ardal Cadwraeth Arbennig
Cyfarwyddeb y Cyngor 92/43/CEE
Dynodwyd gan y Cynulliad Cenedlaethol Cymru Ar :13/12/2004

Special Area of Conservation
Council Directive 92/43/EEC
Designated by the National Assembly for Wales On: 13/12/2004

CYNGOR CEFN GWLAD CYMRU
COUNTRYSIDE COUNCIL FOR WALES

CORE MANAGEMENT PLAN
(INCLUDING CONSERVATION OBJECTIVES)

FOR

Kenfig/Cynffig SAC

Date: 9th April 2008 (Minor map edit, February 2013)

Approved by: David Mitchell

More detailed maps of management units can be provided on request.
A Welsh version of all or part of this document can be made available on request.

Cyngor Cefn Gwlad Cymru
Countryside Council for Wales

NATURA 2000

Ramsar

Llywodraeth Cynulliad Cymru
Welsh Assembly Government
CORFF NODDEDIG | SPONSORED BODY

CONTENTS

PREFACE

This document provides the main elements of the CCW's management plan for the site named. It sets out what needs to be achieved on the site, the results of monitoring and advice on the action required. This document is made available through the CCW's web site and may be revised in response to changing circumstances or new information. This is a technical document that supplements summary information on the web site.

One of the key functions of this document is to provide the CCW's statement of the Conservation Objectives for the relevant Natura 2000 site. This is required to implement the Conservation (Natural Habitats, &c.) Regulations 1994, as amended (Section 4). As a matter of Welsh Assembly Government Policy, the provisions of those regulations are also to be applied to Ramsar sites in Wales.

1. VISION FOR THE SITE

This is a descriptive overview of what needs to be achieved for conservation on the site. It brings together and summarises the Conservation Objectives (part 4) into a single, integrated statement about the site.

The overall aim for the SAC is that the natural coastal and dune-forming processes that determine the dynamics and proportions of habitats at Kenfig should be allowed to continue. Existing habitats should be maintained where possible by management of factors within human control.

Approximately 57% of the site comprises sand dunes, supporting a broad range of plant community types. Natural processes largely govern the area of the dunes, which grade from shifting embryonic dunes with an abundance of bare sand (between a quarter and a half of the dune area), to a more fixed stable dune community. This range of communities, with a high proportion of sparsely vegetated and open dune slacks or wet hollows, should be maintained or increased. The condition of these habitats is dependant on a number of factors including the nutrient state of the aquatic system and quantity of water, as well as the management regime.

Although salt marsh makes up less than 2% of the site, this habitat is rare along the Glamorgan coast. Here it includes plant species such as sea heath and samphire (*Salicornia spp.*). Natural processes, largely determine the area of the salt marsh but where possible the area should be maintained or increased.

Nationally rare and scarce plants, such as petalwort and fen orchid, which are associated with the dunes, should not reduce in range within their habitats, or lose the ability to reproduce and sustain themselves through factors within human control. Populations of other national and local rarities such as rough stonewort, hair-like pondweed, Irish ruffwort, chalk hook-moss, variegated horsetail, maiden pink, sea stock, rock sea-lavender, round-leaved wintergreen and dune fescue should also be maintained.

Populations of rare invertebrates including shrill carder bee, grizzled skipper and small blue butterflies, medicinal leech, strandline beetle (*Eurynebria complanata*) and the weevils *Pachytychius quinquepunctatus*, *Glocianus pilosellus* should be maintained. The site should also support a diverse invertebrate assemblage such as solitary wasps, stiletto flies, robber flies and mining bees, which are associated with the range of sand dune habitats present.

The site should also support nationally and locally rare fungi, associated with the sand dune habitats, including the nail fungus *Poronia punctata*, the ink cap fungus *Coprinus ammophilae*, the stalked puffball *Tulostoma brumale* and the milk-cap fungus *Lactarius controversus*, as well as a diverse assemblage of other macrofungi.

Several nationally important and species rich intertidal communities are found within the coastal front of the SAC, such as rock pools, soft piddock bored substrata and sand influenced biogenic reefs, including honeycomb worm *Sabellaria* reefs. The inter-tidal communities should remain mainly undisturbed, with sustainable populations maintained by maritime influences, and tidal movement.

Management of the site should promote the natural diversity of the sand dune and salt marsh habitats. Due to the nature of the site this will involve clearance of scrub, as natural seral progression would otherwise result in the dune system becoming dominated by scrub and woodland. In the case of the Merthyr Mawr section, this will include control of sea buckthorn.

Kenfig pool is a fine example of a moderately nutrient rich lake with a rich bottom-growing flora of stoneworts. This habitat type is characterised by water with a high base content usually confined to areas of limestone and other base-rich substrates from which the dissolved minerals are derived. Such water bodies are characterised by very clear water and low nutrient status. They are therefore largely restricted to situations where the catchment or aquifer from which they are supplied with water remains relatively unaffected by intensive land-use or other sources of nutrients, and they are most often found in areas supporting mosaics of semi-natural vegetation. The stoneworts are the most prominent component of the vegetation at Kenfig Pool and they occur as dense beds that cover a significant part of the lake bottom over sandy and muddy marl deposits. Kenfig Pool contains a number of rare and local stonewort species. This element of the site may need to be managed to ensure the nutrient state of the lake is maintained and that there are no detrimental impacts from existing or future management activities.

2. SITE DESCRIPTION

2.1 Area and Designations Covered by this Plan

Grid references: Eastings and Northings 279070, 181910 (Kenfig centre of site)
286280, 176890 (Merthyr Mawr centre)

Unitary authorities: **Bridgend County Borough Council**
Vale of Glamorgan
Neath and Port Talbot

Area (hectares): 1191.67

Designations covered:
SAC consisting of 2 separate SSSI. 2 National Nature Reserves (NNR), a Local Nature Reserve (LNR), and a proposed LNR:
Kenfig/Cynffig SSSI
Kenfig Pool and Dunes NNR
Kenfig Pool and Dunes LNR
Merthyr Mawr SSSI
Merthyr Mawr Warren NNR
Newton Burrows LNR (proposed)

Detailed maps of the designated sites are available on the web site.
http://www.ccw.gov.uk/interactive-maps/protected-areas-map.aspx

2.2 Outline Description

This plan covers the Kenfig SAC, which consists of two SSSI (Cynffig/Kenfig and Merthyr Mawr).

2.3 Outline of Past and Current Management

Natural succession to mature habitats within the dune systems can be detrimental to the plant communities of the dune grassland and humid dune slacks, including species of early successional habitats such as *Liparis loeselii* and *Petalophyllum ralfsii*. Kenfig and Merthyr Mawr have a long history of human land use, including grazing, aggregate extraction and military training, although the latter activities ceased a long time ago. Offshore aggregate extraction continues to the present day. Both component parts of the SAC are National Nature Reserves and therefore used as a public open space, with recreational activities including walking, fishing and horse riding, which can impact on management.

Livestock grazing at Kenfig was practised under a commons type regime during the period of medieval township, and rabbits were present from the 13th Century onwards, although myxamatosis and viral haemorrhagic disease later reduced the population. In recent years Kenfig Pool and Dunes NNR has predominantly been grazed by sheep, although cattle have been re-introduced to part of the site in the last few years. The grazing as a whole is currently under review. Selected dune slacks are mown to provide appropriate conditions for maintenance of these particular habitats. Other management takes place to encourage rabbit grazing; this includes mowing and burrow creation on drier areas adjacent to dune slacks. Overall, Kenfig is similar to many dune systems in the UK in that it has become over-stabilised and is losing much of the successionally young habitat types. There has been some management to restore this habitat, with the creation of three ‘scrapes’ in dune slacks adjacent

to those containing *L. loeselii* and *P. ralfsii* populations, where the vegetation was taken back to bare sand.

At Merthyr Mawr NNR, the main focus of ongoing management is control of *Hippophae rhamnoides*, which is an introduced species here, and scrub. This management will benefit the two main SAC features represented on this component of the site - dune grassland and *P. ralfsii*. Merthyr Mawr is currently grazed by rabbits, with cattle also grazing on part of the site.

It is thought that the dune slacks at Kenfig and Merthyr Mawr as well as Kenfig Pool are mainly fed by groundwater, and possibly a deep Carboniferous Limestone aquifer (Davidson & Appleby, 2003). There are also three small ephemeral streams that enter Kenfig Pool. Maintenance of the natural hydrological regime of both dune systems is critical for the maintenance of the character, composition and condition of the features.

2.4 Management Units

The plan area has been divided into management units to enable practical communication about features, objectives, and management. This will also allow us to differentiate between the different designations where necessary.

A map showing the management units referred to in this plan is shown below:

The following table confirms the relationships between the management units and the designations covered:

Unit number	SAC	SSSI	NNR	LNR
Kenfig SSSI				
1	✔	✔		✔
2	✔	✔	✔	✔
3		✔		
4		✔		
5	✔	✔	✔	✔
6	✔	✔	✔	✔
7	✔	✔		
8	✔	✔		
9	✔	✔		
Merthyr Mawr SSSI				
10	✔	✔	✔	
11	✔	✔	✔	
12	✔	✔		Proposed
13	✔	✔		Proposed
14	✔	✔		
15	✔	✔		
16		✔		

3. THE SPECIAL FEATURES

3.1 Confirmation of Special Features

Designated feature	***Relationships, nomenclature etc***	***Conservation Objective in part 4***
SAC features		
Annex I habitats that are a primary reason for selection of this site	*Referred to in this plan as:*	
2130 Fixed dunes with herbaceous vegetation (`grey dunes`) * Priority Feature	Fixed Dunes	3
2170 Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*)	Dune slacks with Salix	1/2
2190 Humid dune slacks	Dune slacks	1/2
3140 Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp.	*Chara* beds	4
Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site		
1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)	Salt marsh	5
Annex II species that are a primary reason for selection of this site		
1395 Petalwort *Petalophyllum ralfsii*	Petalwort	6
1903 Fen orchid *Liparis loeselii*	Fen Orchid	7
SSSI features		
The following is a list of current SSSI features; where these directly relate to SAC and SPA features, they have not been listed.		
Sand dune		
Standing water Marl/High alkalinity		
Dune woodland		
Sand influenced biogenic reefs (eg. *Sabellaria* Honeycomb worm reefs)		
Rock pools		
Soft piddock bored substrata		
Stonewort assemblage		
Assemblage of Red Data Book and/or Nationally scarce plants		
Dune macrofungi assemblage		
Tulostoma melanocyclum (fungi)		

Dune invertebrate assemblage		
Glocianus pilosellus (weevil)		
Bombus sylvarum (shrill carder bee)		
Colletes cunicularis (mining bee)		
*Pyrgus malvae (*grizzled skipper)		
Cupido minimus (small blue butterfly)		
Hirudo medicinalis (medicinal leech)		
Pachytychius quinquepunctatus (weevil)		
Eurynebria complanata (strandline beetle)		

3.2 Special Features and Management Units

This section sets out the relationship between the special features and each management unit. This is intended to provide a clear statement about what each unit should be managed for, taking into account the varied needs of the different special features. All special features are allocated to one of seven classes in each management unit. These classes are:

Key Features

KH - a 'Key Habitat' in the management unit, i.e. the habitat that is the main driver of management and focus of monitoring effort, perhaps because of the dependence of a key species (see KS below). There will usually only be one Key Habitat in a unit but there can be more, especially with large units.

KS – a 'Key Species' in the management unit, and often drives both the selection and management of a Key Habitat.

Geo – an earth science feature that is the main driver of management and focus of monitoring effort in a unit.

Other Features

Sym - habitats, species and earth science features that are of importance in a unit but are not the main drivers of management or focus of monitoring. These features will benefit from management for the key feature(s) identified in the unit. These may be classed as 'Sym' features because:

a) they are present in the unit but may be of less conservation importance than the key feature; and/or
b) they are present in the unit but in small areas/numbers, with the bulk of the feature in other units of the site; and/or
c) their requirements are broader than and compatible with the management needs of the key feature(s), e.g. a mobile species that uses large parts of the site and surrounding areas.

Nm - an infrequently used category where features are at risk of decline within a unit as a result of meeting the management needs of the key feature(s), i.e. under Negative Management. These cases will usually be compensated for by management elsewhere in the plan, and can be used where minor occurrences of a feature would otherwise lead to apparent conflict with another key feature in a unit.

Mn - Management units that are essential for the management of features elsewhere on a site e.g. livestock over-wintering area included within designation boundaries, buffer zones around water bodies, etc.

x – Features not known to be present in the management unit.

The tables below sets out the relationship between the special features and management units identified in this plan:

The table(s) below sets out the relationship between the special features and management units identified in this plan:

	Management units															
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
SAC	✔	✔			✔	✔		✔	✔	✔	✔	✔	✔	✔	✔	
SSSI	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
NNR		✔			✔	✔				✔	✔					
LNR	✔	✔			✔	✔										
SAC features																
1**. 2190 Humid dune slacks**	**x**	**KH**	**x**	**Sym**	**KH**	**x**	**KH**	**KH**	**x**	**KH**	**x**	**x**	**x**	**x**	**x**	**x**
2. **2170 Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*)**	**x**	**Sym**	**x**	**Sym**	**Sym**	**x**	**Sym**	**Sym**	**x**	**KH**	**x**	**x**	**x**	**x**	**x**	**x**
3. **2130 Fixed dunes with herbaceous vegetation (`grey dunes`)**	**x**	**Sym**	**Sym**	**Sym**	**KH**	**x**	**Sym**	**Sym**	**x**	**KH**	**KH**	**KH**	**KH**	**x**	**x**	**x**
4. **3140 Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp.**	**x**	**x**	**x**	**x**	**x**	**KH**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**
5. **1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)**	**x**	**Sym**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**Sym**	**x**	**x**	**x**	**x**	**x**	**x**
6**.1395 Petalwort *Petalophyllum ralfsii***	**x**	**KS**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**Sym**	**x**	**x**	**x**	**x**	**x**	**x**
7**.1903 Fen orchid *Liparis loeselii***	**x**	**KS**	**x**	**x**	**KS**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**
SSSI features																
Note : The following is a list of current SSSI features; where these directly relate to SAC and SPA features, they have not been listed.																
Assemblage of Red Data Book and/or Nationally scarce plants	**x**	**Sym**	**Sym**	**Sym**	**Sym**	**Sym**	**Sym**	**Sym**	**x**	**Sym**	**Sym**	**Sym**	**Sym**	**x**	**x**	**x**
Dune invertebrate assemblage	**x**	**Sym**	**Sym**	**Sym**	**Sym**	**Sym**	**Sym**	**Sym**	**x**	**Sym**	**Sym**	**Sym**	**Sym**	**x**	**x**	**x**
Pyrgus malvae (grizzled skipper)	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**Sym**	**Sym**	**Sym**	**Sym**	**x**	**x**	**x**
Dune macrofungi assemblage	**x**	**Sym**	**Sym**	**Sym**	**Sym**	**x**	**Sym**	**Sym**	**x**	**Sym**	**Sym**	**Sym**	**Sym**	**x**	**Sym**	**Sym**
Dune woodland	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**Sym**	**Sym**	**Sym**	**Sym**	**x**	**KH**	**KH**

Tulostoma melanocyclum (fungi)	x	x	x	x	x	x	x	x	x	Sym	Sym	Sym	Sym	x	x	x
Glocianus pilosellus (weevil)	x	x	x	x	x	x	x	x	x	Sym	Sym	Sym	Sym	x	x	x
Sand influenced biogenic reefs	KH	x	x	x	x	x	x	x	KH	x	x	x	x	KH	x	x
Bombus sylvarum (shrill carder bee)	x	Sym	Sym	Sym	KS	x	Sym	Sym	x	x	x	x	x	x	x	x
Colletes cunicularis (vernal mining bee)	x	Sym	Sym	Sym	Sym	x	Sym	Sym	x	x	x	x	x	x	x	x
Cupido minimus (small blue)	x	Sym	Sym	Sym	Sym	x	Sym	Sym	x	x	x	x	x	x	x	x
Hirudo medicinalis (medicinal leech)	x	x	x	x	x	Sym	x	x	x	x	x	x	x	x	x	x
Rock pools	x	x	x	x	x	x	x	x	KH	x	x	x	x	x	x	x
Soft piddock bored substrata	Sym	x	x	x	x	x	x	x	Sym	x	x	x	x	Sym	x	x
Pachytychius quinquepunctatus (a weevil)	x	Sym	Sym	Sym	Sym	x	Sym	Sym	x	x	x	x	x	x	x	x
Eurynebria complanata (strandline beetle)	x	x	x	x	Sym	x	x	x	x	x	x	x	x	KS	x	x
Stonewort assemblage	x	Sym	x	x	Sym	KS	x	Sym	x	x	x	x	x	x	x	x
Sand dune	x	KH	KH	KH	KH	x	KH	KH	x	Sym	Sym	Sym	Sym	x	x	x

4. CONSERVATION OBJECTIVES

Background to Conservation Objectives:

a. Outline of the legal context and purpose of conservation objectives.

Conservation objectives are required by the 1992 'Habitats' Directive (92/43/EEC). The aim of the Habitats Directives is the maintenance, or where appropriate the restoration of the 'favourable conservation status' of habitats and species features for which SAC and SPA are designated (see Box 1).

In the broadest terms, 'favourable conservation status' means a feature is in satisfactory condition and all the things needed to keep it that way are in place for the foreseeable future. CCW considers that the concept of favourable conservation status provides a practical and legally robust basis for conservation objectives for Natura 2000 and Ramsar sites.

Box 1
Favourable conservation status as defined in Articles 1(e) and 1(i) of the Habitats Directive

"The conservation status of a natural habitat is the sum of the influences acting on it and its typical species that may affect its long-term natural distribution, structure and functions as well as the long term survival of its typical species. The conservation status of a natural habitat will be taken as favourable when:

- Its natural range and areas it covers within that range are stable or increasing, and
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- The conservation status of its typical species is favourable.

The conservation status of a species is the sum of the influences acting on the species that may affect the long-term distribution and abundance of its populations. The conservation status will be taken as 'favourable' when:

- population dynamics data on the species indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis."

Achieving these objectives requires appropriate management and the control of factors that may cause deterioration of habitats or significant disturbance to species.

As well as the overall function of communication, Conservation objectives have a number of specific roles:

- Conservation planning and management.

  The conservation objectives guide management of sites, to maintain or restore the habitats and species in favourable condition.

- Assessing plans and projects.

  Article 6(3) of the 'Habitats' Directive requires appropriate assessment of proposed plans and projects against a site's conservation objectives. Subject to certain exceptions, plans or projects may not proceed unless it is established that they will not adversely affect the integrity of sites. This role for testing plans and projects also applies to the review of existing decisions and consents.

- Monitoring and reporting.

  The conservation objectives provide the basis for assessing the condition of a feature and the status of factors that affect it. CCW uses 'performance indicators' within the conservation objectives, as the basis for monitoring and reporting. Performance indicators are selected to provide useful information about the condition of a feature and the factors that affect it.

The conservation objectives in this document reflect the CCW's current information and understanding of the site and its features and their importance in an international context. The conservation objectives are subject to review by CCW in light of new knowledge.

b. Format of the conservation objectives

There is one conservation objective for each feature listed in part 3. Each conservation objective is a composite statement representing a site-specific description of what is considered to be the favourable conservation status of the feature. These statements apply to a whole feature as it occurs within the whole plan area, although section 3.2 sets out their relevance to individual management units.

Each conservation objective consists of the following two elements:

1. Vision for the feature
2. Performance indicators

As a result of the general practice developed and agreed within the UK Conservation Agencies, conservation objectives include performance indicators, the selection of which should be informed by JNCC guidance on Common Standards Monitoring[1].

There is a critical need for clarity over the role of performance indicators within the conservation objectives. **A conservation objective, because it includes the vision for the feature, has meaning and substance independently of the performance indicators, and is more than the sum of the performance indicators**. The performance indicators are simply what make the conservation objectives measurable, and are thus part of, not a substitute for, the conservation objectives. Any feature attribute identified in the performance indicators should be represented in the vision for the feature, but not all elements of the vision for the feature will necessarily have corresponding performance indicators.

As well as describing the aspirations for the condition of the feature, the Vision section of each conservation objective contains a statement that the factors necessary to maintain those desired conditions are under control. Subject to technical, practical and resource constraints, factors that have an important influence on the condition of the feature are identified in the performance indicators.

[1] Web link: http://www.jncc.gov.uk/page-2199

4.1 Conservation Objective for Feature 1 and 2: 2190 Humid dune slacks and. 2170 Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*)

NB The division between 'humid dunes' and 'dunes with *Salix repens* ssp. *argentea* is unclear and difficult to define. The humid dune slack habitat includes both successionally young and mature slacks, which equate to NVC communities SD13-16. The dunes with *Salix repens* spp. *argentea* equate to drier areas of mature dune slack, and the low hummocks found around dune slacks which support *Salix repens*. These are sometimes known as hedgehog dunes. Because of the difficulties in separating these two habitats, for the purposes of monitoring these features are considered together.

Vision for feature 1

The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:

- Dunes with *Salix repens* and humid dune slacks will occur as part of the dune system, their location will be determined by natural processes and appropriate grazing management
- A range of successional stages will be found in both features
- Factors affecting the features will be under control

Performance indicators for Feature 1 & 2

The performance indicators are part of the conservation objective, not a substitute for it. Assessment of plans and projects must be based on the entire conservation objective, not just the performance indicators.

Performance indicators for feature condition		
Attribute	***Attribute rationale and other comments***	***Specified limits***
A1. Extent	Provided the stated proportion of the dunes with *Salix repens* / humid dune slack habitat is in the required condition (see below) then dune slacks will be deemed to be in favourable condition.	*Upper limit*: None set?? *Lower limit*: As mapped 1997
A2. Quality	The *Salix repens*/humid dune slack features are found on both dune systems that make up this SAC. However, 95% of the slack habitat is found at Kenfig (Hurford & Perry, 2000). Therefore, in the context of the SAC, the condition and extent of dune slack habitat at Merthyr Mawr SSSI is of relatively little significance. The condition of these areas at Merthyr Mawr will continue to be assessed as *Petalophyllum* habitat rather than as part of the dune slack features. A range of dune slack habitat should be present from early successional stages with a large proportion of bare ground through to later stages with more closed vegetation and a significant proportion of *Salix repens*. Limits have been set to reflect this range	*Upper limit*: N/A *Lower limit* >30% of the humid dune slack habitat in Area Y AND >45% of the humid dune slack habitat in Area Z is either embryo or successionally – young slack vegetation AND >70% of the humid dune slack vegetation outside of Areas Y and Z is either successionally young or orchid rich slack vegetation. Areas Y and Z are shown on Map 1. Vegetation composition in areas Y

	of habitat types within these two features. Working on the premise that we want slacks represented by a range of stages of maturity (condition) from successionally young through to mature, but that if we have the former we can always get the latter. It is desirable to have a greater proportion of earlier successional forms. These are represented by embryo dune slacks, characterised by open ground containing clonal patches of *S. repens* and the presence of species such as *Carex arenaria, Sagina nodosa,*and *Juncus articulatus*, and successionally-young dune slacks, characterised by bare sand and thalloid liverworts, with the presence of species such as *Carex viridula* spp. *viridula, Juncus articulatus, Anagallis tenella, Samolus valerandi, Eleocharis quinqueflora, Ranunculus flammula,* and *Liparis loeselii* The other successional stages include humid dune slack vegetation, characterised by moist vegetation on level ground between sloping dunes, with *Salix repens* present along with one other species indicative of damp ground e.g. *Pyrola rotundifolia* or *Equisetum variegatum*, and orchid-rich dune slack vegetation, characterised by the presence of a larger number of orchid species such as *Epipactis palustris, Dactylorhiza incarnata, Gymnadenia conopsea, Pyrola rotundifolia*. The negative indicator species *Phragmites australis, Molinia caerulea, Calamagrostis epigejos* should be infrequent.	and Z will be within the acceptable limits where the following conditions are met – Within any 1 m radius there is 25-50% open ground with *Salix repens* forming clonal patches and at least two of the following species present: *Carex arenaria, Sagina nodosa* or *Juncus articulatus*, **or** Within any 50 cm radius there is bare soil, thalloid liverworts and at least four of the following species present: *Carex viridula* spp. *viridula, Juncus articulatus, Anagallis tenella, Samolus valerandi, Eleocharis quinqueflora, Ranunculus flammula, Liparis loeselii* AND where within any 1m radius none of the following species are present: *Phragmites australis, Molinia caerulea, Calamagrostis epigejos*. In addition, vegetation composition outside of areas Y and Z will be within the acceptable limits where the following conditions are met within any 50 cm radius there is bare soil, thalloid liverworts and at least four of the following species present: *Carex viridula* spp. *viridula, Juncus articulatus, Anagallis tenella, Samolus valerandi, Eleocharis quinqueflora, Ranunculus flammula, Liparis loeselii* **or** within any 50cm radius at least two of the following species are present: *Epipactis palustris, Dactylorhiza incarnata, Gymnadenia conopsea, Pyrola rotundifolia,* **AND** within any 1m radius none of the

		following are present: *Phragmites australis*, *Molinia caerulea*, *Calamagrostis epigejos*
Performance indicators for factors affecting the feature		
Factor	***Factor rationale and other comments***	***Operational Limits***
F1. Livestock grazing	Grazing is important for the maintenance of the slack vegetation. Both low numbers of rabbits and livestock graze the slacks at Kenfig SSSI and rabbits only at Merthyr Mawr SSSI. Undergrazing can lead to the dune slack vegetation becoming dominated by rank grasses or bushy *Salix repens* leading to a loss of species diversity and to scrub invasion leading to drying out of the slacks and total loss of the slack habitat as it is shaded out by the scrub. Overgrazing can lead to loss of species diversity as herbs are grazed out and are replaced by grasses. Trampling of the vegetation can lead to physical damage to the vegetation and soil structure and invasion by weed species.	Refer to limits on habitat quality A2
F2. Water Level &Water Quality	The exceptional wetness and diversity of the Kenfig dune system is directly dependent on the hydrological and hydro-chemical regime. The slack vegetation is influenced and maintained by both a high water table and maintenance of suitable water quality. The major water quality concerns are related to elevated macro-nutrient levels. Elevated levels of nitrogen have been found at Burrows Well (a karstic spring) on the Merthyr Mawr component and there is also some indication that dune slacks are becoming increasingly eutrophic. The nature of the underlying limestone aquifer means that off-site activities a considerable distance away can potentially have an impact on the SAC. This effect may occur both spatially and temporally.	***Upper limit***: No change to natural hydrological regime. Abstraction in the catchment should be regulated **Lower limit:** None set

F3. Natural coastal processes	Dune mobility is essential for the development of embryonic and successionally young slacks. Embryonic slacks form at the base of eroding dunes but slacks can also be destroyed by the advance of a mobile dune or modified as layers of sand are deposited on the slack	***Upper limit:*** There should be no constraints on the movement of sand. ***Lower limit***: None set
F4. Recreational and visitor pressure	Vehicles or pressure from visitors including camping can cause damage or loss of to slack vegetation, compaction and erosion. Illegal off road motorcycling and use of 4X4s is a particular problem at Kenfig SSSI. Uncontrolled horse riding at Merthyr Mawr may cause damage to vegetation and protected species	***Upper limit:*** • Vehicle or visitor damage should not impact on the feature. ***Lower limit:*** None set.
F5.Scrub encroachment	There are on going programmes of scrub clearance within the dune slacks. Mowing has also taken place at Kenfig SSSI. The removal of scrub helps prevents the loss of slack habitats to scrub and woodland	Refer to limits on habitat quality A2
F6. Air Quality	Several features on the Kenfig part of the SAC are potentially sensitive to air quality impacts, either directly from high levels of ethylene/ethane or indirectly through changes to water chemistry through deposition of atmospheric nitrogen. Atmospheric nitrogen oxide (NOx) levels may be exceeded due to proximity of several nearby sources including industrial (steel works/chemical works/power station), agricultural (chicken farms – ammonia), old landfill sites (methane), transport (M4) and wind blown particulates (adjacent tips). The current air pollution assessment criteria for Kenfig SAC are taken from the Environment Agency (EA) Review of Consents (RoC) data and the APIS website (http://www.apis.ac.uk/index.html) Critical loads are assigned for habitats. For species the broad habitat is used as a surrogate. All[2] SAC features are nutrient sensitive, whilst humid dune	Critical level or exposure[3] (over the averaging/summing period): Acid - 4 keq ha^{-1} yr^{-1} (calendar year) NO_X as NO_2 - 30 µg m^{-3} (calendar year) SO_2 – 20 µg m^{-3} (calendar year and winter Oct 1 to Mar 31) Nitrogen - 10-20 kg ha^{-1} yr^{-1} (calendar year) Ammonia - 3 µg m^{-3} (calendar year) Ozone – 3000 ppb h (3 months)

[2] Freshwater critical loads are still being developed and therefore the assessment excludes Hard oligo-mesotrophic standing waters

[3] Note that these based on best available data and are not definitive target values. They are likely to require re-evaluation and will require further consultation with other competent authorities and stake holders

	slacks, fixed dunes with herbaceous vegetation, and *L. loeselii* are also acid sensitive.	
Owner/occupier objectives	All parts of the Kenfig Dunes SSSI are owned by a charitable organisation, the Kenfig Corporation Trust, dedicated to holding the site in trust for the benefit and enjoyment of the community of Kenfig, allowing unrestricted access in time and space. Bridgend County Borough Council manages the site, in consultation with other parties through the Kenfig NNR management committee. Their aim is to maintain and enhance its value for nature conservation, including the provision of educational and public interpretation resources, run from the visitor centre. CCW manage the grazing licences. Fishing is a traditional activity and is dealt with through a separate lease with The Kenfig Hill and District Angling Association.	Maintain regular communication with the Kenfig Corporation Trust, Bridgend County Borough Council, Kenfig Hill and District Angling Association, and graziers Manage grazing leases

4.2 Conservation Objective for Feature 3: 2130 Fixed dunes with herbaceous vegetation (`grey dunes`)

Vision for feature 3

The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:

- Fixed dunes with herbaceous vegetation (grey dunes) will occur where older, shifting dunes become more stabilised and in early successional stages become colonised by lichens and other species indicative of the transition from less mobile habitat.
- The habitat will encompass a range of successional stages throughout the area, determined by patterns of natural factors and grazing.
- Grey dunes will comprise a significant part of the dune system but will increase and decrease in extent and location as natural processes determine the landscape of the dune systems
- All factors are under management control

Performance indicators for Feature 3

The performance indicators are <u>part of</u> the conservation objective, not a substitute for it. Assessment of plans and projects must be based on the entire conservation objective, not just the performance indicators.

Performance indicators for feature condition		
Attribute	***Attribute rationale and other comments***	***Specified limits***
A1. Extent	Grey dunes should be distributed throughout this SAC. To ensure this, a target has been included that states that all SSSI within this SAC, that contain	*Upper limit*: None set?? *Lower limit*: As mapped 1997

	these features have to be in good condition for this SAC feature to be considered favourable overall. Some fluctuations are likely in the extent due to losses to other components of the dune system or increases at the expense of other components. These losses and gains where due to natural factors will be accepted, but there must be no loss due to direct or indirect human activities.	
A2. Quality	Sampling is targeted at the successionally young stages on the premise that if we have these it is always possible to get more mature communities. Grey dunes should cover a range of steps to maturity from successionally young through to mature. It is desirable to have a greater proportion of earlier successional forms characterised by bare sand or the moss *Thymus polytrichus* and the presence of species such as *Phleum arenarium, Vulpia membranacea, Cladonia foliacea, Arenaria serpyllifolia, Sedum acre, Anthyllis vulneraria, Erodium maritimum, Aira praecox, Arenaria serpyllifolia, Sedum acre* and *Catapodium marina, Pilosella officinarum, Geranium molle and Viola tricolor*. In more species rich closed sward the species can also include *Lotus corniculatus, Leontodon autumnalis, Polygala vulgaris Rhinanthus minor, Ranunculus bulbosa, Euphrasia* sp., *Trifolium arvense, Linum catharticum,* and *Lotus corniculatus* Presence of negative indicator species show that there is a problem with one, or a combination of the following factors, grazing, over stabilisation, or eutrophication. Species indicative of negative change include – *Rosa pimpinellifolia* >50cm in height, *Arrhenatherum elatius, Chamerion angustifolium, Clematis vitalba* and *Heracleum sphondylium*	*Upper limit*: N/A *Lower limit* At Kenfig NNR – within Area X 40% of the fixed dune grassland is referable to successionally young grassland or closed rich grassland **AND** within Area Y 70% of the fixed dune grassland is referable to successionally young grassland or closed rich grassland **AND** within Area Z 75% of the fixed dune grassland is referable to successionally young grassland or closed rich grassland. Vegetation composition in areas Y, Z and X will be within the acceptable limits where the following conditions are met – within 50cm of any point there is 10-30% bare sand/ or >10% moss or *Thymus polytrichus* with at least three of the following species present: *Phleum arenarium, Vulpia membranacea, Cladonia foliacea, Arenaria serpyllifolia, Sedum acre or Thymus polytrichus* **or** within 50cm of any point there is a closed sward dominated by forbs, where six of the following species are present; *Anthyllis vulneraria*,

		Rhinanthus minor, Polygala vulgaris, Ranunculus bulbosa, Thymus polytrichus, Euphrasia sp., *Trifolium arvense, Linum catharticum, Sedum acre* or *Lotus corniculatus* **AND** at Merthyr Mawr NNR – within Area A 40% of the fixed dune grassland is referable to successionally young grassland or closed rich grassland **AND** within Area B at least 30% of the fixed dune grassland is referable to successionally young grassland or closed rich grassland **AND** Within Area C least 50% of the fixed grassland is referable to successionally young grassland or closed rich grassland Vegetation composition in areas A, B and C will be within the acceptable limits where the following conditions are met – In Areas A, B and C, within 50cm of any point there is either 10-30% bare sand with at least three of the following species present; *Phleum arenarium, Erodium maritimum, Aira praecox, Arenaria serpyllifolia, Sedum acre* or *Catapodium marina* **or** there is a closed habitat with >50% moss or *Thymus* cover with at least three of the following species present *Arenaria serpyllifolia, Sedum acre, Thymus polytrichus, Lotus corniculatus, Pilosella officinarum, Geranium molle, Leontodon autumnalis, Viola*

		tricolor or *Polygala vulgaris* **or** there is a closed sward dominated by forbs with at least six of the following species present *Arenaria serpyllifolia*, *Sedum acre*, *Thymus polytrichus*, *Lotus corniculatus*, *Pilosella officinarum*, *Geranium molle*, *Leontodon autumnalis*, *Viola tricolor* or *Polygala vulgaris* are present **AND** In Area A, no more than 10% of the fixed dune grassland; In Area B no more than 30% of the fixed dune grassland, And in Area C no more than 50% of the fixed grassland Comprises: Within 1m of any point there should be no vegetation with *Rosa pimpinellifolia* >50cm, *Arrhenatherum elatius*, *Chamerion angustifolium*, *Clematis vitalba* or *Heracleum sphondylium* present
Performance indicators for factors affecting the feature		
Factor	***Factor rationale and other comments***	***Operational Limits***
F1. Livestock grazing	See rationale for feature 1&2	
F2. Natural coastal processes	See rationale for feature 1&2	
F3. Recreational and visitor pressure	See rationale for feature 1&2	
F4. Scrub encroachment	See rationale for feature 1&2	
F5. Air Quality	See rationale for feature 1&2	
F6. Owner/occupier objectives	See rationale for feature 1&2	

4.3 Conservation Objective for Feature 4: Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp. 3140

Vision for feature 4

The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:

- Submerged *Chara* beds (mainly *Chara aspera* and *C. virgata*) growing in relatively shallow water form the predominant submerged macrophyte vegetation throughout most of the lake.
- *Chara* occur at more than 50% frequency along regular surveillance transects within the Western and Central arms.
- Charophyte species and uncommon pondweeds such as *Potamogeton gramineus* and *P.* x *nitens* are present in other embayments and pools, including *Tolypella glomerata* in dune pools.
- The lake is spring-fed so nutrient levels remain low. One of the main nutrients (phosphorus) reaches no more than 25 micrograms per litre in regular sampling areas. Nitrogen levels in the water are low (less than 1 milligram per litre) and declining or stable.
- The lake water is clear, but well vegetated with dense beds of submerged and marginal plants. A Secchi disc is visible on the lake bed in the deepest part of the lake (2.6m).
- Water depth is relatively stable, fluctuating naturally with groundwater.
- Reed, swamp and fringing bur-reed are restricted to shallow zones – covering not more than 10 % of the site.
- All factors affecting the achievement of these conditions are under control.

Performance indicators for Feature 4

The performance indicators are part of the conservation objective, not a substitute for it. Assessment of plans and projects must be based on the entire conservation objective, not just the performance indicators.

Performance indicators for feature condition		
Attribute	***Attribute rationale and other comments***	***Specified limits***
A1. Extent of standing water	There should be no loss of extent of standing water within Kenfig Pool. Reed growth around the South, North and Eastern shorelines should be monitored and managed to avoid further encroachment. To be measured through reference to aerial photography.	*Upper limit:* None set *Lower limit:* Open water surface extent should be not less than 29ha
A2. Extent of aquatic plant beds	Kenfig Pool is relatively shallow (c. 2m) and aquatic plants can grow across the entire bed of the lake. The extent of *Chara* beds has previously been recorded on GIS and this provides a useful baseline for future comparisons. Monitoring follows standard CSM procedure using a fixed point transect method with a grapnel and boat. Four GPS-marked transects are used.	Upper limit: none set. Lower limit: *Chara* beds of appropriate composition (see A3) should be the dominant vegetation type across the lake, covering 50% or more of the lakebed. AND Aquatic plants should be growing in the deepest part of the lake (2.6m)

A3. Vegetation composition: macrophyte community composition (Species, indicative of condition)	Certain species present in Kenfig are indicators of desired conditions. Monitoring follows standard CSM procedure using a fixed point transect method with a grapnel and boat. Four GPS-marked transects are used.	*Upper Limit:* None set *Lower Limit:* Characteristic charophyte species – currently *Chara aspera, C.contraria* and *C. virgata* – should be Dominant in 50% or more of sample points. Any other *Chara* or *Tolypella* species may count towards this target, except for *C. vulgaris*. AND The following species should be present: *Littorella uniflora*; *Potamamogeton gramineus*; *Potamogeton* x *nitens*
A4. Vegetation composition: (negative indicator species)	Certain species present in Kenfig are indicators of increased nutrient levels. Excessive growths of filamentous algae and some aquatic plants are indicative of increased nutrient loads and / or other ecological problems. Monitoring follows standard CSM procedure using a fixed point transect method with a grapnel and boat. Four GPS-marked transects are used. To accommodate natural variation in the plant community, it is acceptable for one of the listed species to increase, so long as this is balanced by a decrease in one or more of the others.	**Negative indicator species** *Upper Limit:* Benthic and epiphytic filamentous algal cover (non-*Chara*) low. No sample points have cover scores >2. AND No increase in overall DAFOR cover of the following macrophyte species: *Ceratophyllum demersum*; *Lemna trisulca*; *Myriophyllum spicatum*; *Potamogeton trichoides*; *Potamogeton pectinatus*; *Ranunculus circinatus*; *Zannichellia palustris*. *Lower Limit:* No loss of *Potamogeton trichoides*.
Performance indicators for factors affecting the feature		
Factor	***Factor rationale and other comments***	***Operational Limits***
F1. Water quality and agricultural run-off	Water quality is vital to all forms of aquatic life. There is a large range of parameters that could be measured, and it is impractical to monitor all of them. Water quality monitoring at Kenfig will focus on nutrient enrichment, which is considered the most serious potential threat to the lake. Two plant nutrients are of particular importance, phosphate and nitrate. Phosphate is measured as total phosphate (TP). Annual Mean TP is currently 20µgl^{-1}. Nitrate is measured as Total nitrogen (TN) and nitrate (NO_3). Historically, nitrate has been viewed as being of little importance in lakes, but there is	Stable nutrients levels: *Upper limit*: Mean annual levels of Total Phosphate (TP) should not exceed 24 microgrammes per litre within the pool. This figure is an annual mean based on the availability of at least four different water samples, collected. AND Winter nitrate (November-February) <1 milligramme per litre. AND

	increasing evidence that it may play a key role. Mean annual Total Nitrogen Concentration (TN) is used because plants can utilise N at various stages of the nitrogen cycle. Winter Nitrate is a measure of nitrate loading to the lake and is correlated with aquatic plant species richness. Dissolved oxygen is measured during the summer, when oxygen levels are most likely to be low. Regular water quality sampling at established locations will be used to compare nutrient levels. Kenfig Pool is an EA Water Framework Directive Monitoring site, so monthly data should be available.	No excessive growth of cyanobacteria or green algae *Lower Limit*: >5mg l^{-1} dissolved O_2 throughout the water column
F2. Hydrology	The lake appears to have a natural hydrological regime. It is fed by dune seepage, three small ephemeral streams, and possibly a deep Carboniferous Limestone aquifer (Davidson & Appleby, 2003). Since the lake is mainly groundwater-fed, it is difficult to estimate the exact catchment area. The extent of the drainage systems leading from the M4 motorway and the town of North Cornelly are also unknown, however it seems likely that most industrial and urban drainage bypasses the site (Monteith (ed.), 1996). Three small streams flowing into the site are thought to be the source of plant nutrients and in 1984 may have received some inputs from waste paper sludge treatment that was spread on adjacent fields. The aquifer may be a threat in that it could convey various pollutants from landfill quarries (ENSIS, 1996).	*Upper limit*: None set *Lower limit:* No change to natural hydrological regime. Abstraction in the catchment should be regulated.
F4. Sediment Load	Kenfig is a largely groundwater fed system, so there are few sedimentation problems at present. Any issues are most likely to arise from the small feeder streams and adjacent road or agricultural runoff. Monitoring will be by visual inspection for evidence of sedimentation during routine site visits.	*Upper limit:* No evidence of sedimentation. *Lower limit:* None set.

F5. Fishery management	Large populations of coarse fish (such as introduced carp for example) can distort the balance between the plant community, nutrient levels and the coarse fish population by eating small microscopic animals (zooplankton) that feed on tiny algae (phytoplankton). Overall the presence of a fishery at Kenfig pool poses little or no threat to the macrophyte communities apart from the continued presence of large carp in the pool. The risk arises from the possibility of carp spawning and resultant rise in population leading to damage through excessive turbidity as a result of the benthic feeding habits of carp. It is hoped that the carp will be removed through agreement with the KHDAA.	*Upper limit*: No further fish species introductions. **AND** No use of live bait. *Lower limit*: All fish stocking events and other fishery management to be based on existing fishery management plan.
F6. Introduced alien/exotic species	Non-native invasive species can fundamentally and irreversibly disrupt ecosystem structure and function. Non-native invasive species often out compete native counterparts, especially under disturbed conditions. A list of the most serious non-native invasive species is published by the UK Technical Advisory Group for the Water Framework Directive. Monitoring for these species will take place during regular monitoring visits, but site wardens and members of the local community will also be encouraged to notify CCW so that prompt action can be taken.	*Upper Limit*: No increase in *Elodea canadensis*. This species is currently rare. **AND** No common carp (*Cyprinus carpio*) present. **AND** No new non-native invasive species on the UKTAG Red List present. *Lower Limits*: Maintain vigilance regular routine site inspections and wardening.
F7. Changes in access and recreation	Kenfig pool has a high recreational worth, educational interest and landscape value. Close contact with the local community is also important to encourage interest in the site and to explain management issues that have to be tackled.	Maintain regular routine site inspections and wardening.

4.4 Conservation Objective for Feature 5: 1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)

Vision for feature 5

The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:

- The quality of the saltmarsh is within specified limits
- There is no increase in erosion along the length of the transition from salt marsh to sand dune
- The saltmarsh flora will continue to include the following scarce species; *Limonium binervosum*, and *Frankenia laevis*
- Light grazing by rabbits and /or stock will continue to be tolerated within limits
- The damaging effects of pony riding will have been reduced or eliminated

Performance indicators for Feature 5

The performance indicators are part of the conservation objective, not a substitute for it. Assessment of plans and projects must be based on the entire conservation objective, not just the performance indicators.

Performance indicators for feature condition		
Attribute	***Attribute rationale and other comments***	***Specified limits***
A1. Extent	The performance indicators state that it is necessary to maintain the area of salt marsh mapped in 2000. However, it is suspected that there has been recent erosion of the eastern side of the marsh, by the River Ogmore. The 1981 survey recorded presence of a 'riverbank' (as opposed to a more gently sloping profile) along the edge of the middle marsh. This now extends along the length of the middle marsh, and further slumping was noted during Autumn 2004. It is proposed that, in the future, the extent of the salt marsh is determined by habitat mapping, using up to date aerial photography. However, it is noted that a change in extent is difficult to detect between the 1991 and 2000 aerial photographs, because the latter were taken at high tide. Also note that any change in extent as a result of river erosion is likely to result from natural change rather than through anthropogenic causes. It will be necessary to consider any future loss within the wider context; there is a small amount of un-notified habitat on the opposite river bank which appears to be accreting rather than eroding. It is acknowledged that this will be difficult	*Upper limit*: None set but should not impinge on the other Annex 1 habitat types *Lower limit*: None set but there should be no losses as a result of human intervention, directly or indirectly, but if these happen as a result of natural processes, then that is acceptable.

	because of the limited opportunity for salt marsh development along this stretch of coastline. There was 11.46 ha of saltmarsh present at Merthyr Mawr when mapped for the Merthyr Mawr Warren SSSI Vegetation Survey 2001. Much of the saltmarsh is being lost at Kenfig due to natural erosion and this should be seen as acceptable given that it is a 'natural process'.	
A2. Quality	Within the performance indicators targets have been set to enable us to determine if erosion from excessive trampling and an increase in the extent and distribution of *Frankenia laevis*, which are the other two main factors that could alter the quality of the salt marsh at Merthyr Mawr, are having an effect. Targets have been set for each of these based on the current situation. If trampling becomes an issue, a limit may be required for bare ground as well. The saltmarsh habitat at Kenfig has been subject to natural changes due to erosion and changes to the river geomorphology. There should be surveillance of the habitat although it is accepted that these natural processes may lead to loss or change.	*Upper limit*: None set *Lower limit*: The Atlantic salt marsh habitat at both Kenfig **AND** Merthyr Mawr is described as favourable **Merthyr Mawr** 50% of the vegetation within Area A (see map 3, draft SAC report) is referable to 'good condition middle marsh vegetation' **AND** There is no increase in erosion along the length of the transition from salt marsh to sand dune Vegetation composition in areas A will be within the acceptable limits where the following conditions are met for "Good condition middle marsh vegetation" defined as: **Within a 50cm radius in:** *Puccinellia maritima* is present along with three of the following species: *Aster tripolium*, *Suaeda maritima*, *Cochlearia officinalis*, *Spergularia media*, *Plantago maritima* or *Glaux maritima* AND *Frankenia laevis* is absent from the sward.
Performance indicators for factors affecting the feature		
Factor	***Factor rationale and other comments***	***Operational Limits***
F1. Livestock grazing	Cattle belonging to the tenant of Ogmore Castle Farm previously grazed the saltmarsh. There are no plans to re-introduce grazing at the present time by either the tenant or CCW.	*Upper limit*: Damage to vegetation due to grazing should be rare or absent *Lower limit:* No limits set

	Rabbits grazing occurs across the saltmarsh	
F2. Nitrogen deposition	See rationale for Features 1&2	**See Feature 1&2**
F3. River bank erosion / sediment deposition	Currently, the river / saltmarsh interface is a hard bank for much of its length with only mild slumping. The opposite bank is generally a more gentle and even gradient from saltmarsh through a narrow band of mud to the river. The current SSSI boundary is the middle of the river. Bank erosion / deposition may result due to changes in the river channel, and peak river flow caused by upstream canalisation. Historical maps and aerial photographs seem to suggest limited meandering about a fairly fixed axis. Further investigation is required to provide an indication of future changes and to establish limits.	*Upper limit*: To be determined *Lower limit:* To be determined
F4. Trampling by horses	The saltmarsh is regularly used by pony riders, both individual riders and strings of up to 20+ horses from the trekking centre at Ogmore Castle Farm. Riders tend to stay to the upper edge of the saltmarsh in the southern half, and follow the route of the sewage pipeline in the northern half. However, tracks made by pony riders straying from this route and occasional vehicles (off road vehicles, coastguard, farm and sewage works staff) are clearly visible on other areas of the saltmarsh. It is agreed that there has been a loss of habitat since 1991, due to an increase in use of the track that runs along the western edge of the marsh by horse riders. Comparison of 1991 and 2000 aerial photographs show a decrease in vegetation cover and an increase in the amount of bare sand, principally within the middle marsh. The increased use has occurred as the result of an attempt to reduce the amount of erosion throughout the dune system by ensuring the majority of use is targeted to this one track. In many ways this represents a decision to prioritise features of	Limits are incorporated into the limits for extent and quality of the feature

	conservation interest across the site. Targets have been set within the performance indicators to ensure that this track does not become too wide – there is potential for riders to encroach further into the marsh, particularly during wet conditions when the track can be more difficult to negotiate.	
F5. Pollution	Salt marsh communities are sensitive to water chemistry, with increased nutrient levels leading to increased algal growth. They are also susceptible to toxic pollution from marine sources such as oil spills. There have been instances of pollution in the River Ogmore but there has been no record of consequential damage to the saltmarsh vegetation. Overflow from sewage works may be an issue but we have no data. Large-scale rubbish, particularly wheels with tyres, regularly migrates from the river and onto the saltmarsh causing local damage to the vegetation.	*Upper limit*: Damage due to pollution / litter should be absent *Lower limit:* No limits set
F6. *Frankenia laevis*	It is appears *F. laevis* has increased its extent and distribution at Merthyr Mawr since it was first discovered in 1981. There is some dispute as to whether it is native to this site or not. Further work e.g. genetic finger printing may help to establish its status but until this is known Andy Jones, CCW Higher Plants Specialist, has recommended that it is not eradicated. With this in mind it is difficult to know 1) whether there should be concern about increasing extent and distribution of this species, and therefore suitable targets need to be incorporated 2) presence of the species is simply accepted as a natural part of the salt marsh. Research suggests that it is associated with salt marsh and sand dune transition zones, favouring freely draining soils (ref: Ecological Flora of the BS, University of York). Therefore it may be reaching the limit of its expansion. Other species associated with the transition zone e.g. *Armeria maritima* and *Limonium* spp. continue to be present at least occasionally within the dense patches of *F. laevis*. In consideration of this, it has been agreed	Limits are incorporated into the limits for the quality of the feature (above)

	a target should be set based on the current level of 'invasion', with the caveat that further surveillance work will be undertaken to confirm the presumption that it is unlikely to encroach any further into the salt marsh.	

4.5 Conservation Objective for Feature 6: 1395 Petalwort *Petalophyllum ralfsii*

Vision for feature 6

Petalophyllum ralfsii will continue to be found at its current locations in each of the two SSSI within the SAC. The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:

- The species will be found where conditions are suitable in sufficient numbers to form a viable and sustainable population
- The population will vary from year to year depending on conditions, especially in drier years, but the long term population will remain steady and sustainable
- Suitable dune slacks will have patches of bare ground that is being colonised by jelly lichens (*Collema* spp.) and *Barbula* mosses.
- The factors affecting the feature are under control

Performance indicators for Feature 6

The performance indicators are part of the conservation objective, not a substitute for it. Assessment of plans and projects must be based on the entire conservation objective, not just the performance indicators.

Performance indicators for feature condition		
Attribute	***Attribute rationale and other comments***	***Specified limits***
A1. Extent + distribution	*P. ralfsii* is present at each of the two component SSSI. Baseline survey and previous surveillance show that the species is locally distributed at each site. Where it occurred the density of thalli was > 50 per m^2. The assumption is that if we have at least two patches of habitat with a relatively high density of thalli, that the species will also be present at a lower density elsewhere. Surveillance at Kenfig and Merthyr Mawr suggests that the thalli are numerous only one year in every fix or six. Monitoring of thalli should be carried out in patches of habitat where thalli are obviously numerous using a 1 x 1 metre quadrat, divided into 16 cells, with counts made at	Lower limit*: P. ralfsii* is present at a density of >50 thalli per m^2 in at least two locations more than 10 m apart in two humid dune slacks

	cell level. Concentrating the search over a small area at a time means thalli are less likely to be overlooked. Thalli counts should only be carried out in years when thalli are numerous.	
A2. Habitat Quality	*P. ralfsii* is a poor competitor and requires open vegetation to persist. It is most frequently found among successionally young, open dune slack vegetation. Limits for presence of this habitat at Kenfig have been set under feature 1/2 above. In optimum habitat it is found in association with other thalloid liverworts such as *Pellia endiviifolia, Aneura pinguis* and *Pressia quadrata*, the latter being a particularly good indicator of the presence of suitable habitat. The combination of bare ground is supported by the requirement for species such as *Carex viridula* ssp. *viridula, Juncus articulatus, Anagallis tenella, Samolus valerandi, Eleocharis quinqueflora*, and *Ranuculus flammula* to be present. The presence of negative indicator species such as *Phragmites australis, Hippophae rhamnoides, Molinia caerulea* and *Calamagrostis epigejos* is a direct threat. The requirement for at least one sizeable slack at each site to be in an embryonic state of development ensures that the local Petalophyllum population has the opportunity to persist into the foreseeable future.	*Lower limit* at each site >25% of at least one humid dune slack (>20 x 30m in area) is represented by embryo slack vegetation **AND** at each site >50% of at least one humid dune slack (> 30 x 20m in area) is represented by successionally-young slack vegetation: Vegetation composition in humid dune slack habitat suitable for *Petalophyllum ralfsii* will be within the acceptable limits where the following conditions are met – In more than 25% of at least one humid dune slack there is open vegetation with *Salix repens* forming clonal patches **AND** within any 1 m radius there is 25-50% bare ground with at least two of the following species present *Carex arenaria, Sagina nodosa or Juncus articulatus* **AND** >10% bare soil or thalloid liverwort cover, with at least one species of thalloid liverwort present within a 50 cm radius **AND** >2 of the following species are present within a 50cm radius; *Carex viridula ssp. viridula, Juncus articulatus, Anagallis tenella, Samolus valerandi, Eleocharis quinqueflora,*

		Ranunculus flammula, Liparis loeselii **AND** *Phragmites australis, Hippophae rhamnoides, Molinia caerulea, Calamagrostis epigejos* are absent within any 1m radius
Performance indicators for factors affecting the feature		
Factor	***Factor rationale and other comments***	***Operational Limits***
F1. Habitat	The species requires early successional dune slack; this is the most significant factor. Low rates of sand accretion mean there are few opportunities for colonisation of newly formed habitats, while stabilisation is resulting in loss of suitable habitat in those areas already occupied by the species.	See above and feature 1&2
F2. Recreation and Access	Horse riding across the dunes at Merthyr Mawr has previously resulted in tracks passing through one of the main slacks where *Petalophyllum* occurs. This track has been 'diverted' through use of restrictions. In one slack where *Petalophyllum* is found, pedestrian visitor pressure is 'creating' suitable habitat at the edge of paths through trampling. This may also allow for spread of the species to other areas of suitable habitat within the slack. At Kenfig, scrambling bikes are cutting deep tracks through former *Petalophyllum* habitat. Although some return to bare ground would benefit this species, tracks in many places are deep and ridged, and do not give rise to suitable habitat.	Maintain vigilance regular routine site inspections and wardening
F3. Air Quality	See rationale for Features 1&2 above	

4.1 Conservation Objective for Feature 7: 1903 Fen orchid *Liparis loeselii*

Vision for feature 7

The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:

- Sufficient suitable habitat is present to support the populations
- The factors affecting the feature are under control

Performance indicators for Feature 7

The performance indicators are part of the conservation objective, not a substitute for it. Assessment of plans and projects must be based on the entire conservation objective, not just the performance indicators.

Performance indicators for feature condition		
Attribute	***Attribute rationale and other comments***	***Specified limits***
A1.Extent and distribution	*L. loeselii* is found only on the Kenfig NNR part of the SAC. Presence in a number of discrete dune slacks ensures that the species is well distributed.	Extent: Lower limit: *L. loeselii* is present in >15 discrete dune slacks (see Map)
A2.Species population	*L. loeselii* is currently found within 9 slacks at Kenfig NNR (2007), although not all slacks contained flowering spikes. The main population is found within slacks managed by mowing. Numbers of flowering spikes within the more successionally young habitat have been declining with stabilisation of this habitat. This is not thought to be secure in the long term. Long-term surveillance indicates that *L. loeselii* used to have a wider distribution, with numbers >200 in certain slacks. The target has been set to reflect this. In good years flowering spikes can be numerous in suitable habitat, and counts of > 200 should be obtained within around 20 minutes.	Distribution: Lower limit: The number of flowering *L. loeselii* spikes is >200 in at least two humid slacks and >20 in a successionally-young humid dune slack and >5 in >14 other humid dune slacks
Performance indicators for factors affecting the feature		
Factor	***Factor rationale and other comments***	***Operational Limits***
F1. Habitat	Habitat is the most significant factor; the species requires early successional dune slacks. Refer to feature 1/2 for dune slack objective.	See Features 1and 2
F2. Recreation and Access	At Kenfig, scrambling bikes are cutting deep tracks through *Liparis* habitat. Although some return to bare ground would benefit this species, tracks in many places are deep and ridged, and do not give rise to suitable habitat.	

5. ASSESSMENT OF CONSERVATION STATUS AND MANAGEMENT REQUIREMENTS

This part of the document provides:

- A summary of the assessment of the conservation status of each feature.
- A summary of the management issues that need to be addressed to maintain or restore each feature.

5.1 Conservation Status and Management Requirements of Feature 1 & 2: Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*) (EU habitat code 2170) and Humid dune slacks (EU habitat code 2190)

These two features have been considered together as the issues and management of both are intimately linked.

Conservation Status of Feature 1 & 2

No distinction has been made between the **Humid dune slacks** and **Dunes with *Salix repens* ssp. *argentea*** as outlined in Section 1, and this monitoring data will be used to determine the condition of both features. Results show that the proportion of early successional stages in Areas Y and Z is below that required. Therefore, vegetation in both areas is considered to be unfavourable. Areas Y and Z contained the largest blocks of embryo and successionally young habitat in 1997. As the system is stabilising and no new natural areas of habitat have been created, we can assume that the slack habitats outside of the sample plots are also unfavourable, despite mowing and scraping has artificially created areas of habitat (see comments below). Therefore, the Humid dune slacks and Dunes with *Salix repens* ssp. *argentea* at Kenfig SAC are considered to be in **unfavourable declining** condition (August 2006 SAC Monitoring Report).

Management Requirements of Features 1 and 2
Management issues for this feature are the lack of creation of new dune slacks, excessive dune stabilisation and succession of older slacks to scrub in some areas, though this is variable over the SAC.

Natural coastal processes
The type and cover of vegetation communities present on the dune system at any given time is largely dependent on geomorphological processes. Management should be aimed at minimising any constraints to the natural movement of sand. This should allow the continued process of slack formation, maintaining a presence of embryo and successionally young slacks on site.

Modelling of coastal processes should be considered.

Liaison with other interested parties should continue, to ensure coastal strategies such as the Marine Aggregate Dredging Policy for south Wales and the Swansea Bay Shoreline Management Plan consider accretion/erosion issues at Kenfig and Merthyr Mawr.

A program of mechanical destabilisation of dunes, involving cutting, scarification and excavation of blowouts should be considered in targeted areas.

Grazing
Humid dune slacks and dunes with *Salix repens* are maintained by the seasonally high water table, grazing and scrub control. Grazing by domestic stock facilitates rabbit and hare grazing since rabbits tend to graze where the sward is already short. Grazing levels should be set to allow the maintenance of a low, species rich sward throughout the majority of the dune slacks and to reduce the spread of scrub.

Dune slacks should be lightly grazed, preferably by cattle during the summer. Grazing by cattle in winter is acceptable provided supplementary feeding and poaching do not take place. Winter sheep grazing is generally benign provided there is no supplementary feeding, however, sheep do not graze coarser vegetation, which gives this vegetation a competitive advantage.

Use of mineral licks should be considered to target grazing in particular areas.

Liaison with stakeholders and neighbours should be maintained to ensure suitable grazing regimes are implemented.

Management aimed at encouraging the return of rabbits and hares at Kenfig, such as mowing and burrow creation, should be continued, and rabbit grazing should be maintained at Merthyr Mawr.

Manage grazing licences/leases

Scrub

Continued scrub clearance is necessary at Merthyr Mawr and Kenfig since scrub encroachment has been considerable over the last 30 years and grazing alone cannot keep scrub in check. Where natural processes such as mobility, erosion, and wind scour are significant, scrub invasion is not an issue. Where slacks are more mature, scrub can become a problem especially when grazing ceases or is reduced for a period and early scrub encroachment is not controlled. As scrub becomes established shelter and seeding increases and the problem is then exacerbated as stock cannot gain easy access to graze.

The scrub clearance programmes at Merthyr Mawr, including removal of *H. rhamnoides*, needs to continue as set out in the Merthyr Mawr NNR Mangement Plan.

Identified areas of mature coastal woodland may be retained.

Mowing

Mowing has taken place within certain dune slacks at Kenfig on a regular basis over the past few years, to facilitate the spread of grazing and to some extent to control dense low willow scrub growth and re-growth following initial clearance management. Mowing has achieved good results by reducing the competitive advantage of coarse and woody growth thereby favouring desirable species such as marsh helleborine *Epipactis palustris*. Mowing may be considered as an option in certain targeted areas within Merthyr Mawr dune system.

Mowing may continue only as consented.

Hydrological regime

The dune slack communities are dependent on a high water table, particularly in the winter. The depth of the water table and degree of inundation throughout the winter months affects the type and composition of dune slack communities.

Management should aim to protect and maintain the natural hydrological regime of the dune slacks.

Onsite monitoring of dip wells needs to be reviewed and continued at appropriate intervals.

Water and air quality

Several features on the Kenfig part of the SAC are potentially sensitive to air and water quality impacts.

Management should aim to protect and maintain the required air and water quality.

Recreation and access
People and vehicle access should be managed so that it does not adversely affect the dune slack SAC features. Dune stabilisation works should only be considered in exceptional cases where severe erosion has been caused by vehicle or visitor pressure. The first action should be to manage the source of the problem.

Wardening and surveillance of camping, vehicle and visitor access that causes damage to the vegetation communities and physical damage to the dune slacks, needs to be continued.

Vehicle restrictions to the dunes need to be continued, and be reviewed as problems arise.

Wardening and surveillance of access for horse riders among certain areas of the dune slacks at Merthyr Mawr where it is impacting on *P. ralfsii* habitat should be continued, with access to sensitive habitats discouraged via deviation onto other less sensitive habitat.

Instances of inappropriate recreation leading to damage should be logged and reported to the appropriate Authorities including CCW.

5.2 Conservation Status and Management Requirements of Feature 3: Fixed dunes with herbaceous vegetation (`grey dunes`) (EU habitat code **2130)**

Conservation Status of Feature 3

The fixed dune with herbaceous vegetation feature of Kenfig/Cynffig SAC is considered to be in **Unfavourable declining conservation** status (August 2006 SAC Monitoring Report). This is due primarily to over-stabilisation, undergrazing and scrub development.

Management Requirements of Feature 3
Active management in the form of livestock grazing, preceded by mechanical excavation or scarification where appropriate, is required to reverse this trend and thereafter maintain (at least a proportion of) the herbaceous dune vegetation in a more open, early successional and mobile form. In some particularly stabilised areas the creation of dune blowouts may be considered.

Natural coastal processes – see management of Features 1&2 above

Grazing - see management of Features 1&2 above substituting fixed dune grassland for dune slack. Additionally, management within the fixed dune grassland for creation of burrows to encourage rabbit grazing should be continued in targeted areas.

Creation of burrows may continue only as consented.

Scrub- see management of Features 1&2 above substituting fixed dune grassland for dune slack

Mowing– Mowing has taken place in selected areas of fixed dune grassland at Kenfig on a regular basis over the past few years, to facilitate rabbit grazing and to control bracken growth and re-growth following initial clearance management. Mowing has achieved good results in these areas and this management should be continued. Mowing may be considered as an option in certain targeted areas within Merthyr Mawr dune system.

Mowing may continue only as consented.

Water and air quality - see management of Features 1&2 above

Recreation and access see management of Features 1&2 above

5.3 Conservation Status and Management Requirements of Feature 4: Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp. 3140

Conservation Status of Feature 4
The Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp. feature of Kenfig/Cynffig SAC is considered to be in **unfavourable recovering** conservation status (2006).

The main reason for the unfavourable condition is the presence of introduced fish (carp). If carp removal can be carried out favourable condition should follow. (Burgess *et al*., 2006)

This analysis is based on the most recent Site Condition Assessments of Welsh SAC and SSSI Standing Water Features (Burgess *et al*., 2006). To make this assessments, data from CCW Contract Science Report no. 704 (Goldsmith *et al*. 2006) was employed, alongside further chemical and biological data collected by ENSIS Ltd. and the Environment Agency (EA) between 2003-2005. Data from previous reports and surveys was also utilised where available to provide a longer-term perspective and possible evidence of trends.

Management Requirements of Features 4

Fishery
Removal of the few remaining carp is an essential prerequisite to the site achieving favourable status.

- All fish stocking events and other fishery management to be assessed in light of advice within the fishery management plan (Giles, 2003) and in line with consultation protocols in place between landlords and tenants at Kenfig NNR.

Hydrology
Management should aim to protect and maintain the natural hydrological regime of Kenfig pool.

- No change to natural hydrological regime.
- Onsite monitoring of the Pool water levels needs to be reviewed and continued at appropriate intervals
- Abstraction in the catchment should be regulated.

Alien plant species
There should be no new non-native invasive species on the UKTAG Red List present.

- Maintain vigilance regular routine site inspections and wardening.
- No increase in *Elodea canadensis*. This species is currently rare.

Other Alien species

- The numbers of Canada geese present on the pool and surrounding land should be monitored.

Water and air quality
Water quality monitoring at Kenfig will focus on nutrient enrichment, which is considered the most serious potential threat to the lake

- Regular water quality sampling at established locations will be used to compare nutrient levels. Kenfig Pool is an EA Water Framework Directive Monitoring site, so monthly data should be available.
- Monitoring will be by visual inspection for evidence of sedimentation during routine site visits.
- No evidence of sedimentation.

- No excessive growth of cyanobacteria or green algae

5.4 Conservation Status and Management Requirements of Feature 5: Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) 1330

Conservation Status of Feature 5
The condition of the Atlantic salt meadows at Merthyr Mawr were assessed as favourable condition on the basis of SAC monitoring carried out in December, 2004?. In addition the SSSI salt marsh feature was assessed as being in favourable condition (December, 2004).

Management Requirements of Feature 5
Trampling by horses
It is likely that surface erosion caused by trampling by stock and/or horse riding has affected the saltmarsh for hundreds of years. However, the extent of this factor has probably increased in the last decade as horse riding has become more popular.

The saltmarsh gets a concentrated use as it is one of the main access points to the foreshore and is used on a frequent basis by the Ogmore Castle Farm trekking centre and stabling facility. This has resulted in a broad band 10m -15m wide of bare, trampled silty sand at the top of the saltmarsh. Unfortunately, this zone is one of the more interesting parts of the saltmarsh.

In 2004 CCW introduced a Horse Riding Permit Scheme, primarily for public safety reasons. The scheme included confining riding to selected routes avoiding sensitive areas and has incidentally, in the first instance at least, reduced the numbers of riding visits to the Warren as a whole. In the future, it may be necessary in the future to dictate the route or areas used for horse riding on the saltmarsh to prevent damage to the feature.

Actions required
- Liase landowner / stakeholders to reduce/eliminate damage by horses.
- Monitor loss/development of saltmarsh
- Monitor horse riding numbers
- Continue Merthyr Mawr Horse Riding Permit scheme / riding routes

Grazing (cattle and rabbits)

The 1981 report Merthyr Mawr vegetation report describes the lower marsh as being ‘a patchwork of vegetation dominated by *Puccinellia* which is kept short by grazing cattle.’ It also describes a domed part of the middle marsh with a dryer surface with abundant bare soil probably caused by cattle trampling. Significantly, this was also the location of the first *Frankenia* colony. Patches of ‘abundant *Agrostis stolonifera* and *Festuca rubra*’ are mentioned as occurring in the upper saltmarsh ‘away from the river’. Patches also occur near the river now and this may reflect the lack of cattle grazing.

Overall, however, the saltmarsh appears to exhibit the diverse mosaic of communities described in 1981 in spite of the absence of stock grazing. There is little indication of over-dominance of any species, with the possible exception of *Frankenia*. Since cattle trampling may have assisted the establishment and spread of this species, this is a good reason for not rushing into re-introducing this form of management.

The early report does not mention rabbit grazing although they do appear to be making a contribution now. This needs to be critically assessed since they may be making a significant contribution to the maintenance of the vegetation mosaic - and without creating the bare ground favoured by *Frankenia.*

Actions required

- Monitor rabbit numbers
- Determine and put in place optimal sward management.

Pollution / rubbish

A watching brief should be maintained on pollution sources / incidents in case of accumulative effects and on any catchment management proposals that may impact on the river.

The Estate has carried out rubbish collection from the saltmarsh for many years and more recently by CCW. This practise should continue. The appropriate authority should be encouraged to keep the river clear.

Actions required

- Maintain watching brief on pollution sources / incidents, remove damaging rubbish from saltmarsh and promote clearing rubbish from the river.
- Liase with B.C.B.C., and Welsh Water

Damage from vehicles

Although incidents of unauthorised access onto the saltmarsh using vehicles are few, access should be continued to be discouraged due to the damage that can be caused from such events.

- Vehicle restrictions on the saltmarsh to continue.
- Instances of inappropriate recreation leading to damage should be logged and reported to the appropriate Authorities including CCW.

5.5 Conservation Status and Management Requirements of Feature 6: Petalwort *Petalophyllum ralfsii* 1395

Conservation status of Feature 6

The *Petalophyllum ralfsii* of Kenfig/Cynffig SAC is considered to be in **unfavourable declining** conservation status (November 2007).

This analysis is based on the most recent SAC monitoring report for the feature, which shows that the performance indicators for the habitat and the extent, distribution and numbers of thalli were not met. Long-term surveillance indicates that *P. ralfsii* used to have a much wider distribution and that it was regularly found with greater than 50 thalli per m^2 in more than two discrete locations within more than two dune slacks. A full version of the monitoring data is available.

Management Requirements of Petalophyllum ralfsii

Management of *P. ralfsii* is entirely dependant on the presence of the required habitat, early successional dune slacks. Therefore for management requirements of the species, refer to section 1 & 2, management for Humid dune slacks.

5.6 Conservation Status and Management Requirements of Feature 6: Fen Orchid *Liparis loeselii* 1903

Conservation status of Feature 6

The *Liparis loeselii* of Kenfig/Cynffig SAC is considered to be in **unfavourable declining** conservation status (July 2007).

This analysis is based on the most recent SAC monitoring report for the feature, which shows that the number of plants and the number of slacks within which it occurs have decreased dramatically. Long-term surveillance indicates that *L. loeselii* used to have a much wider distribution and that on any occasion it was regularly found in six or more discrete dune slacks with numbers of flowering spikes greater than 200. A full version of the monitoring data is available.

Management Requirements of *Liparis loeselii*
Management of *Liparis* is entirely dependant on the presence of the required habitat, early successional dune slacks. Therefore for management requirements of the species, refer to section 1 & 2, management for Humid dune slacks.

6. ACTION PLAN: SUMMARY

This section takes the management requirements outlined in Section 5 a stage further, assessing the specific management actions required on each management unit. This information is a summary of that held in CCW's Actions Database for sites, and the database will be used by CCW and partner organisations to plan future work to meet the Wales Environment Strategy targets for sites.

Unit Number	CCW Database Number	Unit Name	Summary of Conservation Management Issues	Action needed?
1	001977	Unit 1	Kenfig Sands, also known as Sker Beach. Within SSSI and SAC but not NNR. However, Bridgend CBC's NNR team oversee it. Sand tends to diminish in winter and return in summer but the the sand supply is not sufficient for new embryo dunes to be created in the adjacent compartment (Kenfig 5).	No
2	001978	Unit 2	Kenfig northern dunes. In SAC and Cynffig/Kenfig SSSI, and in NNR managed by Bridgend CBC. Unit boundary follows fence, erected in Spring 2006 to permit cattle grazing. This compartment was grazed by cattle in summer 2006 for the first time for many years. Previous regime of sheep grazing now ended. Very few rabbits. Scrub control ongoing. Unit includes grey dunes, humid dune slacks, dunes with creeping willow and petalwort. Fen orchid was present in 1990s.	Yes
5	001979	Unit 5	Kenfig main compartment. In SAC, SSSI, and in NNR managed by Bridgend CBC. Includes grey dunes, humid dune slacks, dunes with creeping willow and fen orchid. Grazed by sheep in winter 2007-08 following approx 18 months without grazing. Previously grazed by sheep for much of the year but this was ended as summer grazing by sheep resulted in the preferential grazing of flowers. Cattle grazing is desirable but not practical at present because of un-fenced boundary with golf course, car park and road. Very few rabbits. NNR staff mow areas of grey dune in summer and selected dune slacks in late summer and autumn. Scrub control ongoing.	Yes

Unit Number	CCW Database Number	Unit Name	Summary of Conservation Management Issues	Action needed?
6	001980	Unit 6	Kenfig pool. SAC feature is hard oligo-mesotrophic waters with benthic vegetation of Chara spp. Important community of aquatic macrophytes. To maintain clear water it is desirable to remove the few remaining mature carp, which currently do not breed but might in future if temperatures rise. This unit includes reedbed on the northern and western margins of the pool, which was not present before about1930 but is now important for birds. It should not be allowed to encroach significantly onto open water, but should be maintained at approximately its current extent. Willow scrub in the reedbed requires control.	Yes
7	001981	Unit 7	Within SSSI but not SAC or NNR. Not fenced from the adjacent unit, compartment 5, which is part of the NNR. Very little grazing and few rabbits. Sheep have always tended to keep away from this area because of disturbance, although they could access it.	No
8	001982	Unit 8	Sker dunes. Boundary defined by ownership. Closely grazed, and so this relatively small area provides a marked contrast to the rest of the SSSI. This grazing regime benefits some species such as autumn ladies tresses orchid which is rare elsewhere on the site.	Yes
9	001983	Unit 9	Sker Point rocks. Much is now known about this inter-tidal area following research by Bridgend CBC over several years, with a view to future designation as a marine LNR.	No
10	001984	Unit 10	The main compartment of Merthyr Mawr SAC and SSSI, managed directly by CCW under a lease from the owner. Includes grey dunes, humid dune slacks, Atlantic salt meadows and petalwort. Grazed only by rabbits. Generally recovering following clearance of extensive areas of sea buckthorn, but petalwort slacks have encroaching creeping willow. CCW is investigating control of creeping willow by mowing. Control of ragwort and willowherb in areas from which scrub has been cleared is ongoing. Scrub clearance work must take account of Scheduled Ancient Monument. CCW is investigating fencing up to a third of the compartment in order to introduce grazing.	Yes
11	001985	Unit 11	Merthyr Mawr high dunes. SAC feature is grey dunes. Compartment boundary is a fence erected in 2005 to permit grazing by cattle. First grazed by cattle in winter 2005-06 and subsequently in summer. Need to maintain grazing and monitor results. Rabbits also present. Need to prevent any spread of scrub beyond the existing areas and perhaps clear more, but some will be retained. Scrub control must take account of Scheduled Ancient Monument.	Yes
12	001986	Unit 12	Compartment boundary follows ownership boundary but is not defined on the ground. Not grazed except by rabbits but this is possibly adequate. In the absence of fencing on the ownership boundary, which would be visually intrusive, cattle grazing could only take place together with adjacent land.	No

Unit Number	CCW Database Number	Unit Name	Summary of Conservation Management Issues	Action needed?
13	001987	Unit 13	Newton Burrows. In SAC and Merthyr Mawr SSSI. Proposed LNR managed by Bridgend CBC. Not grazed except by rabbits but this is considered adequate. Heavy recreational use would make any other grazing difficult to introduce. Some scrub control desirable, including small amounts of sea buckthorn.	Yes
14	001988	Unit 14	Merthyr Mawr beach. In SAC and SSSI.	No
15	001989	Unit 15	South-facing slope of Cwm y Gaer. In SAC and Merthyr Mawr SSSI. A small unit with no immediate management issues	No

7. GLOSSARY

This glossary defines the some of the terms used in this **Core Management Plan**. Some of the definitions are based on definitions contained in other documents, including legislation and other publications of CCW and the UK nature conservation agencies. None of these definitions is legally definitive.

Action A recognisable and individually described act, undertaking or **project** of any kind, specified in section 6 of a **Core Management Plan** or **Management Plan**, as being required for the **conservation management** of a site.

Attribute A quantifiable and monitorable characteristic of a **feature** that, in combination with other such attributes, describes its **condition**.

Common Standards Monitoring A set of principles developed jointly by the UK conservation agencies to help ensure a consistent approach to **monitoring** and reporting on the **features** of sites designated for nature conservation, supported by guidance on identification of **attributes** and monitoring methodologies.

Condition A description of the state of a feature in terms of qualities or **attributes** that are relevant in a nature conservation context. For example the condition of a habitat usually includes its extent and species composition and might also include aspects of its ecological functioning, spatial distribution and so on. The condition of a species population usually includes its total size and might also include its age structure, productivity, relationship to other populations and spatial distribution. Aspects of the habitat(s) on which a species population depends may also be considered as attributes of its condition.

Condition assessment The process of characterising the **condition** of a **feature** with particular reference to whether the aspirations for its condition, as expressed in its **conservation objective**, are being met.

Condition categories The **condition** of **feature** can be categorised, following **condition assessment** as one of the following[4]:

Favourable: maintained;
Favourable: recovered;

[4] See JNCC guidance on Common Standards Monitoring http://www.jncc.gov.uk/page-2272

Favourable: un-classified
Unfavourable: recovering;
Unfavourable: no change;
Unfavourable: declining;
Unfavourable: un-classified
Partially destroyed;
Destroyed.

Conservation management Acts or undertaking of all kinds, including but not necessarily limited to **actions,** taken with the aim of achieving the **conservation objectives** of a site. Conservation management includes the taking of statutory and non-statutory measures, it can include the acts of any party and it may take place outside site boundaries as well as within sites. Conservation management may also be embedded within other frameworks for land/sea management carried out for purposes other than achieving the conservation objectives.

Conservation objective The expression of the desired **conservation status** of a **feature,** expressed as a **vision for the feature** and a series of **performance indicators**. The conservation objective for a feature is thus a composite statement, and each feature has one conservation objective.

Conservation status A description of the state of a **feature** that comprises both its **condition** and the state of the **factors** affecting or likely to affect it. Conservation status is thus a characterisation of both the current state of a feature and its future prospects.

Conservation status assessment The process of characterising the **conservation status** of a **feature** with particular reference to whether the aspirations for it, as expressed in its **conservation objective**, are being met. The results of conservation status assessment can be summarised either as 'favourable' (i.e. conservation objectives are met) or unfavourable (i.e. conservation objectives are not met). However the value of conservation status assessment in terms of supporting decisions about **conservation management**, lies mainly in the details of the assessment of feature **condition**, **factors** and trend information derived from comparisons between current and previous conservation status assessments and condition assessments.

Core Management Plan A CCW document containing the conservation objectives for a site and a summary of other information contained in a full site **Management Plan**.

Factor Anything that has influenced, is influencing or may influence the **condition** of a **feature**. Factors can be natural processes, human activities or effects arising from natural process or human activities, They can be positive or negative in terms of their influence on features, and they can arise within a site or from outside the site. Physical, socio-economic or legal constraints on **conservation management** can also be considered as factors.

Favourable condition See **condition** and **condition assessment**

Favourable conservation status See **conservation status** and **conservation status assessment.**[5]

Feature **The species population, habitat type or other entity for which a site is designated. The ecological or geological interest which justifies the designation of a site and which is the focus of conservation management.**

Integrity See **site integrity**

Key Feature The habitat or species population within a **management unit** that is the primary focus of **conservation management** and **monitoring** in that unit.

Management Plan The full expression of a designated site's legal status, **vision**, **features**, **conservation objectives**, **performance indicators** and management requirements. A complete management plan may not reside in a single document, but may be contained in a number of documents (including in particular **the Core Management Plan**) and sets of electronically stored information.

Management Unit An area within a site, defined according to one or more of a range of criteria, such as topography, location of **features**, tenure, patterns of land/sea use. The key characteristic of management units is to reflect the spatial scale at which **conservation management** and **monitoring** can be most effectively organised. They are used as the primary basis for differentiating priorities for conservation management and monitoring in different parts of a site, and for facilitating communication with those responsible for management of different parts of a site.

Monitoring An intermittent (regular or irregular) series of observations in time, carried out to show the extent of compliance with a formulated standard or degree of deviation from an expected norm. In **Common Standards Monitoring**, the formulated standard is the quantified expression of favourable **condition** based on **attributes**.

Operational limits The levels or values within which a **factor** is considered to be acceptable in terms of its influence on a **feature**. A factor may have both upper and lower operational limits, or only an upper limit or lower limit. For some factors an upper limit may be zero.

Performance indicators The **attributes** and their associated **specified limits**, together with **factors** and their associated **operational limits,** which provide the standard against which information from **monitoring** and other sources is used to determine the degree to which the **conservation objectives** for a **feature** are being met. Performance indicators are part of, not the same as, conservation objectives. See also **vision for the feature**.

Plan or project **Project:** Any form of construction work, installation, development or other intervention in the environment, the carrying out or continuance of which is subject to a decision by any public body or statutory undertaker.
Plan: a document prepared or adopted by a public body or statutory undertaker, intended to influence decisions on the carrying out of **projects.** Decisions on plans and projects which affect Natura 2000 and Ramsar sites are subject to specific legal and policy procedures.

[5] A full definition of favourable conservation status is given in Section 4.

Site integrity The coherence of a site's ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it is designated.

Site Management Statement (SMS) The document containing CCW's views about the management of a site issued as part of the legal notification of an SSSI under section 28(4) of the Wildlife and Countryside Act 1981, as substituted.

Special Feature See **feature**.

Specified limit The levels or values for an **attribute** which define the degree to which the attribute can fluctuate without creating cause for concern about the **condition** of the **feature**. The range within the limits corresponds to favourable, the range outside the limits corresponds to unfavourable. Attributes may have lower specified limits, upper specified limits, or both.

Unit See **management unit.**

Vision for the feature The expression, within a **conservation objective**, of the aspirations for the **feature** concerned. See also **performance indicators.**

Vision Statement The statement conveying an impression of the whole site in the state that is intended to be the product of its **conservation management.** A 'pen portrait' outlining the **conditions** that should prevail when all the **conservation objectives** are met. A description of the site as it would be when all the **features** are in **favourable condition**.

8. REFERENCES

Burgess, A., Bennion, H. & Clarke, G. (2005). *Assessing reference conditions and ecological status for lakes using subfossil diatoms*. Final report to the Environment Agency under contract no. SC030103. ECRC Research Report No. 105.

Burgess, A., Goldsmith, B., and Hatton-Ellis, T. (2006). Site Condition Assessments of Welsh SAC and SSSI Standing Water Features. CCW Contract Science Report No: 705

Davidson, T. & Appleby, P.G. (2003). *The environmental history of Kenfig Pool, cSAC*. CCW Contract Science Report No. 561. Countryside Council for Wales, Bangor

Environment Agency (2005). http://www.environment-agency.gov.uk/http://maps.environment-agency.gov.uk/wiyby/data (to search for individual lake risk assessment details and maps)

Hurford, C. & Perry, K. (2000). Habitat Monitoring for Conservation Management and Reporting, 1: Case studies. Life - Nature, CCW

Joint Nature Conservation Committee (JNCC) (2005a). Common Standards Monitoring Guidance for Standing Waters Version March 2005. JNCC Report, JNCC, Peterborough. An electronic version of this report is available at: http://www.jncc.gov.uk/pdf/CSM_standingwaters_Mar05.pdf

JNCC (2005b). http://www.jncc.gov.uk/ProtectedSites/SACselection/SAC_habitats.asp

Monteith, D.T., Hildrew, A.G., Flower, R.J., Raven, P.J., Beaumont, W.R.B., Collen, P., Kreiser, A.M., Shilland, E.M. & Winterbottom, J.H. (2005). Biological responses to the chemical recovery of acidified freshwaters in the UK. *Environmental Pollution, 137*, 83-101.

Giles, N. (2003). A fishery management plant for Kenfig Pool, cSAC. CCW Contract Science Report no. 527. Countryside Council for Wales, Bangor

Goldsmith, B., Bennion, H., Hughes, M., Jones, V., Rose, C. & Simpson, G.L. (2006). Integrating Habitats Directive and Water Framework Directive monitoring: Baseline survey of Natura 2000 standing water habitats in Wales. CCW Contract Science Report No. 704. Countryside Council for Wales, Bangor

Newberry, C. (2007) Kenfig/Cynffig SAC Monitoring Report: Petalwort *Petalophyllum ralfsii*

Westwood, S., and Newberry, C. (2007) Kenfig/Cynffig SAC Monitoring Report: Fen orchid *Liparis loeselii*

The Ecological Flora of the British Isles at the University of York http://www.york.ac.uk/res/ecoflora/cfm/ecofl/index.cfm

Wilkinson, K. (2006). Kenfig SAC: Summary SAC Monitoring Report.

UK Air Pollution Information System http://www.apis.ac.uk/index.html

UK Technical Advisory Group for the Water Framework Directive. http://www.wfduk.org/tag_guidance/

Cyngor Cefn Gwlad Cymru
Countryside Council for Wales

Unedau Rheoli
Management Units

Kenfig / Cynffig

Map 1 / 1

Côd Safle y GE
EC Site Code **UK0012566**

Ardal Cadwraeth Arbennig (ACA)
Special Area of Conservation (SAC)

1 Ffiniau'r unedau a chyfeirnodau
Boundary of unit and Ref number

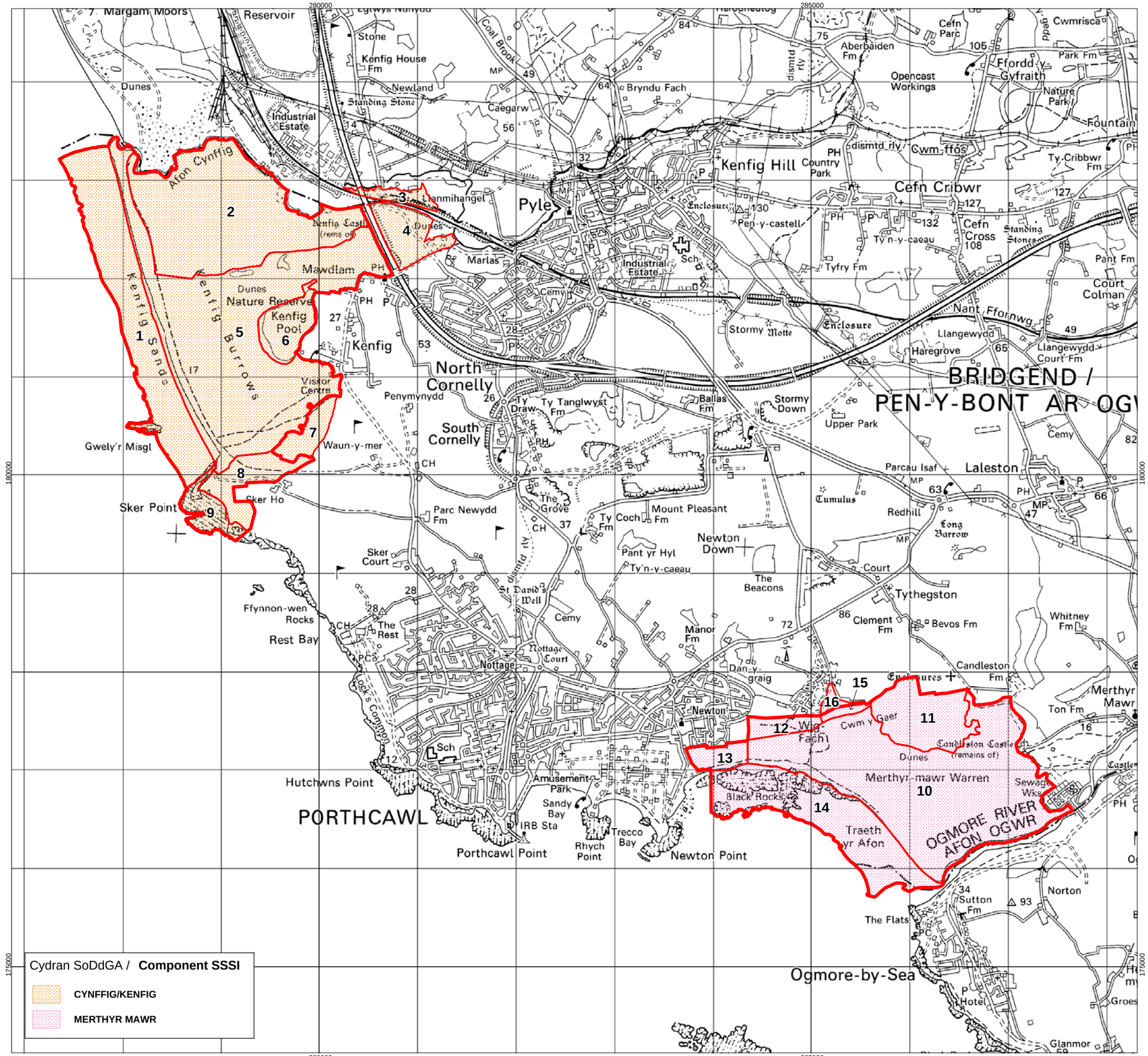
Tafluniad map: Y Grid Cenedlaethol Prydeinig
Projection: British National Grid

G/N

Graddfa
Scale **1:40,000** **15/04/2008**

Noder:Data wedi ei gipio ar raddfa 1:2,500, rhoddwyd ar raddfa 1:50,000 a wedi'i chwyddo i raddfa 1:40,000. Mae mapiau graddfa-fawr swyddogol ar gael gan CCGC.

Note: Data captured at 1:2,500 scale, placed on 1:50,000 scale and enlarged to 1:40,000 scale. A definitive large scale map is available on request from CCW.



Cydran SoDdGA / **Component SSSI**

CYNFFIG/KENFIG

MERTHYR MAWR

STANDARD DATA FORM for sites within the ‘UK national site network of European sites’

Special Protection Areas (SPAs) are classified and Special Areas of Conservation (SACs) are designated under:

- the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales (including the adjacent territorial sea) and to a limited extent in Scotland (reserved matters) and Northern Ireland (excepted matters);
- the Conservation (Natural Habitats &c.) Regulations 1994 (as amended) in Scotland;
- the Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland; and
- the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) in the UK offshore area.

Each SAC or SPA (forming part of the UK national site network of European sites) has its own Standard Data Form containing site-specific information. The information provided here generally follows the same documenting format for SACs and SPAs, as set out in the Official Journal of the European Union recording the Commission Implementing Decision of 11 July 2011 (2011/484/EU).

Please note that these forms contain a number of codes, all of which are explained either within the data forms themselves or in the end notes.

More general information on SPAs and SACs in the UK is available from the SPA homepage and SAC homepage on the JNCC website. These webpages also provide links to Standard Data Forms for all SAC and SPA sites in the UK.

https://jncc.gov.uk/

NATURA 2000 - STANDARD DATA FORM

For Special Protection Areas (SPA),
Proposed Sites for Community Importance (pSCI),
Sites of Community Importance (SCI) and
for Special Areas of Conservation (SAC)

SITE	**UK0012566**
SITENAME	**Kenfig/ Cynffig**

TABLE OF CONTENTS

1. SITE IDENTIFICATION

Back to top

1.1 Type	1.2 Site code
B	UK0012566

1.3 Site name

Kenfig/ Cynffig

1.4 First Compilation date	1.5 Update date
1995-06	2015-12

1.6 Respondent:

Name/Organisation:	Joint Nature Conservation Committee
Address:	Joint Nature Conservation Committee Monkstone House City Road Peterborough PE1 1JY
Email:	

Date site proposed as SCI:	1995-06
Date site confirmed as SCI:	2004-12
Date site designated as SAC:	2004-12
National legal reference of SAC designation:	Regulations 11 and 13-15 of the Conservation of Habitats and Species Regulations 2010 (http://www.legislation.gov.uk/uksi/2010/490/contents/made).

2. SITE LOCATION

2.1 Site-centre location [decimal degrees]:

Back to top

Longitude	Latitude
-3.7447	51.5183

2.2 Area [ha]:

1189.14

2.3 Marine area [%]

23.3

2.4 Sitelength [km]:

0.0

2.5 Administrative region code and name

NUTS level 2 code	Region Name
UKL2	East Wales

2.6 Biogeographical Region(s)

Atlantic (100.0 %)

3. ECOLOGICAL INFORMATION

Back to top

3.1 Habitat types present on the site and assessment for them

Annex I Habitat types						Site assessment			
Code	PF	NP	Cover [ha]	Cave [number]	Data quality	A|B|C|D	A|B|C		
						Representativity	Relative Surface	Conservation	Global
1140			226.06	0	G	D			
1320			0.0	0	M	D			
1330			20.22	0	G	C	C	B	C
2110			1.19	0	G	D			
2120			45.19	0	G	D			
2130	X		536.54	0	G	B	B	B	B
2150	X		0.59	0	G	D			
2160			0.0	0	G	D			
2170									

			4.76	0	G	A	C	A	A
2190			133.3	0	G	A	B	A	A
3140			28.54	0	G	B	B	B	B
6210			1.19	0	G	D			
91E0	X		1.19	0	G	D			

- **PF:** for the habitat types that can have a non-priority as well as a priority form (6210, 7130, 9430) enter "X" in the column PF to indicate the priority form.
- **NP:** in case that a habitat type no longer exists in the site enter: x (optional)
- **Cover:** decimal values can be entered
- **Caves:** for habitat types 8310, 8330 (caves) enter the number of caves if estimated surface is not available.
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation)

3.2 Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site evaluation for them

Species					Population in the site						Site assessment			
G	Code	Scientific Name	S	NP	T	Size		Unit	Cat.	D.qual.	A|B|C|D	A|B|C		
						Min	Max				Pop.	Con.	Iso.	Glo.
P	1903	Liparis loeselii			p	1001	10000	i		M	A	A	A	A
P	1395	Petalophyllum ralfsii			p				P	DD	A	B	C	B
M	1303	Rhinolophus hipposideros			p				P	DD	D			
A	1166	Triturus cristatus			p				P	DD	D			

- **Group:** A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Type:** p = permanent, r = reproducing, c = concentration, w = wintering (for plant and non-migratory species use permanent)
- **Unit:** i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see reference portal)
- **Abundance categories (Cat.):** C = common, R = rare, V = very rare, P = present - to fill if data are deficient (DD) or in addition to population size information
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation); VP = 'Very poor' (use this category only, if not even a rough estimation of the population size can be made, in this case the fields for population size can remain empty, but the field "Abundance categories" has to be filled in)

4. SITE DESCRIPTION

Back to top

4.1 General site character

Habitat class	% Cover
N04	63.0
N07	0.5
N02	19.0
N03	1.0
N16	2.5
N05	4.0
N06	2.5
N08	7.5
Total Habitat Cover	100

Other Site Characteristics

1 Terrestrial: Soil & Geology: sand,basic,limestone 2 Terrestrial: Geomorphology and landscape: coastal,lowland 4 Marine: Geomorphology: open coast (including bay),estuary,intertidal sediments (including sandflat/mudflat)

4.2 Quality and importance

Atlantic salt meadows (Glauco-Puccinellietalia maritimae) for which the area is considered to support a significant presence. Dunes with Salix repens ssp. argentea (Salicion arenariae) for which this is considered to be one of the best areas in the United Kingdom. which is considered to be rare as its total extent in the United Kingdom is estimated to be less than 1000 hectares. Humid dune slacks for which this is considered to be one of the best areas in the United Kingdom. Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. for which this is considered to be one of the best areas in the United Kingdom. Fixed dunes with herbaceous vegetation (?grey dunes?) for which this is considered to be one of the best areas in the United Kingdom. Liparis loeselii for which this is one of only three known outstanding localities in the United Kingdom. which is known from 15 or fewer 10 x 10 km squares in the United Kingdom. Petalophyllum ralfsii for which this is considered to be one of the best areas in the United Kingdom.

4.3 Threats, pressures and activities with impacts on the site

The most important impacts and activities with high effect on the site

Negative Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i|o|b]
M	H05		B
H	A04		I
M	G01		B
H	I01		B
M	I02		B
H	H04		B
M	A03		I
M	J02		I
M	J03		B
L	F03		I
L	A07		I
M	K01		B
M	H01		B
H	K02		B
H	M01		B
M	F02		B

Positive Impacts			
Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i|o|b]
M	D05		I
H	A10		I
H	A03		I
H	A04		I
M	G03		I
M	K02		I

Rank: H = high, M = medium, L = low

Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification,

T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions
i = inside, o = outside, b = both

4.5 Documentation

The Natural Resources Wales weblink below provides access to information on its designated sites. Detailed information about this Natura 2000 site can be accessed via the Management Plan link provided in Section 6.2. See also the 'UK Approach' document for more information (link via the JNCC website).

Link(s): https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/protected-areas-of-lan

http://jncc.defra.gov.uk/pdf/Natura2000_StandardDataForm_UKApproach_Dec2015.pdf

5. SITE PROTECTION STATUS (optional)

Back to top

5.1 Designation types at national and regional level:

Code	Cover [%]	Code	Cover [%]	Code	Cover [%]
UK01	69.8	UK04	100.0		

6. SITE MANAGEMENT

Back to top

6.1 Body(ies) responsible for the site management:

Organisation:	Natural Resources Wales
Address:	
Email:	

6.2 Management Plan(s):

An actual management plan does exist:

[X] Yes Name: KENFIG / CYNFFIG
Link:
https://www.naturalresources.wales/media/672610/Kenfig%20SAC%20management%20plan%2021.4.08%20English.p

[ ] No, but in preparation

[ ] No

7. MAP OF THE SITES

Back to top

INSPIRE ID:

Map delivered as PDF in electronic format (optional)

[ ] Yes [X] No

Reference(s) to the original map used for the digitalisation of the electronic boundaries (optional).

EXPLANATION OF CODES USED IN THE SPECIAL AREA OF CONSERVATION (SAC) AND SPECIAL PROTECTION AREA (SPA) STANDARD DATA FORMS

The codes in the table below generally follow those explained in the official European Union guidelines for the Standard Data Form (also referencing the relevant page number).

1.1 Site type

CODE	DESCRIPTION	PAGE NO
A	SPA (classified Special Protection Area)	53
B	cSAC, SCI or SAC (candidate Special Area of Conservation, Site of Community Importance, designated Special Area of Conservation)	53
C	SPA area/boundary is the same as the cSAC/SCI/SAC i.e. a co-classified/designated site (Note: this situation only occurs in Gibraltar)	53

3.1 Habitat code

CODE	DESCRIPTION	PAGE NO
1110	Sandbanks which are slightly covered by sea water all the time	57
1130	Estuaries	57
1140	Mudflats and sandflats not covered by seawater at low tide	57
1150	Coastal lagoons	57
1160	Large shallow inlets and bays	57
1170	Reefs	57
1180	Submarine structures made by leaking gases	57
1210	Annual vegetation of drift lines	57
1220	Perennial vegetation of stony banks	57
1230	Vegetated sea cliffs of the Atlantic and Baltic Coasts	57
1310	Salicornia and other annuals colonizing mud and sand	57
1320	Spartina swards (Spartinion maritimae)	57
1330	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	57
1340	Inland salt meadows	57
1420	Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi)	57
2110	Embryonic shifting dunes	57
2120	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")	57
2130	Fixed coastal dunes with herbaceous vegetation ("grey dunes")	57
2140	Decalcified fixed dunes with Empetrum nigrum	57
2150	Atlantic decalcified fixed dunes (Calluno-Ulicetea)	57
2160	Dunes with Hippopha• rhamnoides	57
2170	Dunes with Salix repens ssp. argentea (Salicion arenariae)	57
2190	Humid dune slacks	57
21A0	Machairs (* in Ireland)	57
2250	Coastal dunes with Juniperus spp.	57
2330	Inland dunes with open Corynephorus and Agrostis grasslands	57
3110	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)	57
3130	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea	57
3140	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.	57
3150	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation	57

CODE	DESCRIPTION	PAGE NO
3160	Natural dystrophic lakes and ponds	57
3170	Mediterranean temporary ponds	57
3180	Turloughs	57
3260	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation	57
4010	Northern Atlantic wet heaths with Erica tetralix	57
4020	Temperate Atlantic wet heaths with Erica ciliaris and Erica tetralix	57
4030	European dry heaths	57
4040	Dry Atlantic coastal heaths with Erica vagans	57
4060	Alpine and Boreal heaths	57
4080	Sub-Arctic Salix spp. scrub	57
5110	Stable xerothermophilous formations with Buxus sempervirens on rock slopes (Berberidion p.p.)	57
5130	Juniperus communis formations on heaths or calcareous grasslands	57
6130	Calaminarian grasslands of the Violetalia calaminariae	57
6150	Siliceous alpine and boreal grasslands	57
6170	Alpine and subalpine calcareous grasslands	57
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)	57
6230	Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)	57
6410	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)	57
6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	57
6510	Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)	57
6520	Mountain hay meadows	57
7110	Active raised bogs	57
7120	Degraded raised bogs still capable of natural regeneration	57
7130	Blanket bogs (* if active bog)	57
7140	Transition mires and quaking bogs	57
7150	Depressions on peat substrates of the Rhynchosporion	57
7210	Calcareous fens with Cladium mariscus and species of the Caricion davallianae	57
7220	Petrifying springs with tufa formation (Cratoneurion)	57
7230	Alkaline fens	57
7240	Alpine pioneer formations of the Caricion bicoloris-atrofuscae	57
8110	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)	57
8120	Calcareous and calcshist screes of the montane to alpine levels (Thlaspietea rotundifolii)	57
8210	Calcareous rocky slopes with chasmophytic vegetation	57
8220	Siliceous rocky slopes with chasmophytic vegetation	57
8240	Limestone pavements	57
8310	Caves not open to the public	57
8330	Submerged or partially submerged sea caves	57
9120	Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion)	57
9130	Asperulo-Fagetum beech forests	57
9160	Sub-Atlantic and medio-European oak or oak-hornbeam forests of the Carpinion betuli	57
9180	Tilio-Acerion forests of slopes, screes and ravines	57
9190	Old acidophilous oak woods with Quercus robur on sandy plains	57
91A0	Old sessile oak woods with Ilex and Blechnum in the British Isles	57
91C0	Caledonian forest	57
91D0	Bog woodland	57
91E0	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)	57
91J0	Taxus baccata woods of the British Isles	57

3.1 Habitat representativity (abbreviated to 'Representativity' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent representatively	57
B	Good representatively	57
C	Significant representatively	57
D	Non-significant presence representatively	57

3.1 Relative surface

CODE	DESCRIPTION	PAGE NO
A	> 15%-100%	58
B	> 2%-15%	58
C	≤ 2%	58

3.1 Degree of conservation (abbreviated to 'Conservation' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	59
B	Good conservation	59
C	Average or reduced conservation	59

3.1 Global assessment (abbreviated to 'Global' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	59
B	Good value	59
C	Significant value	59

3.2 Population (abbreviated to 'Pop.' in data form)

CODE	DESCRIPTION	PAGE NO
A	> 15%-100%	62
B	> 2%-15%	62
C	≤ 2%	62
D	Non-significant population	62

3.2 Degree of conservation (abbreviated to 'Con.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	63
B	Good conservation	63
C	Average or reduced conservation	63

3.2 Isolation (abbreviated to 'Iso.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Population (almost) Isolated	63
B	Population not-isolated, but on margins of area of distribution	63
C	Population not-isolated within extended distribution range	63

3.2 Global Grade (abbreviated to 'Glo.' or 'G.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	63
B	Good value	63
C	Significant value	63

3.3 Other species – essentially covers bird assemblage types

CODE	DESCRIPTION	PAGE NO
WATR	Non-breeding waterbird assemblage	UK specific code
SBA	Breeding seabird assemblage	UK specific code

BBA	Breeding bird assemblage (applies only to sites classified pre 2000)	UK specific code

4.1 Habitat class code

CODE	DESCRIPTION	PAGE NO
N01	Marine areas, Sea inlets	65
N02	Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins)	65
N03	Salt marshes, Salt pastures, Salt steppes	65
N04	Coastal sand dunes, Sand beaches, Machair	65
N05	Shingle, Sea cliffs, Islets	65
N06	Inland water bodies (Standing water, Running water)	65
N07	Bogs, Marshes, Water fringed vegetation, Fens	65
N08	Heath, Scrub, Maquis and Garrigue, Phygrana	65
N09	Dry grassland, Steppes	65
N10	Humid grassland, Mesophile grassland	65
N11	Alpine and sub-Alpine grassland	65
N14	Improved grassland	65
N15	Other arable land	65
N16	Broad-leaved deciduous woodland	65
N17	Coniferous woodland	65
N19	Mixed woodland	65
N21	Non-forest areas cultivated with woody plants (including Orchards, groves, Vineyards, Dehesas)	65
N22	Inland rocks, Screes, Sands, Permanent Snow and ice	65
N23	Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites)	65
N25	Grassland and scrub habitats (general)	65
N26	Woodland habitats (general)	65

4.3 Threats code

CODE	DESCRIPTION	PAGE NO
A01	Cultivation	65
A02	Modification of cultivation practices	65
A03	Mowing / cutting of grassland	65
A04	Grazing	65
A05	Livestock farming and animal breeding (without grazing)	65
A06	Annual and perennial non-timber crops	65
A07	Use of biocides, hormones and chemicals	65
A08	Fertilisation	65
A10	Restructuring agricultural land holding	65
A11	Agriculture activities not referred to above	65
B01	Forest planting on open ground	65
B02	Forest and Plantation management & use	65
B03	Forest exploitation without replanting or natural regrowth	65
B04	Use of biocides, hormones and chemicals (forestry)	65
B06	Grazing in forests/ woodland	65
B07	Forestry activities not referred to above	65
C01	Mining and quarrying	65
C02	Exploration and extraction of oil or gas	65
C03	Renewable abiotic energy use	65
D01	Roads, paths and railroads	65
D02	Utility and service lines	65
D03	Shipping lanes, ports, marine constructions	65
D04	Airports, flightpaths	65
D05	Improved access to site	65
E01	Urbanised areas, human habitation	65
E02	Industrial or commercial areas	65

CODE	DESCRIPTION	PAGE NO
E03	Discharges	65
E04	Structures, buildings in the landscape	65
E06	Other urbanisation, industrial and similar activities	65
F01	Marine and Freshwater Aquaculture	65
F02	Fishing and harvesting aquatic ressources	65
F03	Hunting and collection of wild animals (terrestrial), including damage caused by game (excessive density), and taking/removal of terrestrial animals (including collection of insects, reptiles, amphibians, birds of prey, etc., trapping, poisoning, poaching, predator control, accidental capture (e.g. due to fishing gear), etc.)	65
F04	Taking / Removal of terrestrial plants, general	65
F05	Illegal taking/ removal of marine fauna	65
F06	Hunting, fishing or collecting activities not referred to above	65
G01	Outdoor sports and leisure activities, recreational activities	65
G02	Sport and leisure structures	65
G03	Interpretative centres	65
G04	Military use and civil unrest	65
G05	Other human intrusions and disturbances	65
H01	Pollution to surface waters (limnic & terrestrial, marine & brackish)	65
H02	Pollution to groundwater (point sources and diffuse sources)	65
H03	Marine water pollution	65
H04	Air pollution, air-borne pollutants	65
H05	Soil pollution and solid waste (excluding discharges)	65
H06	Excess energy	65
H07	Other forms of pollution	65
I01	Invasive non-native species	65
I02	Problematic native species	65
I03	Introduced genetic material, GMO	65
J01	Fire and fire suppression	65
J02	Human induced changes in hydraulic conditions	65
J03	Other ecosystem modifications	65
K01	Abiotic (slow) natural processes	65
K02	Biocenotic evolution, succession	65
K03	Interspecific faunal relations	65
K04	Interspecific floral relations	65
K05	Reduced fecundity/ genetic depression	65
L05	Collapse of terrain, landslide	65
L07	Storm, cyclone	65
L08	Inundation (natural processes)	65
L10	Other natural catastrophes	65
M01	Changes in abiotic conditions	65
M02	Changes in biotic conditions	65
U	Unknown threat or pressure	65
XO	Threats and pressures from outside the Member State	65

5.1 Designation type codes

CODE	DESCRIPTION	PAGE NO
UK00	No Protection Status	67
UK01	National Nature Reserve	67
UK04	Site of Special Scientific Interest (GB)	67
UK05	Marine Conservation Zone	67
UK06	Nature Conservation Marine Protected Area	67
UK86	Special Area (Channel Islands)	67
UK98	Area of Special Scientific Interest (NI)	67
IN00	Ramsar Convention site	67
IN08	Special Protection Area	67
IN09	Special Area of Conservation	67

CYNGOR CEFN GWLAD CYMRU
COUNTRYSIDE COUNCIL FOR WALES

SITE OF SPECIAL SCIENTIFIC INTEREST CITATION

BRIDGEND **MERTHYR MAWR**

Date of Notification: 1950, 1983, 2002

National Grid Reference: SS861768

O.S. Maps: 1:50,000 Sheet number: 170
1:10,000 Sheet number: SS 87 NW

Site Area: 478.5 ha

Description:

Merthyr Mawr is of special interest for its saltmarsh, sand dune habitats and for its associated coastal habitats including calcareous grassland, swamp and intertidal habitats. In addition, the site is also of special interest for the assemblages of higher plants, fungi and invertebrates associated with the sand dunes. The rare weevil *Glocianus pilosellus*, a rare Gasteromycete fungus *Tulostoma melanocyclum* and a rare liverwort *Petalophyllum ralfsii* are also features of interest.

Merthyr Mawr is situated to the southeast of the town of Porthcawl and lies on the northern shore of the estuary of the Ogmore River. It is bounded to the north and east by agricultural land.

The beach is composed of periglacial material most of which is derived from the Pennant Sandstone of the Upper Coal Measures. A Carboniferous Limestone plateau, which is largely obscured by sand, runs east to west on the leeward side of the dunes. There is a discontinuous distribution of clay and silt beneath the dune sand, with shingle and beach cobble occurring in many places.

The hydrology of the site is influenced by two karstic springs which discharge groundwater from underlying Carboniferous Limestone sources. A freshwater water table underlies the whole of the southern or lower dunes, and its annual range is controlled by the seasonal pattern of rainfall. The site ranges from low tide up to about 80 m on the top of the limestone plateau.

The extensive sand dune system of Merthyr Mawr displays a range of dune habitats. These include successional stages from bare sand to stabilised dunes and slacks, and dune woodland and scrub.

In the sandy beach area, there is a typical foreshore community of prickly saltwort *Salsola kali*, babington's orache *Atriplex glabriuscula* and sea sandwort *Honkenya peploides*. Further inland, species such as marram grass *Ammophila arenaria*, sand-couch *Elytrigia juncea* and sea-holly *Eryngium maritimum* form a typical fore-dune community. The succession from these fore-dunes to tall, white dunes of marram grass is evident along the sandy area of the beach. Grassland species colonise these white dunes inland, forming a marram grass/red fescue *Festuca*

rubra semi-fixed dune grassland community. Merthyr Mawr contains extensive areas of semi-fixed and fixed species-rich dune grassland types. Many areas are relatively open, reflecting heavy grazing by rabbits particularly at the southern end of the site; this leaves areas of very short, open swards dominated by lichens, bryophytes, lady's bedstraw *Galium verum*, wild pansy *Viola tricolor* and thyme *Thymus praecox*. Rank, fixed dunes with yorkshire-fog *Holcus lanatus*, false oat-grass *Arrhenatherum elatius*, dewberry *Rubus caesius* and burnet rose *Rosa pimpinellifolia* occur elsewhere.

Dune slack vegetation at Merthyr Mawr is also very species-rich. Creeping willow *Salix repens* is locally common on the slack floors, along with other typical slack species such as marsh pennywort *Hydrocotyle vulgaris*, marsh helleborine *Epipactis palustris*, southern marsh-orchid *Dactylorhiza praetermissa* and early marsh-orchid *D. incarnata*. The rare petalwort *Petalophyllum ralfsii* occurs in the patches of damp, bare sand between the creeping willow.

The hollows of the smaller more inland dunes are often colonized by trees and scrub, completing the successional sequence of sand dune habitats from strandline to woodland. Merthyr Mawr has the largest area of semi-natural woodland of all Welsh sand dune systems, consisting of species such as birches *Betula spp*., willows *Salix spp*., sycamore *Acer pseudoplatanus*, hazel *Corylus avellana*, ash *Fraxinus excelsior* and oak *Quercus robur*.

The saltmarsh at Merthyr Mawr flanks the western bank of the Ogmore River, and consists of three bays separated by sandbars. The strandline flora of these sandbars is diverse, with vegetation including sea sandwort *Honkenya peploides*, hard-grass *Parapholis strigosa*, fern-grasses *Desmazeria maritima* and *D. rigida*, and sea rocket *Cakile maritima*. The transition from lower to upper saltmarsh is well developed in these bays.

The lower saltmarsh is generally a patchwork of vegetation dominated by common saltmarsh-grass *Puccinellia maritima*. Sea-purslane *Atriplex portulacoides* is locally abundant, and the river fringe is dominated by glasswort *Salicornia spp*. and annual sea-blite *Suaeda maritima*. Higher areas include an abundance of sea arrowgrass *Triglochin maritima* and common saltmarsh-grass. Upper saltmarsh is characterised by common saltmarsh-grass, creeping bent *Agrostis stolonifera* and red fescue *Festuca rubra*. The saltmarsh/sand dune interface is characterised by rock sea-lavender *Limonium procerum* and sand-couch *Elytrigia juncea*.

Merthyr Mawr is one of only three Welsh sand dune systems with calcareous grassland. These grasslands are extremely species-rich, and occur on the south-facing slopes of the limestone plateau where the bedrock is often very close to the surface. Species present in this habitat include autumn gentian *Gentianella amarella*, autumn lady's tresses *Spiranthes spiralis*, wild thyme *Thymus praecox* and hairy violet *Viola hirta*. An area of swamp fed by karstic springs is characterised by species indicative of moving groundwater such as yellow flag *Iris pseudacorus*, meadowsweet *Filipendula ulmaria* and wild angelica *Angelica sylvestris*. Birthwort *Aristolochia clematitis* flanks a water channel influenced by one of these springs.

Intertidal habitat at Merthyr Mawr is characterised by a large sandy beach with rocks to the north. The beach, which forms the coastal frontage of the site, is believed to be eroding at the present time.

Merthyr Mawr supports a significant population of petalwort *Petalophyllum ralfsii*, which is rare and generally declining. The UK is now considered to be a stronghold for this species. The site

is also important for its assemblage of nationally scarce species such as variegated horsetail *Equisetum variegatum*, sea spurge *Euphorbia paralias*, hutchinsia *Hornungia petraea*, rock sea-lavender *Limonium procerum*, curved hard-grass *Parapholis incurva*, round-leaved wintergreen *Pyrola rotundifolia*, and dune fescue *Vulpia fasciculata*. Shore horsetail *E. x littorale* and great brome *Anisantha diandra* are two locally rare plants that occur on the site.

The sand dunes of Merthyr Mawr are one of the most important sites in Britain for rare macrofungi. Important species include *Tulostoma melanocyclum*, the agaric *Russula cessans*, a bolete *Suillus fluryi*, the netted rhodotus *Rhodotus palmatus*, morels and helvellas.

Merthyr Mawr is of importance for its invertebrate fauna. The sand dunes represent a stronghold for many restricted invertebrates, including the notable carabid beetle *Nebria complanata*, the stiletto fly *Thereva fulva*, the dune tiger beetle *Cicindela maritima* and many species of bees and wasps such as the cuckoo bee *Coelioxys mandibularis*, the solitary wasp *Psen bicolor* and the mining bee *Colletes marginatus*. The rare weevil *Glocianus pilosellus* is also a feature of this site.

Remarks:

1. The majority of the site lies within the Merthyr Mawr Warren National Nature Reserve (NNR), which was declared in July 2002 and is managed by CCW.

2. Merthyr Mawr SSSI is part of Kenfig/Cynffig Special Area of Conservation, being host to the following habitats listed in Annex I of the EC Habitats Directive (Directive 92/43/EEC on the Conservation of Natural habitats and of Wild Flora and Fauna): 'Fixed dunes with herbaceous vegetation ('grey dunes')', 'Dunes with *Salix repens ssp. argentea* (*salicion arenariae*)' and 'humid dune slacks'. The site is also host to petalwort *Petalophyllum ralfsii*, which is listed in Annex II of the Directive.

3. The Merthyr Mawr Warren Scheduled Ancient Monument covers a large part of the site, and most of the site lies within the Glamorgan Heritage Coast.

4. This site is host to petalwort *Petalophyllum ralfsii* which is protected under Schedule 8 of the Wildlife and Countryside Act (as amended).

Cyngor Cefn Gwlad Cymru
Countryside Council for Wales

MERTHYR MAWR

Pen-y-bont ar Ogwr,
Bro Morgannwg /
Bridgend, Vale of Glamorgan

Map 1 of 2

	Safle o Ddiddordeb Gwyddonol Arbennig **Site of Special Scientific Interest**
1:10000	Graddfa **Scale**
478.5 ha	Arwynebedd **Area**
01/01/50	Hysbyswyd am y tro cyntaf **First notified**
05/11/02	Hysbysiad o ehangiad **Notification of enlargment**
24/07/03	Cadarnhad **Confirmation**
838	Rhif y safle **Site id**

Sylwer: Mae ffin atfor SDdGA yn dilyn Marc Distyll Cymedrig ac mae'n debygol o newid.

Note: SSSI seaward boundary follows Mean Low Water Mark and is liable to change.

Cyngor Cefn Gwlad Cymru
Countryside Council for Wales

MERTHYR MAWR

Pen-y-bont ar Ogwr,
Bro Morgannwg /
Bridgend, Vale of Glamorgan

Map 2 of 2

	Safle o Ddiddordeb Gwyddonol Arbennig **Site of Special Scientific Interest**
1:10000	Graddfa **Scale**
478.5 ha	Arwynebedd **Area**
01/01/50	Hysbyswyd am y tro cyntaf **First notified**
05/11/02	Hysbysiad o ehangiad **Notification of enlargment**
24/07/03	Cadarnhad **Confirmation**
838	Rhif y safle **Site id**

Sylwer: Mae ffin atfor SDdGA yn dilyn Marc Distyll Cymedrig ac mae'n debygol o newid.

Note: SSSI seaward boundary follows Mean Low Water Mark and is liable to change.

CYNGOR CEFN GWLAD CYMRU
COUNTRYSIDE COUNCIL FOR WALES

SITE OF SPECIAL SCIENTIFIC INTEREST: MANAGEMENT STATEMENT

BRIDGEND **MERTHYR MAWR**

Date of Notification: 5 November 2002

Site Area: 478.5 ha

1. Introduction:

This management statement contains CCW's opinion of the way in which the SSSI should be managed in order to maintain its special interest. It also provides a basis for future discussions and decisions on the conservation management of the SSSI. It is important that any works described in this statement are fully discussed with and formally consented by CCW, before any of these management activities are started.

The document sets out a vision for the features of interest; it describes the key issues affecting those features and outlines any management considered necessary to safeguard the features.

It is very important to recognise that management may need to change with time. Problems that we are aware of today may be resolved or completely removed and new unforeseen problems may arise. New improved management techniques may also become available. Consequently the management outlined in this document is considered appropriate for the short term but may need to change in the long term.

2. Features of Special Scientific Interest:

2.1 Sand dune habitat
2.2 Saltmarsh habitat
2.3 Rare plants
2.4 Rare invertebrates
2.5 Rare fungi

As well as the features listed above, Merthyr Mawr has other habitats that are essential to the maintenance of the special wildlife interest. These include wet grassland and swamp, calcareous grassland and intertidal mud, sand and rocks. This diversity of habitats similarly supports a wide range of species and these too are a key component of the special interest of the site. Unless it is specified below, management of this site should aim to look after these habitats as well as the listed features of interest.

3. Long-term Vision for the Site and Features

3.1 **Sand dune habitat** - The range of sand dune habitats should be maintained for as long as the natural coastal processes of sand erosion and accretion will allow. Areas of accreting dunes should be colonised by only a few specialised species, particularly marram grass. In the dune grassland the following species should remain common: red fescue, common rest-harrow, sand cat's tail and sand sedge.

3.2 **Saltmarsh habitat** - The extent of saltmarsh and the areas where saltmarsh grades into intertidal and sand dune habitat should be maintained for as long as the natural coastal processes of erosion and accretion will allow. A range of saltmarsh communities should be present, from lower saltmarsh with glasswort, through to upper saltmarsh with red fescue and common saltmarsh grass.

3.3 **Rare plants** - the site should support populations of the rare petalwort. Populations of other national and local rarities should be maintained, including: variegated horsetail, sea spurge, hutchinsia, rock sea-lavender, curved hard-grass, round-leaved wintergreen and dune fescue.

3.4 **Rare invertebrates** - the site should support a population of the rare weevil Glocianus pilosellus. In addition, the site should support a diverse assemblage of other invertebrates associated with the range of sand dune habitats present, such as rare stiletto flies, cuckoo bees, solitary wasps and mining bees.

3.5 **Rare Fungi** – the site should support a population of the rare Tulostoma melanocyclum. In addition, the site should support a diverse assemblage of macrofungi including local and national rarities such as the agaric Russula cessans, a bolete Suillus fluryi, the netted rhodotus Rhodotus palmatus, morels and helvellas.

4. Key Management Issues:

All Features

Bare dune slacks and mobile sand dunes are of particular interest and should be managed in preference to rank dune grassland and dune woodland. The natural coastal processes of sand erosion and accretion play a major role in maintaining the sand dune habitat and the associated rare plants and invertebrates. However, other important management issues include:

- **Scrub control**
  Sea-buckthorn and other scrub species colonise areas of dune, particularly slacks.

A programme of sea-buckthorn control has been implemented and this should continue in order to increase the area of sand dune habitat. Many of the rare insects need compacted, bare sand; public access, rabbit grazing and natural erosion all help to maintain such areas without intervention.

- **Grazing**
  Controlled grazing by stock at appropriate levels is necessary to maintain the condition of the sand dune and saltmarsh vegetation. Without grazing, much of the habitat would become rank and species poor. Too much grazing may lead to excessive poaching and erosion problems.

- **Litter Control**
  Removal of sea-borne litter from the strandline is carried out by Glamorgan Heritage Coast Rangers and the landowners. Only plastics etc should be collected, leaving woody debris and seaweed, as some notable insect species such as the ground beetle Nebria complanata require this habitat.

CYNGOR CEFN GWLAD CYMRU
COUNTRYSIDE COUNCIL FOR WALES

SITE OF SPECIAL SCIENTIFIC INTEREST: OPERATIONS REQUIRING CONSULTATION WITH THE COUNTRYSIDE COUNCIL FOR WALES (CCW)

SITE NAME: MERTHYR MAWR

UNITARY AUTHORITY: BRIDGEND

DATE OF NOTIFICATION: 2002

The operations listed below may damage the features of interest of Merthyr Mawr SSSI. Before any of these operations are undertaken you must consult CCW, and may require our consent. **The list of operations is not a prohibited list.**

It is usually possible to carry out some of these operations in certain ways, or at specific times of year, or on certain parts of the SSSI, without damaging the features of interest. If you wish to carry out any of these activities please contact the local office of CCW, a Conservation Officer will give you advice and where appropriate issue a consent. Please help us by using the enclosed form to ask us for consent to carry out these operations.

In certain circumstances it will not be possible to consent these operations, because they would damage the features of interest. Where possible the Conservation Officer will suggest alternative ways in which you may proceed, which would enable a consent to be issued. To proceed without CCW's consent may constitute an offence. **If consent is refused, or conditions attached to it, which are not acceptable to you, you will be provided with details of how you may appeal to the National Assembly Government.**

Ref No	Type of operation
1.	Cultivation, including ploughing, rotovating, harrowing and re-seeding.
2.	The introduction of grazing and alterations to the grazing regime (including type of stock, intensity or seasonal pattern of grazing).
3.	The introduction of stock feeding and alterations to stock feeding practice.
4.	The introduction of mowing or cutting and alterations to the mowing or cutting regime (such as from haymaking to silage).
5.	Application of manure, slurry, silage liquor, fertilisers and lime.
6.	Application of pesticides, including terrestrial and aquatic herbicides (weedkillers), and the use of veterinary products.
7.	Dumping, spreading or discharging of any materials.

8. Burning and alterations to the pattern or frequency of burnings.

9. Release into the site of any wild, feral, captive-bred or domestic animal*, plant, seed or micro-organism and any genetically modified organism.

10. Killing, injuring, taking or removal of any wild animal*, or the eggs/nests of any wild animal or the disturbing, taking, damaging or destroying of any wild animal in its place of shelter including pest control.

11. Destruction, displacement, removal or cutting of any plant or plant remains, including tree, shrub, herb, hedge, dead or decaying wood, moss, lichen, fungus, leaf-mould or turf.

12. Tree and woodland management including planting, felling, pruning and tree surgery, thinning, coppicing, changes in species composition and removal of fallen timber.

13a. Drainage including moor-gripping, the use of mole, tile, tunnel or other artificial drains.

13b. Modification to the structure of water courses including rivers, streams, springs, ditches, drains, including their banks and beds, as by re-alignment, regrading, damming or dredging.

13c. Management of aquatic and bank vegetation for drainage purposes.

14. Alterations to water levels and tables and water utilisation including irrigation, storage and abstraction from existing water bodies and through boreholes. Also the modification of current drainage regime, (eg through the installation of new pumps).

15. Infilling or digging of ditches, dykes, drains, ponds, pools, marshes, quarries or pits.

16b. Coastal fishing, fisheries management and seafood or marine life collection, including the use of traps or fish cages, alterations to coastal fishing practice or fisheries management and seafood or marine life collection.

17. Reclamation of land from sea, estuary or marsh.

18. Bait digging in intertidal areas.

19. Erection and repair of sea defences or coast protection works, including cliff or landslip drainage or stabilisation measures.

20. Extraction of minerals including peat, shingle, hard rock, sand and gravel, topsoil, subsoil, shells and spoil.

21. Destruction, construction, removal, rerouting, or regrading of roads, tracks,

walls, fences, hardstands, banks, ditches or other earthworks, including soil and rock exposures.

22. Storage of materials.

23. Erection of permanent or temporary structures or the undertaking of engineering works, including drilling or the laying, maintenance or removal of pipelines and cables, above or below ground.

24. Modification of natural or man-made features and clearance of boulders, large stones, loose rock or scree.

26. Use of vehicles or craft.

27. Recreational activities.

28. Game and waterfowl management and hunting practices and alterations to game and waterfowl management and hunting practice.

Notes:

i. This is a list of operations appearing to the CCW to be likely to damage the special features of this SSSI, as required under section 28(4)(b) of the Wildlife and Countryside Act 1981 as substituted by Schedule 9 to the Countryside and Rights of Way Act 2000.

ii. Where an operation has been granted a consent, licence or permission from another authority separate consent will not normally be required from CCW, however you should always give notice to CCW prior to exercising such consent, licence or permission.

iii. Any reference to animal in this list shall be taken to include any mammal, reptile, amphibian, bird, fish or invertebrate (including honey bees).

Appendix 4.

Cefn Cribwr Grasslands SAC:

JNCC Page, Register Entry, Conservation Objectives and Standard Data Form

Special Areas of Conservation

Glaswelltiroedd Cefn Cribwr/ Cefn Cribwr Grasslands

Designated Special Area of Conservation (SAC)

Country	Wales
Unitary Authority	East Wales
Centroid*	SS870830
Latitude	51.535
Longitude	-3.6281
SAC EU Code	UK0030113
Status	Designated Special Area of Conservation (SAC)
Area (ha)	57.92

* This is the approximate central point of the SAC. In the case of large, linear or composite sites, this may not represent the location where a feature occurs within the SAC.

Location of Glaswelltiroedd
Cefn Cribwr/ Cefn Cribwr
Grasslands SAC

General site character

- Bogs, Marshes, Water fringed vegetation, Fens (1%)
- Heath, Scrub, Maquis and Garrigue, Phygrana (10%)
- Humid grassland, Mesophile grassland (64%)
- Broad-leaved deciduous woodland (25%)

Download the Standard Data Form for this site (PDF <100kb)

Note When undertaking an appropriate assessment of impacts at a site, all features of European importance (both primary and non-primary) need to be considered.

Annex I habitats that are a primary reason for selection of this site

- **6410 Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)**
  This is one of four sites representing ***Molinia* meadows** in south and central Wales, one of the major UK strongholds for this habitat type. At this site, there are extensive stands of M24 *Molinia – Cirsium dissectum* fen-meadow, including the heathy sub-type with cross-leaved heath *Erica tetralix*, as well as other forms with a stronger representation of grasses, rushes and small sedges. Transitions to stands of more acidic *Molinia* and *Juncus* pasture, dry neutral grassland and wet scrub vegetation are well-represented. Uncommon and declining species associated with the ***Molinia* meadows** at this site include the nationally rare viper's-grass *Scorzonera humilis* and the nationally scarce soft-leaved sedge *Carex montana*.

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site

- Not Applicable

Annex II species that are a primary reason for selection of this site

- Not Applicable

Annex II species present as a qualifying feature, but not a primary reason for site selection

- **1065 Marsh fritillary butterfly** *Euphydryas (Eurodryas, Hypodryas) aurinia*

Many designated sites are on private land: the listing of a site in these pages does not imply any right of public access.

Conservation (Natural Habitats, &c.) Regulations 1994 (SI 1994 No. 2716),
fel y'u diwygiwyd / as amended.

COFNOD YN Y GOFRESTR O SAFLEOEDD EWROPEAIDD I GYMRU

ENTRY IN THE REGISTER OF EUROPEAN SITES FOR WALES

(Rheoliad / Regulation 11.2)

***ENW'R SAFLE*:**
***SITE NAME*:** Glaswelltiroedd Cefn Cribwr / Cefn Cribwr Grasslands

***MATH O SAFLE*:** Ardal Cadwraeth Arbennig (ACA)
***SITE TYPE*:** Special Area of Conservation (SAC)

***CÔD Y SAFLE*:**
***SITE CODE*:** UK0030113

***HANES DYNODIAD*:**

***Dyddiad y trosglwyddwyd i'r Comisiwn Ewropeaidd (Rheoliad 7.4)*:**
Hydref 2002

***Dyddiad y mabwysiadwyd fel safle o bwysigrwydd cymunedol (Council Directive 92/42/EEC, Erthygl 4.2)*:**
7 Rhagfyr 2004

***Dyddiad dynodi*:**
13 Rhagfyr 2004

***Dynodwyd gan (Rheoliad 8.1)*:**
Cynulliad Cenedlaethol Cymru

***LLEOLIAD*:**

Awdurdod unedol:
Pen-y-bont ar Ogwr

***Cyfesurynnau*:**
Hydred 03 37 41 Gor, Lledred 51 32 06 Gog
Cyfeirnod Grid Cenedlaethol Arolwg Ordnans: SS870830

Gweler hefyd y map(iau) amgaeëdig, nad ydynt yn ffurfio rhan o'r cofnod hwn.

***DESIGNATION HISTORY*:**

***Date transmitted to the European Commission (Regulation 7.4)*:**
October 2002

Date adopted as a site of community importance (Council Directive 92/42/EEC, Article 4.2):
7 December 2004

***Date designated*:**
13 December 2004

Designated by (Regulation 8.1):
National Assembly for Wales

***LOCATION*:**

Unitary authority:
Bridgend

***Coordinates*:**
Longitude 03 37 41 W, Latitude 51 32 06 N
Ordnance Survey National Grid Reference: SS870830

See also the accompanying map(s), which do not form part of this entry.

MATHAU O GYNEFIN A/NEU RYWOGAETHAU Y DYNODIR Y SAFLE O'U PLEGID:
HABITAT TYPES AND/OR SPECIES FOR WHICH THE SITE IS DESIGNATED:

	*	**Enw cyffredin**	**Common name**	**Term Gwyddonol**	**Scientific term**
1		Glöyn byw britheg y gors	Marsh fritillary butterfly	*Euphydryas* (*Eurodryas*, *Hypodryas*) *aurinia*	
2		Dolydd o laswellt y bwla	Purple moor-grass meadows	Dolydd *Molinia* ar briddoedd calchaidd, mawnaidd neu briddoedd sy'n llawn o silt cleiog (*Molinion caerulea*)	*Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)

*Mae'n dynodi mathau o gynefin neu rywogaeth y rhoddir blaenoriaeth iddynt (a ddiffinnir yn Erthyglau 1(d) ac 1(h) o Council Directive 92/43/EEC).

*Denotes a priority habitat type or species (defined in Articles 1(d) and 1(h) of Council Directive 92/43/EEC).

***GWNAED Y COFNOD HWN*:**
14 Mehefin 2005

***THIS ENTRY MADE*:**
14 June 2005

***GAN*:**
Trish Fretten, ar ran Gweinidog dros yr Amgylchedd, Cynllunio a Chefn Gwlad, Cynulliad Cenedlaethol Cymru

***BY*:**
Trish Fretten, on behalf of the Minister for Environment, Planning and Countryside, National Assembly for Wales

***LLOFNOD*:** ***SIGNATURE*:**

DYDDIAD(AU) COFNODION BLAENOROL AR GYFER Y SAFLE HWN:
Dim

DATE(S) OF PREVIOUS ENTRIES FOR THIS SITE:
None

CYNGOR CEFN GWLAD CYMRU
COUNTRYSIDE COUNCIL FOR WALES

CORE MANAGEMENT PLAN
(INCLUDING CONSERVATION OBJECTIVES)

for

Glaswelltiroedd Cefn Cribwr/ Cefn Cribwr Grasslands Special Area of Conservation

Version: 3

Date: 6th March 2008

Approved by: **David Mitchell**

More detailed maps of management units can be provided on request.
A Welsh version of all or part of this document can be made available on request.

Cyngor Cefn Gwlad Cymru
Countryside Council for Wales

NATURA 2000

Ramsar

Llywodraeth Cynulliad Cymru
Welsh Assembly Government
CORFF NODDEDIG SPONSORED BODY

CONTENTS

Preface

This document contains the main elements of CCW's management plan for the site(s) named. The full management plan consists of this document together with fully expanded Parts 1, 5 and 6. Parts 1, 5 and 6 are or will be accessible via the CCW website.

One of the key functions of this document is to provide CCW's statement of the conservation objectives for the relevant Natura 2000 site(s), for the purposes of implementing the Conservation (Natural Habitats, &c.) Regulations 1994, as amended (Section 4). As a matter of Welsh Assembly Government Policy, the provisions of those regulations are also to be applied to Ramsar sites in Wales.

1. VISION FOR THE SITE

This is a descriptive overview of what needs to be achieved for conservation on the site. It brings together and summarises the Conservation Objectives (part 4) into a single, integrated statement about the site. This statement also reflects the Site Management Statements for the SSSIs concerned:

During the summer, the Cefn Cribwr SSSIs are oases of wildlife amongst the industry and agriculturally improved farmland of the area. Plant communities vary across the four SSSIs, depending on soil conditions, producing a mosaic of vegetation rich in wildlife.

The sward height is between 10 and 30 cm high, but it is still fairly easy to walk through, and large tussocks of purple moor-grass are only found occasionally in the damper ground.

Over most of the damp ground, purple-moor grass and several different sedges and rushes are found, together with the tiny yellow flowers of tormentil. Later in the year the blue, button-like flowers of devils-bit scabious are visited by many bees and butterflies.

Much of the damper grassland has some natural lime-enrichment, and here the vegetation can be particularly species-rich, with up to 30 different species in a square metre. Characteristic plants include meadow thistle (conspicuous in early summer with nodding purple heads) and saw-wort (with sharp-edged leaves, and small purple flowers later in the year). Some of this vegetation also contains plants that indicate more acidic conditions, such as cross-leaved heath, heather and cushions of bog moss.

Particularly wet areas are dominated by tall rushes with water-mint, the yellow pea-like flowers of greater bird's-foot trefoil and the tiny white stars of marsh bedstraw. In a few such places, which are flushed by springs of lime-rich water, the uncommon blunt-flowered rush is dominant and it is here that the rare marsh fern grows.

In drier areas, grasses such as crested dog's-tail and sweet vernal-grass are common, together with more showy flowers such as black knapweed, bird's-foot-trefoil, tormentil and devil's-bit scabious.

By contrast, it is hard to find plants which are common in modern, intensively managed grasslands. In particular, rye-grass and white clover are rarely seen in any of the four SSSIs.

On warm sunny days in late May, June and early July, marsh fritillary butterflies should be a common sight. The females will be searching for large plants of devil's-bit scabious on which to lay their eggs. In autumn, the ground is dotted with the tiny web-like structures in which the caterpillars spend the winter.

2. DESCRIPTION OF THE SITE

2.1 Site location & area

Grid reference: SS870830
Unitary authority: Pen-y-bont ar Ogwr/ Bridgend
Area (hectares): 58.35

Detailed maps of the designated sites are available through CCW's web site:
http://www.ccw.gov.uk/interactive-maps/protected-areas-map.aspx

See accompanying map of management units.

2.2 Outline description

This is one of four sites selected to represent *Molinia* meadows in south and central Wales, one of the major UK strongholds for this habitat type. At this site, there are extensive stands of *Molinia – Cirsium dissectum* fen-meadow (M24), including the heathy sub-type with cross-leaved heath *Erica tetralix* as well as other forms with a stronger representation of native grasses, rushes and small sedges. Transitions to stands of more acidic *Molinia* and *Juncus* pasture, dry neutral grassland and wet scrub vegetation are well represented. Uncommon and declining species associated with the *Molinia* meadows at this site include the nationally rare viper's-grass *Scorzonera humilis* and the nationally scarce soft-leaved sedge *Carex montana*.

The Cefn Cribwr group of SSSIs is also of importance for the presence of marsh fritillary butterflies. This small species, whose wings have an attractive chequerboard pattern of red, brown and cream, is now rare throughout Britain, and is only found where its food plant, devil's bit scabious, grows in abundance. It is mainly on the wing during June. In autumn, the tiny black caterpillars gather together in tens or even hundreds, to spend the winter buried in tussocky vegetation in characteristic webs.

This butterfly is now considered endangered in Europe. Wales (together with Ireland, Scotland and parts of western England) has a special responsibility for its conservation. Recent research has shown that the marsh fritillary will only survive in areas where suitable habitat is plentiful within a short flying distance. Small, isolated fields of marshy grassland, however suitable in other ways, cannot be colonised, and this is one of the reasons that the Cefn Cribwr area is so important.

Marsh fritillary have been recorded in recent years from 3 of the SSSI units – Caeau Cefn Cribwr, Bryn Bach and Pen y Castell, but not Waun Fawr SSSI. Suitable breeding habitat occours at all four SSSI units but by far the most extensive area is at Bryn Bach. One marsh fritillary web was found at Bryn Bach in 2007, and that was the only record from from this SAC for this year.

Marshy grassland

Including stands of Eu-molinion, other acid Molinia grassland M25, M22, blunt-flowered rush meadow and M23 rush pasture.

Neutral grassland

Areas of neutral grassland (MG5a & c) are found throughout each of the 4 SSSI units, most extensively in Caeau Cefn Cribwr and Bryn Bach SSSI.

Vipers grass (*Scorzonera humilis*)

S. humilis is frequent to abundant in several hectares of mostly marshy grassland contained in five fields at Caeau Cefn Cribwr SSSI. Using the National Vegetation Classification (NVC), *S. humilis* is most frequent in *Molinia caerulea - Cirsium dissectum* fen meadow, **M24**. It also extends into *Molinia caerulea - Potentilla erecta* mire, **M25**, *Juncus acutiflorus* rush-pasture, **M23**, *Scirpus cespitosus - Erica tetralix* wet heath, **M15**, and *Cynosurus cristatus - Centaurea nigra* grassland, **MG5** (Rodwell, 1991). Single plants were seen in two nearby fields of similar habitat.

Marsh fern (*Thelpyteris palustris*)

This clonal fern is found in one large area of a field within the Caeau Cefn Cribwr SSSI . It forms a prominent component of an area of blunt-flowered rush pasture (M22). The only other extant site for this species in Glamorgan is at Crymlyn Bog.

Bog myrtle (*Myrica gale*)

Here this species is on the edge of its eastern range in Wales. It is found in three of the component SSSIs of the SAC: Bryn Bach, Caeau Cefn Cribwr and Pen y Castell.

2.3 Outline of past and current management

Typically, the site has been used as grazing pasture for cattle and ponies, although some areas have also been grazed by sheep. Bryn Bach SSSI is grazed by cattle and has been for many years before notification. Caeau Cefn Cribwr is also mostly cattle grazed with some units wholly horse grazed. Pen y Castell is divided between two owners; one half is horse grazed and the other has recieved no grazing in recent years but used to be cattle grazed. Waun Fawr is cattle grazed but has recieved some sheep grazing in the recent past.

The three southern fields of Waun Fawr SSSI were limed in 1991. CCW has no other management information on this site before 1991.

2.4 SSSIs and Management Units within the site

Component SSSIs

The Glaswelltiroedd Cefn Cribwr/Cefn Cribwr Grasslands SAC is notified as four component SSSIs:

- Caeau Cefn Cribwr;
- Pen y Castell, Cefn Cribwr;
- Bryn-bach, Cefn Cribwr; and
- Waun-fawr, Cefn Cribwr.

Each component SSSI may have additional land or features that are not part of the SAC interest features.

Management Units

The individual SSSIs have been divided into management units. This will allow differentiation between different designations within the SSSI (namely SAC and non-SAC), and where appropriate between different tenure blocks, and between parcels of land that have differing management needs.

The basis for the division of Management Units within the Cefn Cribwr Grasslands SAC and component SSSI was primarily tenure, with reference to features and land management requirements. The unit names follow the letter codes used in the Phase II grassland survey.

Unit no.	**Unit name**	**SAC**	**SSSI**	**NNR/ CCW**	**Other**
Caeau Cefn Cribwr					
1	CCC Fields A, B, C, D	✔	✔		
2	CCC Field I	✔	✔		
3	CCC Field L	✔	✔	✔	
4	CCC Field M	✔	✔	✔	
5	CCC Field N	✔	✔		
11	CCC Field P		✔		
12	CCC Fields J & K		✔	✔	
13	CCC Field G		✔		
14	CCC Field H		✔		
Pen y Castell, Cefn Cribwr					
9	PyC Field D & part F	✔	✔		
10	PyC Field E & part F	✔	✔		
17	PyC Field B		✔		
Bryn-bach, Cefn Cribwr					
6	BB Field B, I - O	✔	✔		
15	BB Fields E - G		✔		
7	BB Field D	✔	✔		
16	BB Field A		✔		
Waun-fawr, Cefn Cribwr					
8	Wf Fields A - F	✔	✔		

3. CONFIRMATION OF FEATURES

3.1 Confirmation of features, relationship with and other designations & nomenclature, and Conservation Objectives numbering

Designated feature	***Relationships, nomenclature etc***	***CO no.***
SAC features		
Annex I habitats that are a primary reason for selection of this site ***1. Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) (EU Habitat Code: 6410)**	Generally referred to as '*Eu Molinion* grassland' throughout this document.	1
Annex II species present as a qualifying feature, but not a primary reason for site selection **2. Marsh fritillary butterfly *Euphydryas* (*Eurodryas, Hypodryas*) *aurinia (EU Species Code: 1065)***		2
SPA features		
Not applicable		
Ramsar features		
Not applicable		
SSSI features		
3. Marshy grassland		3
4. Dry neutral grassland		4
5. Viper's grass *Scorzonera humilis*		5
6. Marsh fern *Thelypteris thelypteroides*		6
7. Bog myrtle *Myrica gale*		**7**

3.2 Special Features and Management Units

This section sets out the relationship between the special features and each management unit. This is intended to provide a clear statement about what each unit should be managed for, taking into account the varied needs of the different special features. All special features are allocated to one of seven classes in each management unit. These classes are:

Key Features
KH - a 'Key Habitat' in the management unit, i.e. the habitat that is the main driver of management and focus of monitoring effort, perhaps because of the dependence of a key species (see KS below). There will usually only be one Key Habitat in a unit but there can be more, especially with large units.
KS – a 'Key Species' in the management unit, often driving both the selection and management of a Key Habitat.
Geo – an earth science feature that is the main driver of management and focus of monitoring effort in a unit.

Other Features
Sym - habitats, species and earth science features that are of importance in a unit but are not the main drivers of management or focus of monitoring. These features will benefit from management for the key feature(s) identified in the unit. These may be classed as 'Sym' features because:

a) they are present in the unit but may be of less conservation importance than the key feature; and/or
b) they are present in the unit but in small areas/numbers, with the bulk of the feature in other units of the site; and/or
c) their requirements are broader than and compatible with the management needs of the key feature(s), e.g. a mobile species that uses large parts of the site and surrounding areas.

Nm - an infrequently used category where features are at risk of decline within a unit as a result of meeting the management needs of the key feature(s), i.e. under Negative Management. These cases will usually be compensated for by management elsewhere in the plan, and can be used where minor occurrences of a feature would otherwise lead to apparent conflict with another key feature in a unit.

Mn - Management units that are essential for the management of features elsewhere on a site e.g. livestock over-wintering area included within designation boundaries, buffer zones around water bodies, etc.

x – Features not known to be present in the management unit.

Background information on Cefn Cribwr SAC

Cefn Cribwr SAC comprises four component SSSIs: Cefn Cribwr SSSI, Pen y Castell SSSI, Bryn Bach SSSI and Waun Fawr SSSI. These sites are included in the Natura 2000 series primarily for the areas of Eu Molinion grassland habitat present, with occasional colonisation by the marsh fritillary butterfly adding to their importance. None of the sites is believed to support a core marsh fritillary colony, but some are known to hold small breeding populations periodically (typically following 'good' years at core breeding sites). As such these sites probably play the role of satellite sites within a larger metapopulation, and in most years marsh fritillaries will not be present.

The sites also host five SSSI features, namely marshy grassland (a broad type that can also include Eu Molinion grassland), neutral grassland, viper's grass, marsh fern and bog myrtle.

In general, where Eu Molinion vegetation is present it is considered to be the main focus of management, not only because it is a threatened and declining habitat in Europe, but also because the marsh fritillary and viper's grass (the two key species on the site) are strongly associated with this vegetation.

Caeau Cefn Cribwr SSSI is the most complex of the component SSSI in the SAC, with nine discrete management units and all seven SAC and SSSI habitats and species present.

As viper's grass is found at one of only three UK sites the management of the Eu Molinion and marshy grassland in the three management units where it occurs (Units 1-3) should aim to maintain or increase the population. The marsh fritillary will benefit from sympathetic habitat management in these units, as will the neutral grassland in Unit 1 and the bog myrtle in Unit 3. Elsewhere on the site, in Units 5, 7 and 8, the marshy grassland will be managed to create optimum marsh fritillary habitat. The main focus of the management in Units 4, 6 and 9 is the neutral grassland, though here again, the recommended grazing regime is also sympathetic to requirements of the marshy grassland, marsh fern and bog myrtle.

Note: Even if marsh fritillaries bred regularly in Units 1-3,there is a strong case for viper's grass being selected as the key species to drive the management: Cefn Cribwr supports one of only three populations in the UK, while the marsh fritillary occurs at several hundred known locations.

Caeau Cefn Cribwr	**Management unit**								
	1	**2**	**3**	**4**	**5**	**11**	**12**	**13**	**14**
SAC	✔	✔	✔	✔	✔				
SSSI	✔	✔	✔	✔	✔	✔	✔	✔	✔

NNR/CCW owned			✔	✔			9		
SAC features									
1. Eu Molinion meadows	**KH**	**KH**	**KH**	***x***	***KH***	***x***	***x***	***x***	***x***
2. Marsh fritillary butterfly	**Sym**	**Sym**	**Sym**	***x***	**KS**	**Sym**	**KS**	**KS**	**Sym**
SSSI features									
3. Marshy grassland	**Sym**	**Sym**	**Sym**	***x***	**sym**	**Sym**	**KH**	**KH**	**KH**
4. Dry neutral grassland	**Sym**	***x***	***x***	**KH**	**Sym**	**KH**	***x***	***x***	***x***
5. Viper's grass *Scorzonera humilis*	**KS**	**KS**	**KS**	***x***	***x***	***x***	***x***	***x***	***x***
6. Marsh fern *Thelypteris palustris*	***x***	***x***	***x***	***x***	***x***	***x***	**Sym**	***x***	***x***
7. Bog myrtle *Myrica gale*	***x***	**Sym**	***x***	***x***	***x***	***x***	***x***	**Sym**	***x***

Pen y Castell is a relatively small and straightforward site, comprising three management units. The main focus of the management in Unit 1 and Unit 2 is the Eu Molinion vegetation, which will be managed to create optimum marsh fritillary habitat, the marshy grassland in these units will also be under sympathetic management. Neutral grassland is the main management focus in Unit 3, with the marshy grassland again under sympathetic management to benefit marsh fritillary butterflies.

Pen y Castell	**Management unit**								
	9	**10**	**17**						
SAC	✔	✔							
SSSI	✔	✔	✔						
NNR/CCW owned									
SAC features									
1. Eu Molinion meadows	**KH**	**KH**	***x***						
2. Marsh fritillary butterfly	**KS**	**KS**	**Sym**						
SSSI features									
3. Non SAC marshy grassland	**Sym**	**Sym**	**Sym**						
4. Dry neutral grassland	***x***	***x***	**KH**						
5. Bog myrtle	x	**sym**	**x**						

Bryn Bach Although the largest SSSI in the SAC, the site was treated as three discrete management units, making unitisation straightforward. Units 1 and 3 are dominated by marshy grassland vegetation (including EU Molinion in Unit 1) and managed to benefit marsh fritillary butterflies. The management of Unit 2 focuses on the neutral grassland habitat, which is restricted to this management unit on the site. Bog myrtle occurs in Unit 1.

Bryn Bach	**Management unit**								
	6	**15**	**7**	**16**					
SAC	✔		✔						
SSSI	✔	✔	✔	✔					
NNR/CCW owned									
SAC features									
1. Eu Molinion meadows	**KH**	***x***	***x***	***x***					
2. Marsh fritillary butterfly	**KS**	**Sym**	**KS**	**KS**					
SSSI features									
3. Non SAC marshy grassland	**Sym**	**Sym**	**KH**	**KH**					
4. Dry neutral grassland	***x***	**KH**	***x***	**x**					
5. Bog myrtle	**sym**	**x**	***x***	**x**					

Waun Fawr Eu Molinion is the main focus of the management effort at Waun Fawr, which is a single management unit comprising several fields. The management across the site aims to create optimum

marsh fritillary habitat, which is also sympathetic management for the remaining areas of marshy grassland and the neutral grassland present on the site.

Waun Fawr	**Management unit**								
	8								
SAC	✔								
SSSI	✔								
NNR/CCW owned									
SAC features									
1. Eu Molinion meadows	**KH**								
2. Marsh fritillary butterfly	**Sym**								
SSSI features									
3. Non SAC marshy grassland	**Sym**								
4. Dry neutral grassland	**Sym**								

4. CONSERVATION OBJECTIVES

Outline of the legal context and purpose of the conservation objectives

Conservation objectives are required by the 1992 'Habitats' Directive (92/43/EEC). The aim of the Habitats Directives is the maintenance, or where appropriate the restoration of the 'favourable conservation status' of habitats and species features for which SACs and SPAs are designated (see Box 1).

In the broadest terms, 'favourable conservation status' means a feature is in satisfactory condition and all the things needed to keep it that way are in place for the foreseeable future. CCW considers that the concept of favourable conservation status provides a practical and legally robust basis for conservation objectives for Natura 2000 and Ramsar sites.

Box 1
Favourable conservation status as defined in Articles 1(e) and 1(i) of the Habitats Directive

"The conservation status of a natural habitat is the sum of the influences acting on it and its typical species that may affect its long-term natural distribution, structure and functions as well as the long term survival of its typical species. The conservation status of a natural habitat will be taken as favourable when:

- Its natural range and areas it covers within that range are stable or increasing, and
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- The conservation status of its typical species is favourable.

The conservation status of a species is the sum of the influences acting on the species that may affect the long-term distribution and abundance of its populations. The conservation status will be taken as 'favourable' when:

- population dynamics data on the species indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis."

Achieving these objectives requires appropriate management and the control of factors that may cause deterioration of habitats or significant disturbance to species.

As well as the overall function of communication, conservation objectives have a number of specific roles:

- Conservation planning and management.

  The conservation objectives guide management of sites, to maintain or restore the habitats and species in favourable condition.

- Assessing plans and projects.

  Article 6(3) of the 'Habitats' Directive requires appropriate assessment of proposed plans and projects against a site's conservation objectives. Subject to certain exceptions, plans or projects may not proceed unless it is established that they will not adversely affect the

integrity of sites. This role for testing plans and projects also applies to the review of existing decisions and consents.

- Monitoring and reporting.

  The conservation objectives provide the basis for assessing the condition of a feature and the status of factors that affect it. CCW uses 'performance indicators' within the conservation objectives, as the basis for monitoring and reporting. Performance indicators are selected to provide useful information about the condition of a feature and the factors that affect it.

The conservation objectives in this document reflect CCW's current information and understanding of the site and its features and their importance in an international context. The conservation objectives are subject to review by CCW in light of new knowledge.

Format of the conservation objectives

There is one conservation objective for each feature listed in section 3. Each conservation objective is a composite statement representing a site-specific description of what is considered to be the favourable conservation status of the feature.

Each conservation objective consists of the following two elements:

1 Vision for the feature
2 Performance indicators

As a result of the general practice developed and agreed within the UK Conservation Agencies, conservation objectives include performance indicators, the selection of which should be informed by JNCC guidance on Common Standards Monitoring[1].

There is a critical need for clarity over the role of performance indicators within the conservation objectives. **A conservation objective, because it includes the vision for the feature, has meaning and substance independently of the performance indicators, and is more than the sum of the performance indicators**. The performance indicators are simply what make the conservation objectives measurable, and are thus part of, not a substitute for, the conservation objectives. Any feature attribute identified in the performance indicators should be represented in the vision for the feature, but not all elements of the vision for the feature will necessarily have corresponding performance indicators.

As well as describing the aspirations for the condition of the feature, the Vision section of each conservation objective contains a statement that the factors necessary to maintain those desired conditions are under control. Subject to technical, practical and resource constraints, factors which have an important influence on the condition of the feature are identified in the performance indicators.

[1] Web link: http://www.jncc.gov.uk/page-2199

Conservation Objective for Feature 1:
***Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) (EU Habitat Code: 6410)**

4.1(1) Vision for feature 1

The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:

- *eu-Molinion* marshy grassland will occupy between 50% and 55% of the total site area.
- The remainder of the site will be other semi-natural habitat or areas of permanent pasture.
- The following plants will be common in the *eu-Molinion* marshy grassland: purple moor-grass *Molinia caerulea*; meadow thistle *Cirsium dissectum*; *Carex hostiana; Carex pulicaris*; devil's bit scabious *Succisa pratensis*; carnation sedge *Carex panicea;* saw wort *Serratula tinctoria* and; tormentil *Potentilla erecta*.
- Cross-leaved heath *Erica tetralix* and common heather *Calluna vulgaris* will also be common in some areas.
- Rushes and species indicative of agricultural modification, such as perennial rye grass *Lolium perenne* and white clover *Trifolium repens* will be largely absent from the *eu-Molinion* marshy grassland.
- Scrub species such as willow *Salix* (excluding *Salix repens*) and birch *Betula* will also be largely absent from the *eu-Molinion* marshy grassland.
- All factors affecting the achievement of the foregoing conditions are under control.

4.2(1) Performance indicators for feature 1 (*Note:* The performance indicators are part of the conservation objective, not a substitute for it)

Table 1. Limits for maintenance of the *eu-Molinion* feature at Cefn Cribwr cSAC.

Conservation Objective for maintenance management		To maintain the *eu-Molinion* grassland at Cefn Cribwr SAC in favourable condition where
Extent	Upper Limit	As mapped (date?)(55% of the site (no encroachment into areas of neutral grassland *Myrica gale*, wet heath, flushes or swamp))
	Lower Limit	See Map 1 (as mapped during Phase II, apart from two additional areas described as potential habitat at Penycastell and Waun Fawr SSSI).
Quality	Upper Limit	None set
	Lower Limit	70% of the *eu-Molinion* grassland on **each** SSSI to be species rich fen meadow (all four SSSI have to pass in order for the SAC feature to be considered favourable).
Site Specific Habitat Definitions		
Eu-Molinion grassland		*Molinia caerulea* with *Cirsium dissectum* **or** *Molinia caerulea* with *Carex hostiana* **and** *Carex pulicaris*
Species rich fen meadow		Eu-Molinion grassland with *Succisa pratensis, Carex panicea, Potentilla erecta* and *Erica tetralix* (Bryn Bach only) within a 50cm radius **and** <25% in total of mesic grasses (*Holcus lanatus, Nardus stricta* and *Agrostis sp*.) **and** <20% *Cirsium palustre* **and** <50% *Juncus sp*. **and** *Trifolium repens, Ranunculus repens, Pteridium aquilinum, Betula, Quercus, Salix* (not *Salix repens*), *Alnus* and *Rubus* are absent **and** The vegetation height is between 10-50cm when measured with a Boorman's Disc

Performance indicators for feature condition			
Attribute	***Attribute rationale and other comments***	***Specified limits***	***Project code***
A1. Extent of *Eu Molinion* grassland	Monitoring is likely to be a map-based exercise. The area of *eu-Molinion* marshy grassland will be mapped as a baseline extent and the total area measured. Repeat monitoring will either re-map the site or review the baseline map in the field. *Eu-Molinion* grassland is defined	**Caeau Cefn Cribwr** *Upper limit*: As limited by other habitat types *Lower limit*: 30% of Management Units 1, 2 , 3 & 5 **Pen y Castell**	

	as stands of grassland vegetation where Molinia caerulea is present with Cirsium dissectum or with Carex hostiana and/or Carex pulicaris and with: *Succisa pratensis* *Carex panicea* *Serratula tinctoria* *Potentilla erecta* Lower limits are based on current extent *As mapped by Phase II survey with interpretation of possible expansion into other non SAC habitat i.e. scrub/bracken.*	*Upper limit*: As limited by other habitat types *Lower limit*: 10% of Management Units 1 & 2 **Bryn Bach** *Upper limit*: As limited by other habitat types *Lower limit*: 25% of Management Unit 1 **Waun Fawr** *Upper limit*: As limited by other habitat types *Lower limit*: 60% of Management Unit 1	
A2. Condition of the *Eu Molinion* grassland	Based on the Standard CSM attribute for this feature. Modified according to site-specific requirements. An additional lower limit has been set for the presence of *Succisa pratensis* as this is the host plant for the marsh fritillary butterfly – a key SAC species on this site. Limits for sward height in the late summer/ autumn have also been modified to ensure marshy grassland with a suitable vegetation structure is also available for the marsh fritillary population.	**Where** *Eu Molinion* grassland is the Key Habitat in the Management Units, **Caeau Cefn Cribwr -** 1, 2, 3 & 5 **Pen y Castell -** 1 & 2 **Bryn Bach -** 1 **Waun Fawr -** 1 *Upper limit*: Not required *Lower limit*: 70% of the *Eu Molinion* grassland is 'species-rich' fen meadow in good condition, characterised by: • key indicator species - *Molinia caerulea*, associated with: *Cirsium dissectum; Succisa pratensis; Carex panicea; Serratula tinctoria; Potentilla erecta* (plus *Calluna vulgaris*, *Erica tetralix* – Bryn-bach, Cefn Cribwr only); • negative indicator species – an absence or low frequency/cover of: *Holcus lanatus; Cirsium palustre; Trifolium repens; Ranunculus repens; Pteridium aquilinum;* • scrub- an absence or low frequency/cover of : *Betula; Quercus; Salix*(excluding *Salix repens*); *Alnus; Rubus;* • vegetation height - should be between 20-50cm in early	

		summer (Mid-May to end of June); • plant litter – should be no more than 10% cover. In addition and to ensure **suitable habitat for marsh fritillary** butterfly, *Lower limit: Succisa pratensis* will be present within 1 metre of 40% of sample points *Lower limit:* The sward height in 40% of the marshy grassland will be between 10 and 20 cm in late summer/autumn.	
Performance indicators for factors affecting the feature			
Factor	***Factor rationale and other comments***	***Operational Limits***	***Project code***
F1. Livestock grazing	The *eu-Molinion* marshy grassland has been maintained through traditional farming practices. Without an appropriate grazing regime, the grassland would become rank and eventually turn to scrub and woodland. Light grazing by cattle and ponies between April and November each year is essential in maintaining the marshy grassland communities.	*Upper limit*: Refer to management agreement *Lower limit*: The *eu Molinion* grasslands will be subject to light summer grazing by cattle and/or ponies at least 4 in every 5 years. Light summer grazing is defined as - cattle and/or ponies at a rate of 0.4 SU/ha/year for the period April to November	
F2. Hydrological regime	The marshy grassland communities are strongly influenced by the quantity and base status of the groundwater. Reductions in the quality and quantity of the water in the springs and watercourses feeding the site may lead to a loss of marshy grassland or changes in species composition. Conversely, reduced/impeded drainage may lead to ground-water stagnation and a different change in species composition, e.g. increased abundance of rushes.	No limits set. Pending a fuller understanding of current situation and habitat requirements.	
F3. Adjacent land use	Two of the component SSSIs lie close to opencast coal workings and other active mineral workings. These may have indirect effects on the hydrological regime (see above).	No limits set. May need to be considered in the future.	

Other factors considered include – Owner/occupier objectives - the owners/occupiers of the land typically have an interest in securing some financial/agricultural benefit from the land. This return could be optimised by the agricultural improvement of the land, e.g. by installing new drainage, fertiliser application, or re-seeding; however these operations would cause significant long-term damage to the *eu-Molinion* marshy grassland. This factor will be controlled through management agreements and the SSSI legislation. An operational limit is not required.

Conservation Objective for Feature 2:
Marsh fritillary butterfly *Euphydryas* (*Eurodryas, Hypodryas*) *aurinia* (EU Species Code: 1065)

4.1(2) Vision for feature 2

The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:

- The site will contribute towards supporting a sustainable metapopulation of the marsh fritillary in the Cefn Cribwr area. This will require a minimum of 50ha of suitable habitat, of which at least 10ha must be in good condition, although not all is expected to be found within the SAC. Some will be on nearby land within a radius of about 2km.
- The population will be viable in the long term, acknowledging the extreme population fluctuations of the species.
- Habitats on the site will be in optimal condition to support the metapopulation.
- At least 40ha within the SAC & associated SSSI will be marshy grassland suitable for supporting marsh fritillary, with *Succisa pratensis* present and only a low cover of scrub.
- At least 8ha will be marsh fritillary breeding habitat in good condition, dominated by purple moor-grass *Molinia caerulea*, with *S. pratensis* present throughout and a vegetation height of 10-20cm over the winter period.
- Suitable marsh fritillary habitat is defined as stands of grassland where *Succisa pratensis* is present and where scrub more than 1 metre tall covers no more than 10% of the stands
- Optimal marsh fritillary breeding habitat will be characterised by grassland where the vegetation height is 10-20 cm, with abundant purple moor-grass *Molinia caerulea*, frequent "large-leaved" devil's-bit scabious *Succisa pratensis* suitable for marsh fritillaries to lay their eggs and only occasional scrub. In peak years, a density of 200 larval webs per hectare of optimal habitat will be found across the site. (Fowles 2004[2])
- The marshy grassland will be well sheltered by hedgerows and mature trees.
- All factors affecting the achievement of the foregoing conditions are under control.

[2] *Fowles AP (2004) Conservation objective for Marsh Fritillaries on marshy grassland. CCW internal document.*

4.2(2) Performance indicators for feature 2 (*Note:* The performance indicators are part of the conservation objective, not a substitute for it)

Performance indicators for feature condition			
Attribute	***Attribute rationale and other comments***	***Specified limits***	***Project code***
A1. Density of larval webs	Larval web density in a 'good' year for marsh fritillary has been identified as a measurable performance indicator of the population. During peaks in the population cycle a density of 200 webs per hectare of suitable habitat is an appropriate target to set as defining favourable condition for strong populations. Estimate the density of larval webs via random transects running across the area of suitable habitat, counting all webs up to one metre either side of the transect. For this site, the total transect area should cover a minimum of 5% (1.25ha) of the area of suitable habitat. The transects should also be representative of the proportion of good to suitable habitat (see Feature 1 & 3 – Attribute 2. Wide fluctuations in abundance occur, with dramatic crashes in population size occurring every ten years or so. Recovery from these crashes may take 4 or 5 yrs.	*Upper limit:* not required *Lower limit:* at least 200 per hectare in at least one year every six years. Recording should be (initially) targeted on those Management Units where the marsh fritillary is a Key Species (KS), these are, **Caeau Cefn Cribwr** 5, 7 & 8 **Pen y Castell** 1 & 2 **Bryn Bach** 1 & 3	
A2. Distribution of larval webs	In most cases the marsh fritillary occurs in metapopulations where dispersal from a core population during good years permits colonisation of nearby patches of habitat. Periodic extinctions and colonisations of patches can be tolerated as long as sufficient habitat overall is in good condition for breeding.	*Upper limit:* not required *Lower limit:* Larval webs should be present every year on at least three of the four component SSSI. Recording should be (initially) targeted on those Units where the marsh fritillary is a Key Species (KS), these are, **Caeau Cefn Cribwr** 5, 7 & 8 **Pen y Castell** 1 & 2 **Bryn Bach** 1 & 3	
Performance indicators for factors affecting the feature			
Factor	***Factor rationale and other comments***	***Operational Limits***	***Project code***
F1. Extent & quality of the marshy	The marsh fritillary is a highly localised and sedentary butterfly that inhabits unimproved *Molinia*	Refer to Feature 1 & 3 - Attributes 1 & 2. Any Management Units where marsh fritillary is a Key	

grassland as habitat for marsh fritillary	grassland in the lowlands. It has an annual life-cycle and feeds as a larva on *Succisa pratensis*, especially on large-leaved plants that are growing amongst vegetation that is between 10 and 20 cms tall in late summer/autumn. The larvae over-winter communally amongst litter in such situations and the shelter provided by leaf litter and tussocks is considered to be important. The conditions stipulated in the conservation objective/performance indicators for Feature 1 (*Eu Molinion* marshy grassland) and Feature 3 (other nonSAC marshy grassland) will ensure that these requirements are met.	Species (KS) or will benefit from sympathetic management (Sym), these are **Caeau Cefn Cribwr** 1, 2, 3, 5, 6, 7, 8, 9 **Pen y Castell** 1, 2 & 3 **Bryn Bach** 1, 2 & 3 **Waun Fawr** 1	
F2. Livestock grazing	Necessary habitat requirements will met through the appropriate management of Feature 1 (*Eu Molinion* marshy grassland) and Feature 3 (other non SAC marshy grassland).	Refer to Feature 1 & 3.	
F3. Shelter belts	Hedgerows, woodland and mature trees in and around the site provide the sheltered conditions which the marsh fritillary require. These should be retained and managed.	On each component SSSI *Upper limit:* As limited by other habitat types *Lower limit:* at any given time least 80% of the existing mature hedgerows (over 4 metres tall) should be retained. The remaining 20% should be subject to a sustainable hedgerow management rotation. The existing blocks of woodland should be retained.	
F4. Hydrological regime	Refer to Feature 1 (*Eu Molinion* marshy grassland) and Feature 3 (other nonSAC marshy grassland).	Refer to Feature 1 & 3.	
F5. Burning	Burning is not a sympathetic habitat management tool for maintaining marsh fritillary populations.	*Upper limit:* Burning should only be employed in the restoration of *Eu Molinion*/marshy grassland, where marsh fritillaries are **known not to breed**.	

Other factors considered include –

Owner/occupier objectives - the owners/occupiers of the land typically have an interest in securing some financial/agricultural benefit from the land. This return could be optimised by the agricultural improvement of the land, e.g. by installing new drainage, fertiliser application, or re-seeding. However these operations would cause significant long-term damage to the marsh fritillary habitat, namely the marshy grassland. This factor will be controlled through management agreements and the SSSI legislation. An operational limit is not required.

Weather conditions - Weather conditions have an effect on the breeding success of the marsh fritillary. In particular, poor weather conditions during the adult flight period will reduce opportunities for mating, egg-laying and dispersal from core areas. Weather conditions during early spring influence the rate of larval development of the marsh fritillary and the effects of the parasitic wasp (see below). This factor is outside the influence of the site manager and an operational limit is not required.

Parasites - The larvae of marsh fritillaries can be parasitised by species of braconid wasp of the *Cotesia* genus. The parasites can have good years and infect a large number of larval webs, causing a crash in the subsequent adult population of marsh fritillary. This factor is outside the influence of the site manager; and an operational limit is not required.

Metapopulations - Some consideration needs to be given to setting the conservation objectives for this marsh fritillary population in the context of other near-by populations

Conservation Objective for Feature 3:
Non-SAC marshy grassland

4.1(3) Vision for feature 3

As Feature 1 (*Eu Molinion* marshy grassland) with non-SAC marshy grassland occupying between X and Y %

4.2(3) Performance indicators for feature 3 (*Note:* The performance indicators are part of the conservation objective, not a substitute for it)

Performance indicators for feature condition			
Attribute	***Attribute rationale and other comments***	***Specified limits***	***Project code***
A1. Extent of marshy grassland	Monitoring is likely to be a map-based exercise. The area of *eu-Molinion* marshy grassland will be mapped as a baseline extent and the total area measured. Repeat monitoring will either re-map the site or review the baseline map in the field. *Eu-Molinion* grassland is defined as stands of grassland vegetation where at least four of the following species are present: *Molinia caerulea* *Cirsium dissectum* *Succisa pratensis* *Carex panicea* *Serratula tinctoria* *Potentilla erecta* Lower limits are based on current extent at time of initial Phase II survey plus any scope for quick expansion into other non-qualifying habitat	Where marshy grassland is the Key Habitat (KH) or sym habitat in the Management Units, **Caeau Cefn Cribwr -** 1, 2, 3, 5 - 9 **Pen y Castell -** 1 & 2 **Bryn Bach –** 1 - 4 **Waun Fawr -** 1 **Caeau Cefn Cribwr** *Upper limit*: As limited by other habitat types *Lower limit*: Current extent? **Pen y Castell** *Upper limit*: As limited by other habitat types *Lower limit*: Current extent **Bryn Bach** *Upper limit*: As limited by other habitat types *Lower limit*: Current extent **Waun Fawr** *Upper limit*: As limited by other habitat types *Lower limit*: Current extent	
A2. Condition of the *marshy* grassland	As per Feature 1(Eu Molinion grassland)	As per Feature 1(Eu Molinion grassland)	
Performance indicators for factors affecting the feature			
Factor	***Factor rationale and other comments***	***Operational Limits***	***Project code***
AS FEATURE 1			

Conservation Objective for Feature 4:
Neutral grassland

4.1(4) Vision for feature 4

4.2(4) Performance indicators for feature 4(*Note:* The performance indicators are part of the conservation objective, not a substitute for it)

Performance indicators for feature condition			
Attribute	***Attribute rationale and other comments***	***Specified limits***	***Project code***
A1. Extent of neutral grassland	Monitoring is likely to be a map-based exercise. The area of neutral grassland will be mapped as a baseline extent and the total area measured. Repeat monitoring will either re-map the site or review the baseline map in the field. Lower limits are based on current extent at time of initial Phase II survey plus any scope for quick expansion into other non-qualifying habitat	Where neutral grassland is the Key Habitat (KH) or sym habitat in the Management Units, **Caeau Cefn Cribwr – 4 & 6** **Pen y Castell – 3** **Bryn Bach – 2** **Waun Fawr -** 1 **Caeau Cefn Cribwr** *Upper limit*: As limited by other habitat types *Lower limit*: Current extent **Pen y Castell** *Upper limit*: As limited by other habitat types *Lower limit*: Current extent **Bryn Bach** *Upper limit*: As limited by other habitat types *Lower limit*: Current extent **Waun Fawr** *Upper limit*: As limited by other habitat types *Lower limit*: Current extent	
A2. Condition of the neutral grassland	In good condition, the neutral grassland can be identified as 'species-rich neutral grassland', characterised by: o key indicator species – *Festuca rubra, Cynosurus cristatus* and *Agrostis capillaris*, associated with: *Centaurea nigra; Lotus corniculatus; Succisa pratensis; Potentilla erecta;* o negative indicator species – an absence or low frequency/cover of: *Holcus lanatus; Trifolium repens; Ranunculus repens; Pteridium aquilinum; Lolium perenne;*		

	o scrub- an absence or low frequency/cover of: *Betula; Quercus; Salix; Alnus; Rubus;* o average vegetation height - should be between 10-20cm in early summer (Mid-May to end of June); o plant litter – should be no more than 10% cover.		

Conservation Objective for Feature 5:
Viper's grass (*Scorzonera humilis*)

4.1(5) Vision for feature 5

To be completed

4.22(5) Performance indicators for feature 5 (*Note:* The performance indicators are part of the conservation objective, not a substitute for it)

Performance indicators for feature condition			
Attribute	***Attribute rationale and other comments***	***Specified limits***	***Project code***
A1.	• The number and distribution of flowering/fruiting plants is:	Where vipers grass is the Key species(KS) in the Management Units, **Caeau Cefn Cribwr -** 1, 2, 3 **Caeau Cefn Cribwr** **Upper limit:** not required. **Lower limit:** at least 1000 plants, present in last mapped extent (five fields *Upper limit*:	

Conservation Objective for Feature 6: Marsh fern (Thelypteris palustris)

4.1(6) Vision for feature 6

To be completed

4.22(6) Performance indicators for feature 6 (*Note:* The performance indicators are part of the conservation objective, not a substitute for it)

Performance indicators for feature condition			
Attribute	***Attribute rationale and other comments***	***Specified limits***	***Project code***
A1.	• The distribution of Thelypteris palustris is:	Where marsh fern is a sym species in the Management Unit, **Caeau Cefn Cribwr –** 2 **Caeau Cefn Cribwr** **Upper limit:** not required. **Lower limit:** at least 1000+ ramets in at least one location (South east corner of unit 2).	

Conservation Objective for Feature 7:
Bog myrtle (Myrica gale)

4.1(7) Vision for feature 7

To be completed

4.22(7) Performance indicators for feature 7 (*Note:* The performance indicators are part of the conservation objective, not a substitute for it)

Performance indicators for feature condition			
Attribute	***Attribute rationale and other comments***	***Specified limits***	***Project code***
A1.	• The distribution of *Myrica gale* is:	Where bog myrtle is a sym species in the Management Units, **Caeau Cefn Cribwr –** 2 & 8 **Pen y Castell –** 2 **Bryn Bach –** 1 **Bryn Bach** **Upper limit:** not required. **Lower limit:** present in at least fields K and O (ref. Phase II survey	

5.ASSESSMENT OF CONSERVATION STATUS AND RATIONALE: SUMMARY

This part of the document provides:

- A summary of the assessment of the conservation status of each feature or, (where features are aggregated for the purposes of objective setting), each group of features.

- A summary of the management rationale required to maintain the features in, or restore them to, favourable conservation status.

Part 6 of the document contains a summary of the Action Plan arising from the management rationale

Assessment of conservation status and management rationale for Feature 1: *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) (EU Habitat Code: 6410)

5.1(1) Conservation status assessment for feature 1

This assessment relates to monitoring results from 2001 and provisional results from monitoring undertaken in 2007.

The current status of the feature is **Unfavourable**

The status within each management unit where Eu-Molinion is Key Habitat:

Caeau Cefn Cribwr SSSI:
MU1 Unfavourable
MU2 Unfavourable
MU3 Unfavourable
MU5 Unfavourable

Pen y Castell SSSI:
MU1 Unfavourable
MU2 Unfavourable

Bryn Bach SSSI:
MU1 Unfavourable

Waun Fawr SSSI:
MU1 Unfavourable

5.2(1) Management rationale for feature 1

Habitat management
The *eu-Molinion* marshy grassland has been maintained through traditional farming practices.

Livestock grazing Without an appropriate grazing regime, the grassland would become rank and eventually turn to scrub and woodland. Conversely, overgrazing, or grazing by inappropriate stock (particularly sheep) would also lead to unwanted changes in species composition, through selective grazing, increased nutrient inputs and poaching. Grazing levels (the number of grazing animals and the period of grazing) need to be assessed against feature condition and modified accordingly. The preferred livestock regime is light grazing by cattle and ponies between April and November at a rate of 0.4LSU/ha/yr.

Scrub and rushes Grazing alone may not be sufficient to prevent the gradual encroachment of scrub, woodland or bracken. A scrub control programme may need to be implemented. The abundance of rushes may also increase and may need to be controlled by topping subject to condition assessments.

The habitat management required on this site will be best achieved through management agreements with the owners/occupiers. Agreements should specify grazing periods and levels and other details necessary for the management of the site, namely scrub control, rush topping, and fencing/gates required.

- Secure management agreement/leases with appropriate owners/occupiers on all areas of the SAC;

- Maintain and ensure compliance with management agreements;
- Liase with owners/occupiers.

Hydrology

The *eu-Molinion* marshy grassland is dependent on a number of springs and watercourses feeding the site. Investigation is required to achieve a better understanding of the hydrological regime and to confirm that adjacent mineral workings are having no significant adverse effects.

- In liaison with the Environment Agency, investigate the hydrological regime of the cSAC and the relationship with adjacent mineral workings.

Off-site pollution

The effects of the releases of lime dust into the atmosphere from the adjacent works on the SSSI are not known; these emissions are subject to the authorisation of other competent authorities, particularly the Environment Agency. Investigation is required to establish the existence and significance of any adverse effects.

- In liaison with the Environment Agency, investigate the effects of lime deposition on the eu-Molinion marshy grassland.

Note: The management requirements for the *Eu-Molinion* marshy grassland (SAC feature) are consistent with those of other SSSI features, namely the SSSI marshy grassland, the dry neutral grassland and the species interests of the site.

Assessment of conservation status and management rationale for Feature 2: Marsh fritillary butterfly *Euphydryas* (*Eurodryas, Hypodryas*) *aurinia* (EU Species Code: 1065)

5.1(2) Conservation status assessment for feature 2

Both larvae and adults of marsh fritillary have been recorded on the site more recently, but it is suspected that the site does not currently support the required density of larval webs that would indicate a sustainable metapopulation.
The current status of the feature is **unfavourable**

The status within each management unit where marsh fritillary butterfly is the Key species:

Caeau Cefn Cribwr SSSI:
MU5 **Unfavourable**
MU7 **Unfavourable**
MU8 **Unfavourable**

Pen y Castell SSSI:
MU1 **Unfavourable**
MU2 **Unfavourable**

Bryn Bach SSSI:
MU1 **Unfavourable**
MU3 **Unfavourable**

5.2(2) Management rationale for feature 2

Habitat management
All the habitat management requirements for the marsh fritillary will be met through the appropriate management of the *Eu-Molinion* grassland (Feature 1) and the non-SAC marshy grassland (Feature 3).

The links between breeding success of the marsh fritillary, weather conditions and parasite populations are generally accepted, however the management of the site can do little to influence the effects.

The life cycle and population dynamics of the marsh fritillary, particularly the periodic population crashes, make it difficult assess whether the population is in a state to maintain itself in the long-term. In addition, further site specific data is required to establish confidence in the influence of grazing levels on habitat condition for marsh fritillaries. Annual monitoring of larval web densities and habitat condition are required until some confidence on these issues is achieved.

Assessment of conservation status and management rationale for Feature 3: Marshy grassland

5.1(3) Conservation status assessment for feature 3

The current status of the feature is **Unfavourable** (as Eu-Molinion is unfavourable)

The status within each management unit where Marshy grassland is the Key Habitat:

Caeau Cefn Cribwr SSSI:
MU5 **Unfavourable**
MU7 **Unfavourable**
MU8 **Unfavourable**

Bryn Bach SSSI:
MU3 **Unfavourable**

5.2(3) Management rationale for feature 3

The management requirements of the SSSI marshy grassland are entirely consistent with those of the areas of *Eu-Molinion* marshy grassland (Feature 1) and these two features will be managed collectively.

Assessment of conservation status and management rationale for Feature 4: Dry neutral grassland

5.1(4) Conservation status assessment for feature 4

This feature has not been formally monitored but visits and observations over the years suggest that although grazed at correct levels over most of the site there has been some scrub encroachment in Caeau Cefn Cribwr SSSI, Pen y Castell SSSI and Bryn Bach SSSI.

The status within each management unit where Dry neutral grassland is the Key Habitat:

Caeau Cefn Cribwr SSSI:
MU4 **Unfavourable**
MU6 **Unfavourable**
MU9 **Unfavourable**

Pen y Castell SSSI:
MU3 **Unfavourable**

Bryn Bach SSSI:
MU2 **Unfavourable**

5.2(4) Management rationale for feature 4

The management requirements of the dry neutral grassland are very similar to those stated in the management rationale for the Eu-Molinion feature above – summer grazing at similar levels but this feature can cope with slightly increased levels. Care should be taken with scrub encroachment.

Assessment of conservation status and management rationale for Feature 5: Viper's grass (*Scorzonera humilis*)

5.1(3) Conservation status assessment for feature 5

Provisional monitoring / surveillence was undertaken in 1997 and numbers of individuals were high (1000 +) in management Unit 1. Casual observations over subsequent years and as recently as 2007 suggest that it is present at similar levels. Small populations have been noted in units 2 & 3 of Caeau Cefn Cribwr in the latter recently but not seen in unit 2 for a number of years , no other populations of *Scorzonera* has been noted elsewhere within the SAC.

The status within each management unit where **Viper's grass (*Scorzonera humilis*)** is the Key Species:

Caeau Cefn Cribwr SSSI:
MU1 **Favourable**
MU2 **Unfavourable**
MU3 **Favourable**

5.2(4) Management rationale for feature 5

The management requirements of viper's grass are very similar to those stated in the management rationale for the Eu-Molinion feature above – summer grazing at similar levels but this feature can cope with slightly increased levels. Care should be taken with scrub encroachment.

Assessment of conservation status and management rationale for Feature 6: Marsh fern (*Thelypteris palustris*)

5.1(3) Conservation status assessment for feature 6

No formal monitoring has been undertaken for this feature but observations since it's discovery in 1994 suggest it is stable within the single area that it occurs within Unit 2 of Caeau cefn cribwr SSSI. The last observation was in 2007.

The status within each management unit where **marsh fern (Thelypteris palustris)** is the Key Species:

Caeau Cefn Cribwr SSSI:
MU2 **Favourable**

Assessment of conservation status and management rationale for Feature 7: Bog myrtle (*Myrica gale*)

5.1(3) Conservation status assessment for feature 7

No formal monitoring has been undertaken for this feature but observations since it's discovery in 1991 suggest it is stable within the areas that it occurs within Caeau Cefn Cribwr SSSI, Pen y Castell SSSI and Bryn Bach SSSI. The last observation was in 2007.

Caeau Cefn Cribwr SSSI:
MU2 **Favourable**
MU8 **Favourable**

Pen y Castell SSSI

MU2 **Favourable**

Bryn Bach SSSI:
MU1 **Favourable**

6. ACTION PLAN: SUMMARY

This section takes the management requirements outlined in Section 5 a stage further, assessing the specific management actions required on each management unit. This information is a summary of that held in CCW's Actions Database for sites, and the database will be used by CCW and partner organisations to plan future work to meet the Wales Environment Strategy targets for sites.

Unit Number	CCW Database Number	Unit Name	Summary of Conservation Management Issues	Action needed?
2	000827	CCC Field I	Parts of this field are very wet, mostly through base-rich flushing but also in places from a blocked ditch on the southern boundary, in process of being addressed under existing management agreement. It requires only very light grazing, by cattle, in summer. This management is in place under a management agreement. Field is grazed as a unit with an improved field up-slope from it and there is a need to watch for any problems that may arise from this in future.	No
1	000828	CCC Fields A- D	Appropriate grassland management (light summer grazing by cattle) is in place under a management agreement. Viper's-grass also thrives under this regime. A slight reduction in grazing pressure is desirable for the benefit of marsh fritillaries.	Yes
3	000830	CCC Field L	Direct management by CCW is in place following several years without any grazing in the late 1990s. This restoration management is now showing results and needs to be maintained.	No
4	000831	CCC Field M	Direct management by CCW is in place after several years without grazing in the late 1990s. This small field supports neutral grassland (not a SAC feature) and has suffered from encroachment of bramble from all boundaries. Any further spread of bramble must be prevented and this will be an annual task.	Yes
5	000832	CCC Field N-O	These two small fields have been left ungrazed in some recent years and subject to limited horse-grazing and ad-hoc scrub clearance in others. There is a need for CCW to liase with the owner to ensure that management is more structured.	Yes
6	000843	BB Field B, I-O	A series of several fields, most of which are affected by scrub encroachment, particularly willow. (The most westerly field of this unit is affected only along boundaries.) A programme of scrub clearance has been initiated under an existing management agreement but the work will take several years at current rate of progress and could potentially be intensified. Light summer grazing by cattle is in place and was also the historic management here for at least 15 years before the agreement started. There is an adjacent sandstone quarry, currently not working below the water table. Its existing planning permission includes a condition that before any sub-water-table working takes place, a monitoring borehole must be installed in the SAC and water levels must be recorded for a year. The greatest potential benefit would be obtained by starting water-level recording sooner rather than later, even though there is no intention to work below the water table yet.	Yes

Unit Number	CCW Database Number	Unit Name	Summary of Conservation Management Issues	Action needed?
7	000845	BB Field D	There is a need for CCW to re-establish contact with the owner of this field and check that grazing levels and type are still appropriate	Yes
8	000848	Wf Fields A-F	Light summer grazing by cattle takes place under existing management agreement. The grassland is recovering from past sheep-grazing before notification (December 2000) and also by stray sheep at intervals since. Fences were repaired in early 2007 so this should not be a problem in future.	No
9	000849	PyC Field D and part F	Currently grazed by horses under an existing management agreement. New owners took over at about the same time the SSSI was notified. They cleared large amounts of scrub after a period of neglect, during which SAC feature grassland had been reduced to 'islands' in each field. This accounts for the current condition of the outer parts of the fields where recovery may be expected to take years.	No
10	000850	PyC Field E and part F	These fields are grazed from time to time by cattle, but not necessarily at the right levels or right time of year. There is a need for CCW to re-establish contact with the tenant and owners to establish a better grazing regime. Some scrub control is also desirable, and would ideally be arranged by CCW under an agreement.	Yes

7. GLOSSARY

This glossary defines the some of the terms used in this **Core Management Plan**. Some of the definitions are based on definitions contained in other documents, including legislation and other publications of CCW and the UK nature conservation agencies. None of these definitions is legally definitive.

Action A recognisable and individually described act, undertaking or **project** of any kind, specified in section 6 of a **Core Management Plan** or **Management Plan**, as being required for the **conservation management** of a site.

Attribute A quantifiable and monitorable characteristic of a **feature** that, in combination with other such attributes, describes its **condition**.

Common Standards Monitoring A set of principles developed jointly by the UK conservation agencies to help ensure a consistent approach to **monitoring** and reporting on the **features** of sites designated for nature conservation, supported by guidance on identification of **attributes** and monitoring methodologies.

Condition A description of the state of a feature in terms of qualities or **attributes** that are relevant in a nature conservation context. For example the condition of a habitat usually includes its extent and species composition and might also include aspects of its ecological functioning, spatial distribution and so on. The condition of a species population usually includes its total size and might also include its age structure, productivity, relationship to other populations and spatial distribution. Aspects of the

habitat(s) on which a species population depends may also be considered as attributes of its condition.

Condition assessment The process of characterising the **condition** of a **feature** with particular reference to whether the aspirations for its condition, as expressed in its **conservation objective**, are being met.

Condition categories The **condition** of **feature** can be categorised, following **condition assessment** as one of the following[3]:

Favourable: maintained;
Favourable: recovered;
Favourable: un-classified
Unfavourable: recovering;
Unfavourable: no change;
Unfavourable: declining;
Unfavourable: un-classified
Partially destroyed;
Destroyed.

Conservation management Acts or undertaking of all kinds, including but not necessarily limited to **actions,** taken with the aim of achieving the **conservation objectives** of a site. Conservation management includes the taking of statutory and non-statutory measures, it can include the acts of any party and it may take place outside site boundaries as well as within sites. Conservation management may also be embedded within other frameworks for land/sea management carried out for purposes other than achieving the conservation objectives.

Conservation objective The expression of the desired **conservation status** of a **feature,** expressed as a **vision for the feature** and a series of **performance indicators**. The conservation objective for a feature is thus a composite statement, and each feature has one conservation objective.

Conservation status A description of the state of a **feature** that comprises both its **condition** and the state of the **factors** affecting or likely to affect it. Conservation status is thus a characterisation of both the current state of a feature and its future prospects.

Conservation status assessment The process of characterising the **conservation status** of a **feature** with particular reference to whether the aspirations for it, as expressed in its **conservation objective**, are being met. The results of conservation status assessment can be summarised either as 'favourable' (i.e. conservation objectives are met) or unfavourable (i.e. conservation objectives are not met). However the value of conservation status assessment in terms of supporting decisions about **conservation management**, lies mainly in the details of the assessment of feature **condition**, **factors** and trend information derived from comparisons between current and

[3] See JNCC guidance on Common Standards Monitoring http://www.jncc.gov.uk/page-2272

previous conservation status assessments and condition assessments.

Core Management Plan A CCW document containing the conservation objectives for a site and a summary of other information contained in a full site **Management Plan**.

Factor Anything that has influenced, is influencing or may influence the **condition** of a **feature**. Factors can be natural processes, human activities or effects arising from natural process or human activities, They can be positive or negative in terms of their influence on features, and they can arise within a site or from outside the site. Physical, socio-economic or legal constraints on **conservation management** can also be considered as factors.

Favourable condition See **condition** and **condition assessment**

Favourable conservation status See **conservation status** and **conservation status assessment.**[4]

Feature The species population, habitat type or other entity for which a site is designated. The ecological or geological interest which justifies the designation of a site and which is the focus of conservation management.

Integrity See **site integrity**

Key Feature The habitat or species population within a **management unit** that is the primary focus of **conservation management** and **monitoring** in that unit.

Management Plan The full expression of a designated site's legal status, **vision**, **features**, **conservation objectives**, **performance indicators** and management requirements. A complete management plan may not reside in a single document, but may be contained in a number of documents (including in particular **the Core Management Plan**) and sets of electronically stored information.

Management Unit An area within a site, defined according to one or more of a range of criteria, such as topography, location of **features**, tenure, patterns of land/sea use. The key characteristic of management units is to reflect the spatial scale at which **conservation management** and **monitoring** can be most effectively organised. They are used as the primary basis for differentiating priorities for conservation management and monitoring in different parts of a site, and for facilitating communication with those responsible for management of different parts of a site.

Metapopulation **A group of distinct populations of a species, separated by areas of either unoccupied, or unsuitable, habitat. These populations can support one another, so that when one population becomes extinct, the species can recolonise from a nearby population.**

Monitoring An intermittent (regular or irregular) series of observations in time, carried out to show the extent of compliance with a formulated standard or degree of deviation from

[4] A full definition of favourable conservation status is given in Section 4.

an expected norm. In **Common Standards Monitoring**, the formulated standard is the quantified expression of favourable **condition** based on **attributes**.

Operational limits The levels or values within which a **factor** is considered to be acceptable in terms of its influence on a **feature**. A factor may have both upper and lower operational limits, or only an upper limit or lower limit. For some factors an upper limit may be zero.

Performance indicators The **attributes** and their associated **specified limits**, together with **factors** and their associated **operational limits,** which provide the standard against which information from **monitoring** and other sources is used to determine the degree to which the **conservation objectives** for a **feature** are being met. Performance indicators are part of, not the same as, conservation objectives. See also **vision for the feature**.

Plan or project **Project:** Any form of construction work, installation, development or other intervention in the environment, the carrying out or continuance of which is subject to a decision by any public body or statutory undertaker.
Plan: a document prepared or adopted by a public body or statutory undertaker, intended to influence decisions on the carrying out of **projects.** Decisions on plans and projects which affect Natura 2000 and Ramsar sites are subject to specific legal and policy procedures.

Site integrity The coherence of a site's ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it is designated.

Site Management Statement (SMS) The document containing CCW's views about the management of a site issued as part of the legal notification of an SSSI under section 28(4) of the Wildlife and Countryside Act 1981, as substituted.

Special Feature See **feature**.

Specified limit The levels or values for an **attribute** which define the degree to which the attribute can fluctuate without creating cause for concern about the **condition** of the **feature**. The range within the limits corresponds to favourable, the range outside the limits corresponds to unfavourable. Attributes may have lower specified limits, upper specified limits, or both.

Unit See **management unit.**

Vision for the feature The expression, within a **conservation objective**, of the aspirations for the **feature** concerned. See also **performance indicators.**

Vision Statement The statement conveying an impression of the whole site in the state that is intended to be the product of its **conservation management.** A 'pen portrait' outlining the **conditions** that should prevail when all the **conservation objectives** are met. A description of the site as it would be when all the **features** are in **favourable condition**.

8. REFERENCES

Woodman J & Mockridge C 1993. CCW Phase II Lowland Grassland Survey, Bryn-bach (Site Code: SS88/6) site pack. Countryside Council for Wales.

Woodman J & Mockridge, C 1993. CCW Phase II Lowland Grassland Survey, Waun-fawr (Site Code: SS88/4) site pack. Countryside Council for Wales.

Woodman J & Mockridge, C 1993. CCW Phase II Lowland Grassland Survey, Cefn Cribwr Meadows SSSI and Annex (Site Code: SS88/7) site pack. Countryside Council for Wales.

Woodman J & Mockridge, C 1994. CCW Phase II Lowland Grassland Survey, Pen y Castell (Site Code: SS88/10) site pack. Countryside Council for Wales.

Cyngor Cefn Gwlad Cymru
Countryside Council for Wales

Glaswelltiroedd Cefn Cribwr / Cefn Cribwr Grasslands

Map 1 / 1

Côd Safle y GE **EC Site Code** **UK0030113**

Ardal Cadwraeth Arbennig (ACA)
Special Area of Conservation (SAC)

Arwynebedd cyfan **Total area** **58.35 ha**

Hydred **Longitude**	03° 37' 45"	Gorllewin **West**	
Lledred **Latitude**	51° 32' 07"	Gogledd **North**	

G/N

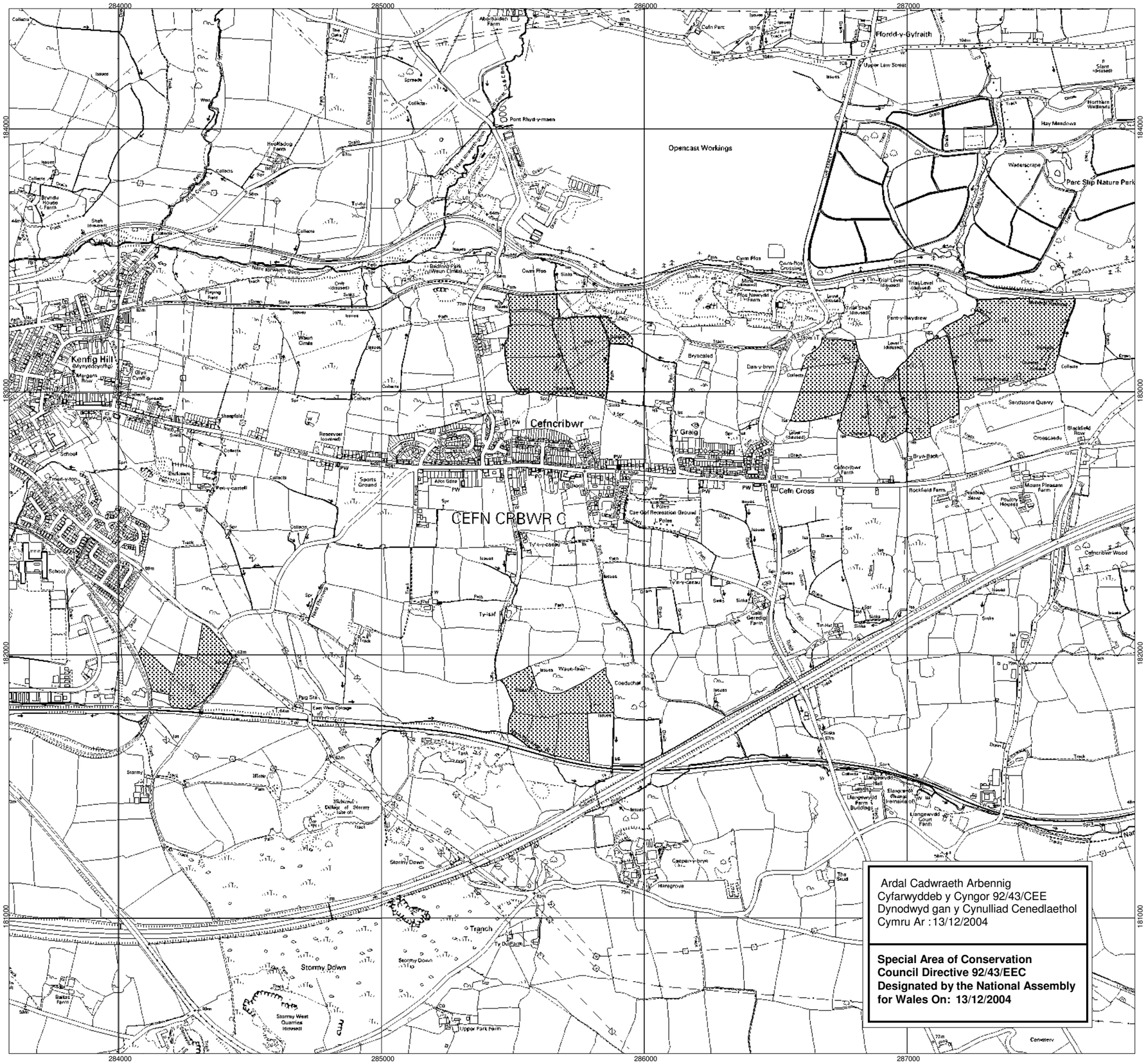
N.G. Mae'r ffigurau Lledred/Hydred i gyd wedi deillio o System Geodesig y Byd 84 (WGS 84)
N.B. All Latitude/Longitude figures have been derived from World Geodetic System 84 (WGS 84).

Tafluniad map: Y Grid Cenedlaethol Prydeinig
Projection: British National Grid

Rhif diweddaraf **Version number** **3** **17/02/2005**

Graddfa **Scale** **1 : 15,000**

Noder: Data wedi ei gipio ar raddfa 1:2,500, rhoddwyd ar raddfa 1:10,000 a'i leihau i raddfa 1:15,000. Mae mapiau graddfa-fawr swyddogol ar gael gan CCGC.
Note: Data captured at 1:2,500 scale, placed on 1:10,000 scale and reduced to 1:15,000. A definitive large scale map is available on request from CCW.



Cyngor Cefn Gwlad Cymru
Countryside Council for Wales

Unedau Rheoli
Management Units

Glaswelltiroedd Cefn Cribwr / Cefn Cribwr Grasslands

Map 1 / 1

Côd Safle y GE
EC Site Code **UK0030113**

Ardal Cadwraeth Arbennig (ACA)
Special Area of Conservation (SAC)

1 Ffiniau'r unedau a chyfeirnodau
Boundary of unit and Ref number

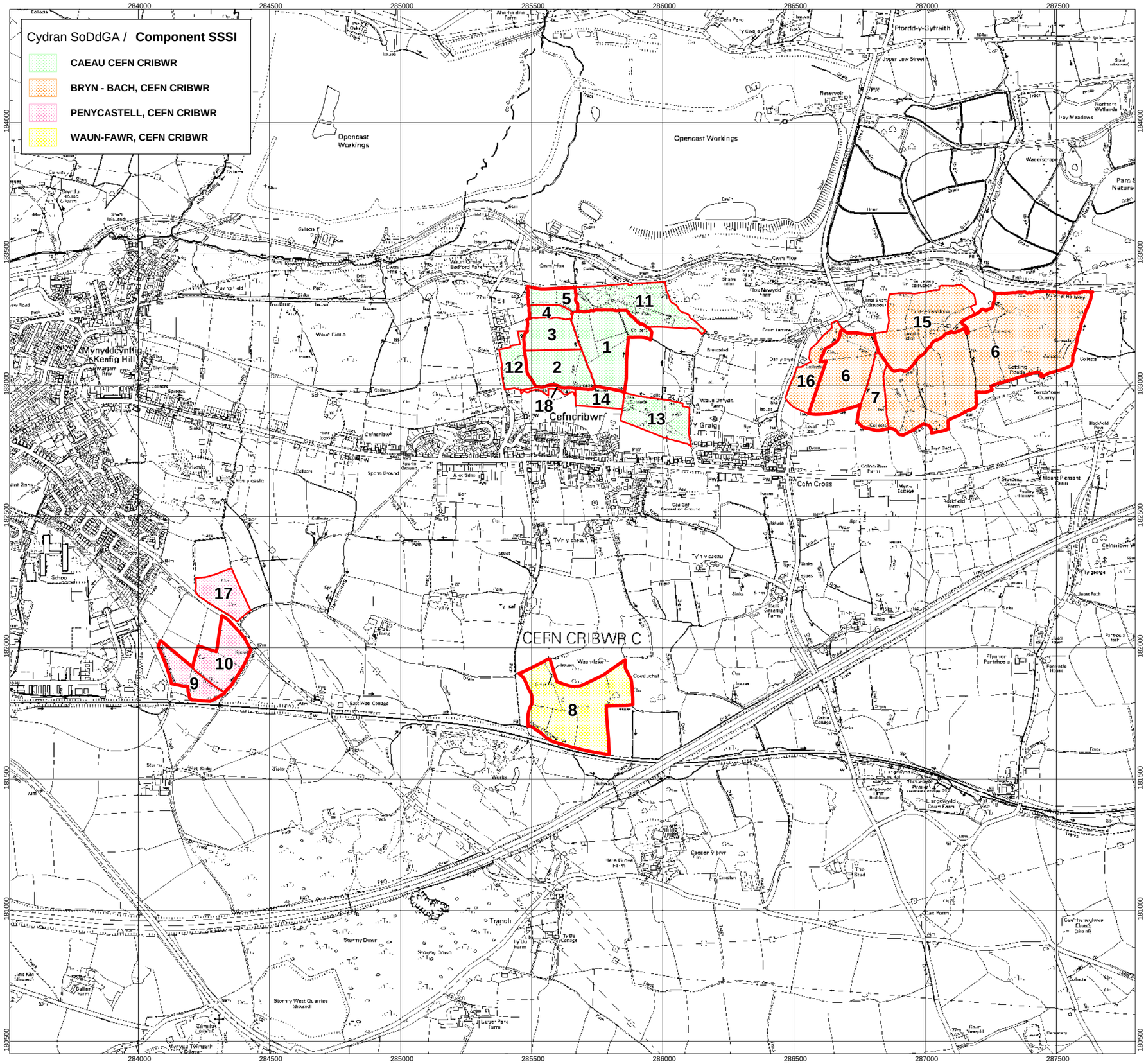
Tafluniad map: Y Grid Cenedlaethol Prydeinig
Projection: British National Grid

G/N

Graddfa
Scale **1:15,000** **25/03/2008**

Noder:Data wedi ei gipio ar raddfa 1:2,500, rhoddwyd ar raddfa 1:10,000 a'i leihau i raddfa 1:15,000. Mae mapiau graddfa-fawr swyddogol ar gael gan CCGC.

Note: Data captured at 1:2,500 scale, placed on 1:10,000 scale and reduced to 1:15,000. A definitive large scale map is available on request from CCW.



STANDARD DATA FORM for sites within the ‘UK national site network of European sites’

Special Protection Areas (SPAs) are classified and Special Areas of Conservation (SACs) are designated under:

- the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales (including the adjacent territorial sea) and to a limited extent in Scotland (reserved matters) and Northern Ireland (excepted matters);
- the Conservation (Natural Habitats &c.) Regulations 1994 (as amended) in Scotland;
- the Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland; and
- the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) in the UK offshore area.

Each SAC or SPA (forming part of the UK national site network of European sites) has its own Standard Data Form containing site-specific information. The information provided here generally follows the same documenting format for SACs and SPAs, as set out in the Official Journal of the European Union recording the Commission Implementing Decision of 11 July 2011 (2011/484/EU).

Please note that these forms contain a number of codes, all of which are explained either within the data forms themselves or in the end notes.

More general information on SPAs and SACs in the UK is available from the SPA homepage and SAC homepage on the JNCC website. These webpages also provide links to Standard Data Forms for all SAC and SPA sites in the UK.

https://jncc.gov.uk/

NATURA 2000 - STANDARD DATA FORM

For Special Protection Areas (SPA),
Proposed Sites for Community Importance (pSCI),
Sites of Community Importance (SCI) and
for Special Areas of Conservation (SAC)

SITE **UK0030113**

SITENAME **Glaswelltiroedd Cefn Cribwr/ Cefn Cribwr Grasslands**

TABLE OF CONTENTS

1. SITE IDENTIFICATION

Back to top

1.1 Type	1.2 Site code
B	UK0030113

1.3 Site name

Glaswelltiroedd Cefn Cribwr/ Cefn Cribwr Grasslands

1.4 First Compilation date	1.5 Update date
2001-01	2015-12

1.6 Respondent:

Name/Organisation: Joint Nature Conservation Committee

Address: Joint Nature Conservation Committee Monkstone House City Road Peterborough PE1 1JY

Email:

Date site proposed as SCI:	2001-01
Date site confirmed as SCI:	2004-12
Date site designated as SAC:	2004-12
National legal reference of SAC designation:	Regulations 11 and 13-15 of the Conservation of Habitats and Species Regulations 2010 (http://www.legislation.gov.uk/uksi/2010/490/contents/made).

2. SITE LOCATION

Back to top

2.1 Site-centre location [decimal degrees]:

Longitude	Latitude
-3.628055556	51.535

2.2 Area [ha]:

57.92

2.3 Marine area [%]

0.0

2.4 Sitelength [km]:

0.0

2.5 Administrative region code and name

NUTS level 2 code	Region Name
UKL2	East Wales

2.6 Biogeographical Region(s)

Atlantic (100.0 %)

3. ECOLOGICAL INFORMATION

Back to top

3.1 Habitat types present on the site and assessment for them

Annex I Habitat types						Site assessment			
Code	PF	NP	Cover [ha]	Cave [number]	Data quality	A|B|C|D	A|B|C		
						Representativity	Relative Surface	Conservation	Global
4010			0.6	0	G	D			
6410			18.92	0	G	B	C	B	B

- **PF:** for the habitat types that can have a non-priority as well as a priority form (6210, 7130, 9430) enter "X" in the column PF to indicate the priority form.
- **NP:** in case that a habitat type no longer exists in the site enter: x (optional)
- **Cover:** decimal values can be entered
- **Caves:** for habitat types 8310, 8330 (caves) enter the number of caves if estimated surface is not available.
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation)

3.2 Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site evaluation for them

Species					Population in the site					Site assessment	
		Scientific									

G	Code	Name	S	NP	T	Size		Unit	Cat.	D.qual.	A|B|C|D	A|B|C		
						Min	Max				Pop.	Con.	Iso.	Glo.
I	1065	Euphydryas (Eurodryas, Hypodryas) aurinia			p	11	50	i		M	C	B	C	C

- **Group:** A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Type:** p = permanent, r = reproducing, c = concentration, w = wintering (for plant and non-migratory species use permanent)
- **Unit:** i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see reference portal)
- **Abundance categories (Cat.):** C = common, R = rare, V = very rare, P = present - to fill if data are deficient (DD) or in addition to population size information
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation); VP = 'Very poor' (use this category only, if not even a rough estimation of the population size can be made, in this case the fields for population size can remain empty, but the field "Abundance categories" has to be filled in)

4. SITE DESCRIPTION

Back to top

4.1 General site character

Habitat class	% Cover
N16	25.0
N10	64.0
N08	10.0
N07	1.0
Total Habitat Cover	100

Other Site Characteristics

1 Terrestrial: Soil & Geology: neutral,sandstone,sedimentary,nutrient-poor,clay,acidic,basic 2 Terrestrial: Geomorphology and landscape: slope,lowland

4.2 Quality and importance

Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) for which this is considered to be one of the best areas in the United Kingdom. Euphydryas (Eurodryas, Hypodryas) aurinia for which the area is considered to support a significant presence.

4.3 Threats, pressures and activities with impacts on the site

The most important impacts and activities with high effect on the site

Negative Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i|o|b]
L	J02		B
M	A04		I
H	H04		B
L	I01		B

Positive Impacts			
Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i|o|b]
H	A04		I
H	A10		I

H	K02		B
M	B07		I
H	J03		B

Rank: H = high, M = medium, L = low
Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification,
T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions
i = inside, o = outside, b = both

4.5 Documentation

The Natural Resources Wales weblink below provides access to information on its designated sites. Detailed information about this Natura 2000 site can be accessed via the Management Plan link provided in Section 6.2. See also the 'UK Approach' document for more information (link via the JNCC website).

Link(s): https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/protected-areas-of-lan

http://jncc.defra.gov.uk/pdf/Natura2000_StandardDataForm_UKApproach_Dec2015.pdf

5. SITE PROTECTION STATUS (optional)

Back to top

5.1 Designation types at national and regional level:

Code	Cover [%]	Code	Cover [%]	Code	Cover [%]
UK04	100.0				

6. SITE MANAGEMENT

Back to top

6.1 Body(ies) responsible for the site management:

Organisation:	Natural Resources Wales
Address:	
Email:	

6.2 Management Plan(s):

An actual management plan does exist:

- [X] Yes — Name: GLASWELLTIROEDD CEFN CRIBWR / CEFN CRIBWR GRASSLANDS
  Link: https://www.naturalresources.wales/media/671199/Cefn%20Cribwr%20Core%20SAC%20plan%20290108%20English.
- [ ] No, but in preparation
- [ ] No

EXPLANATION OF CODES USED IN THE SPECIAL AREA OF CONSERVATION (SAC) AND SPECIAL PROTECTION AREA (SPA) STANDARD DATA FORMS

The codes in the table below generally follow those explained in the official European Union guidelines for the Standard Data Form (also referencing the relevant page number).

1.1 Site type

CODE	DESCRIPTION	PAGE NO
A	SPA (classified Special Protection Area)	53
B	cSAC, SCI or SAC (candidate Special Area of Conservation, Site of Community Importance, designated Special Area of Conservation)	53
C	SPA area/boundary is the same as the cSAC/SCI/SAC i.e. a co-classified/designated site (Note: this situation only occurs in Gibraltar)	53

3.1 Habitat code

CODE	DESCRIPTION	PAGE NO
1110	Sandbanks which are slightly covered by sea water all the time	57
1130	Estuaries	57
1140	Mudflats and sandflats not covered by seawater at low tide	57
1150	Coastal lagoons	57
1160	Large shallow inlets and bays	57
1170	Reefs	57
1180	Submarine structures made by leaking gases	57
1210	Annual vegetation of drift lines	57
1220	Perennial vegetation of stony banks	57
1230	Vegetated sea cliffs of the Atlantic and Baltic Coasts	57
1310	Salicornia and other annuals colonizing mud and sand	57
1320	Spartina swards (Spartinion maritimae)	57
1330	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	57
1340	Inland salt meadows	57
1420	Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi)	57
2110	Embryonic shifting dunes	57
2120	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")	57
2130	Fixed coastal dunes with herbaceous vegetation ("grey dunes")	57
2140	Decalcified fixed dunes with Empetrum nigrum	57
2150	Atlantic decalcified fixed dunes (Calluno-Ulicetea)	57
2160	Dunes with Hippopha• rhamnoides	57
2170	Dunes with Salix repens ssp. argentea (Salicion arenariae)	57
2190	Humid dune slacks	57
21A0	Machairs (* in Ireland)	57
2250	Coastal dunes with Juniperus spp.	57
2330	Inland dunes with open Corynephorus and Agrostis grasslands	57
3110	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)	57
3130	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea	57
3140	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.	57
3150	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation	57

CODE	DESCRIPTION	PAGE NO
3160	Natural dystrophic lakes and ponds	57
3170	Mediterranean temporary ponds	57
3180	Turloughs	57
3260	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation	57
4010	Northern Atlantic wet heaths with Erica tetralix	57
4020	Temperate Atlantic wet heaths with Erica ciliaris and Erica tetralix	57
4030	European dry heaths	57
4040	Dry Atlantic coastal heaths with Erica vagans	57
4060	Alpine and Boreal heaths	57
4080	Sub-Arctic Salix spp. scrub	57
5110	Stable xerothermophilous formations with Buxus sempervirens on rock slopes (Berberidion p.p.)	57
5130	Juniperus communis formations on heaths or calcareous grasslands	57
6130	Calaminarian grasslands of the Violetalia calaminariae	57
6150	Siliceous alpine and boreal grasslands	57
6170	Alpine and subalpine calcareous grasslands	57
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)	57
6230	Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)	57
6410	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)	57
6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	57
6510	Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)	57
6520	Mountain hay meadows	57
7110	Active raised bogs	57
7120	Degraded raised bogs still capable of natural regeneration	57
7130	Blanket bogs (* if active bog)	57
7140	Transition mires and quaking bogs	57
7150	Depressions on peat substrates of the Rhynchosporion	57
7210	Calcareous fens with Cladium mariscus and species of the Caricion davallianae	57
7220	Petrifying springs with tufa formation (Cratoneurion)	57
7230	Alkaline fens	57
7240	Alpine pioneer formations of the Caricion bicoloris-atrofuscae	57
8110	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)	57
8120	Calcareous and calcshist screes of the montane to alpine levels (Thlaspietea rotundifolii)	57
8210	Calcareous rocky slopes with chasmophytic vegetation	57
8220	Siliceous rocky slopes with chasmophytic vegetation	57
8240	Limestone pavements	57
8310	Caves not open to the public	57
8330	Submerged or partially submerged sea caves	57
9120	Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion)	57
9130	Asperulo-Fagetum beech forests	57
9160	Sub-Atlantic and medio-European oak or oak-hornbeam forests of the Carpinion betuli	57
9180	Tilio-Acerion forests of slopes, screes and ravines	57
9190	Old acidophilous oak woods with Quercus robur on sandy plains	57
91A0	Old sessile oak woods with Ilex and Blechnum in the British Isles	57
91C0	Caledonian forest	57
91D0	Bog woodland	57
91E0	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)	57
91J0	Taxus baccata woods of the British Isles	57

3.1 Habitat representativity (abbreviated to 'Representativity' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent representatively	57
B	Good representatively	57
C	Significant representatively	57
D	Non-significant presence representatively	57

3.1 Relative surface

CODE	DESCRIPTION	PAGE NO
A	> 15%-100%	58
B	> 2%-15%	58
C	≤ 2%	58

3.1 Degree of conservation (abbreviated to 'Conservation' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	59
B	Good conservation	59
C	Average or reduced conservation	59

3.1 Global assessment (abbreviated to 'Global' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	59
B	Good value	59
C	Significant value	59

3.2 Population (abbreviated to 'Pop.' in data form)

CODE	DESCRIPTION	PAGE NO
A	> 15%-100%	62
B	> 2%-15%	62
C	≤ 2%	62
D	Non-significant population	62

3.2 Degree of conservation (abbreviated to 'Con.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	63
B	Good conservation	63
C	Average or reduced conservation	63

3.2 Isolation (abbreviated to 'Iso.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Population (almost) Isolated	63
B	Population not-isolated, but on margins of area of distribution	63
C	Population not-isolated within extended distribution range	63

3.2 Global Grade (abbreviated to 'Glo.' or 'G.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	63
B	Good value	63
C	Significant value	63

3.3 Other species – essentially covers bird assemblage types

CODE	DESCRIPTION	PAGE NO
WATR	Non-breeding waterbird assemblage	UK specific code
SBA	Breeding seabird assemblage	UK specific code

BBA	Breeding bird assemblage (applies only to sites classified pre 2000)	UK specific code

4.1 Habitat class code

CODE	DESCRIPTION	PAGE NO
N01	Marine areas, Sea inlets	65
N02	Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins)	65
N03	Salt marshes, Salt pastures, Salt steppes	65
N04	Coastal sand dunes, Sand beaches, Machair	65
N05	Shingle, Sea cliffs, Islets	65
N06	Inland water bodies (Standing water, Running water)	65
N07	Bogs, Marshes, Water fringed vegetation, Fens	65
N08	Heath, Scrub, Maquis and Garrigue, Phygrana	65
N09	Dry grassland, Steppes	65
N10	Humid grassland, Mesophile grassland	65
N11	Alpine and sub-Alpine grassland	65
N14	Improved grassland	65
N15	Other arable land	65
N16	Broad-leaved deciduous woodland	65
N17	Coniferous woodland	65
N19	Mixed woodland	65
N21	Non-forest areas cultivated with woody plants (including Orchards, groves, Vineyards, Dehesas)	65
N22	Inland rocks, Screes, Sands, Permanent Snow and ice	65
N23	Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites)	65
N25	Grassland and scrub habitats (general)	65
N26	Woodland habitats (general)	65

4.3 Threats code

CODE	DESCRIPTION	PAGE NO
A01	Cultivation	65
A02	Modification of cultivation practices	65
A03	Mowing / cutting of grassland	65
A04	Grazing	65
A05	Livestock farming and animal breeding (without grazing)	65
A06	Annual and perennial non-timber crops	65
A07	Use of biocides, hormones and chemicals	65
A08	Fertilisation	65
A10	Restructuring agricultural land holding	65
A11	Agriculture activities not referred to above	65
B01	Forest planting on open ground	65
B02	Forest and Plantation management & use	65
B03	Forest exploitation without replanting or natural regrowth	65
B04	Use of biocides, hormones and chemicals (forestry)	65
B06	Grazing in forests/ woodland	65
B07	Forestry activities not referred to above	65
C01	Mining and quarrying	65
C02	Exploration and extraction of oil or gas	65
C03	Renewable abiotic energy use	65
D01	Roads, paths and railroads	65
D02	Utility and service lines	65
D03	Shipping lanes, ports, marine constructions	65
D04	Airports, flightpaths	65
D05	Improved access to site	65
E01	Urbanised areas, human habitation	65
E02	Industrial or commercial areas	65

CODE	DESCRIPTION	PAGE NO
E03	Discharges	65
E04	Structures, buildings in the landscape	65
E06	Other urbanisation, industrial and similar activities	65
F01	Marine and Freshwater Aquaculture	65
F02	Fishing and harvesting aquatic ressources	65
F03	Hunting and collection of wild animals (terrestrial), including damage caused by game (excessive density), and taking/removal of terrestrial animals (including collection of insects, reptiles, amphibians, birds of prey, etc., trapping, poisoning, poaching, predator control, accidental capture (e.g. due to fishing gear), etc.)	65
F04	Taking / Removal of terrestrial plants, general	65
F05	Illegal taking/ removal of marine fauna	65
F06	Hunting, fishing or collecting activities not referred to above	65
G01	Outdoor sports and leisure activities, recreational activities	65
G02	Sport and leisure structures	65
G03	Interpretative centres	65
G04	Military use and civil unrest	65
G05	Other human intrusions and disturbances	65
H01	Pollution to surface waters (limnic & terrestrial, marine & brackish)	65
H02	Pollution to groundwater (point sources and diffuse sources)	65
H03	Marine water pollution	65
H04	Air pollution, air-borne pollutants	65
H05	Soil pollution and solid waste (excluding discharges)	65
H06	Excess energy	65
H07	Other forms of pollution	65
I01	Invasive non-native species	65
I02	Problematic native species	65
I03	Introduced genetic material, GMO	65
J01	Fire and fire suppression	65
J02	Human induced changes in hydraulic conditions	65
J03	Other ecosystem modifications	65
K01	Abiotic (slow) natural processes	65
K02	Biocenotic evolution, succession	65
K03	Interspecific faunal relations	65
K04	Interspecific floral relations	65
K05	Reduced fecundity/ genetic depression	65
L05	Collapse of terrain, landslide	65
L07	Storm, cyclone	65
L08	Inundation (natural processes)	65
L10	Other natural catastrophes	65
M01	Changes in abiotic conditions	65
M02	Changes in biotic conditions	65
U	Unknown threat or pressure	65
XO	Threats and pressures from outside the Member State	65

5.1 Designation type codes

CODE	DESCRIPTION	PAGE NO
UK00	No Protection Status	67
UK01	National Nature Reserve	67
UK04	Site of Special Scientific Interest (GB)	67
UK05	Marine Conservation Zone	67
UK06	Nature Conservation Marine Protected Area	67
UK86	Special Area (Channel Islands)	67
UK98	Area of Special Scientific Interest (NI)	67
IN00	Ramsar Convention site	67
IN08	Special Protection Area	67
IN09	Special Area of Conservation	67

Appendix 5.

Dunraven Bay SAC:

JNCC Page, Register Entry, Conservation Objectives and Standard Data Form

Special Areas of Conservation

Dunraven Bay

Designated Special Area of Conservation (SAC)

Country	Wales
Unitary Authority	East Wales
Centroid*	SS886727
Latitude	51.4422
Longitude	-3.6025
SAC EU Code	UK0030139
Status	Designated Special Area of Conservation (SAC)
Area (ha)	6.45

* This is the approximate central point of the SAC. In the case of large, linear or composite sites, this may not represent the location where a feature occurs within the SAC.

Location of Dunraven Bay SAC

General site character

- Shingle, Sea cliffs, Islets (26.5%)
- Dry grassland, Steppes (18.5%)
- Humid grassland, Mesophile grassland (25%)
- Improved grassland (17.5%)
- Broad-leaved deciduous woodland (12.5%)

Download the Standard Data Form for this site (PDF <100kb)

Note When undertaking an appropriate assessment of impacts at a site, all features of European importance (both primary and non-primary) need to be considered.

Annex I habitats that are a primary reason for selection of this site

- Not Applicable

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site

- Not Applicable

Annex II species that are a primary reason for selection of this site

- **1441 Shore dock** *Rumex rupestris*
  The 20 or so plants of **shore dock *Rumex rupestris*** growing here on damp coastal limestone are the only remnant of the species' former Bristol Channel range. The species has disappeared through loss of damp dune-slacks and shingle banks from other sites at Merthyr Mawr, Kenfig, Braunton Burrows and Pennard but is relatively secure on this steep, inaccessible site. The Dunraven Bay population is a significant seed-source for recolonisation of Bristol Channel dunes and beach-heads when future management restores these habitats to favourable condition.

Annex II species present as a qualifying feature, but not a primary reason for site selection

- Not Applicable

Many designated sites are on private land: the listing of a site in these pages does not imply any right of public access.

Conservation (Natural Habitats, &c.) Regulations 1994 (SI 1994 No. 2716),
fel y'u diwygiwyd / as amended.

COFNOD YN Y GOFRESTR O SAFLEOEDD EWROPEAIDD I GYMRU

ENTRY IN THE REGISTER OF EUROPEAN SITES FOR WALES

(Rheoliad / Regulation 11.2)

***ENW'R SAFLE*:**
***SITE NAME*:** Dunraven Bay

***MATH O SAFLE*:** Ardal Cadwraeth Arbennig (ACA)
***SITE TYPE*:** Special Area of Conservation (SAC)

CÔD Y SAFLE:
SITE CODE: UK0030139

HANES DYNODIAD:

***Dyddiad y trosglwyddwyd i'r Comisiwn Ewropeaidd (Rheoliad 7.4)*:**
Hydref 2002

***Dyddiad y mabwysiadwyd fel safle o bwysigrwydd cymunedol (Council Directive 92/42/EEC, Erthygl 4.2)*:**
7 Rhagfyr 2004

***Dyddiad dynodi*:**
13 Rhagfyr 2004

***Dynodwyd gan (Rheoliad 8.1)*:**
Cynulliad Cenedlaethol Cymru

LLEOLIAD:

Awdurdod unedol:
Bro Morgannwg

***Cyfesurynnau*:**
Hydred 03 36 09 Gor, Lledred 51 26 32 Gog
Cyfeirnod Grid Cenedlaethol Arolwg Ordnans: SS886727

Gweler hefyd y map(iau) amgaeëdig, nad ydynt yn ffurfio rhan o'r cofnod hwn.

DESIGNATION HISTORY:

***Date transmitted to the European Commission (Regulation 7.4)*:**
October 2002

Date adopted as a site of community importance (Council Directive 92/42/EEC, Article 4.2):
7 December 2004

***Date designated*:**
13 December 2004

Designated by (Regulation 8.1):
National Assembly for Wales

LOCATION:

Unitary authority:
Vale of Glamorgan

***Coordinates*:**
Longitude 03 36 09 W, Latitude 51 26 32 N
Ordnance Survey National Grid Reference: SS886727

See also the accompanying map(s), which do not form part of this entry.

MATHAU O GYNEFIN A/NEU RYWOGAETHAU Y DYNODIR Y SAFLE O'U PLEGID:
HABITAT TYPES AND/OR SPECIES FOR WHICH THE SITE IS DESIGNATED:

		Enw cyffredin	Common name	Term Gwyddonol	Scientific term
1		Tafolen y traeth	Shore dock	*Rumex rupestris*	

*Mae'n dynodi mathau o gynefin neu rywogaeth y rhoddir blaenoriaeth iddynt (a ddiffinnir yn Erthyglau 1(d) ac 1(h) o Council Directive 92/43/EEC).

*Denotes a priority habitat type or species (defined in Articles 1(d) and 1(h) of Council Directive 92/43/EEC).

***GWNAED Y COFNOD HWN*:**
14 Mehefin 2005

***THIS ENTRY MADE*:**
14 June 2005

***GAN*:**
Trish Fretten, ar ran Gweinidog dros yr Amgylchedd, Cynllunio a Chefn Gwlad, Cynulliad Cenedlaethol Cymru

***BY*:**
Trish Fretten, on behalf of the Minister for Environment, Planning and Countryside, National Assembly for Wales

***LLOFNOD*:**

***SIGNATURE*:**

DYDDIAD(AU) COFNODION BLAENOROL AR GYFER Y SAFLE HWN:
Dim

DATE(S) OF PREVIOUS ENTRIES FOR THIS SITE:
None

Cyngor Cefn Gwlad Cymru
Countryside Council for Wales

Dunraven Bay

Map 1 / 1

Côd Safle y GE
EC Site Code **UK0030139**

Ardal Cadwraeth Arbennig (ACA)
Special Area of Conservation (SAC)

Arwynebedd cyfan
Total area **6.47 ha**

Hydred
Longitude **03° 36' 14"** Gorllewin **West**

Lledred
Latitude **51° 26' 34"** Gogledd **North**

G/N

N.G. Mae'r ffigurau Lledred/Hydred i gyd wedi deillio o System Geodesig y Byd 84 (WGS 84)
N.B. All Latitude/Longitude figures have been derived from World Geodetic System 84 (WGS 84).

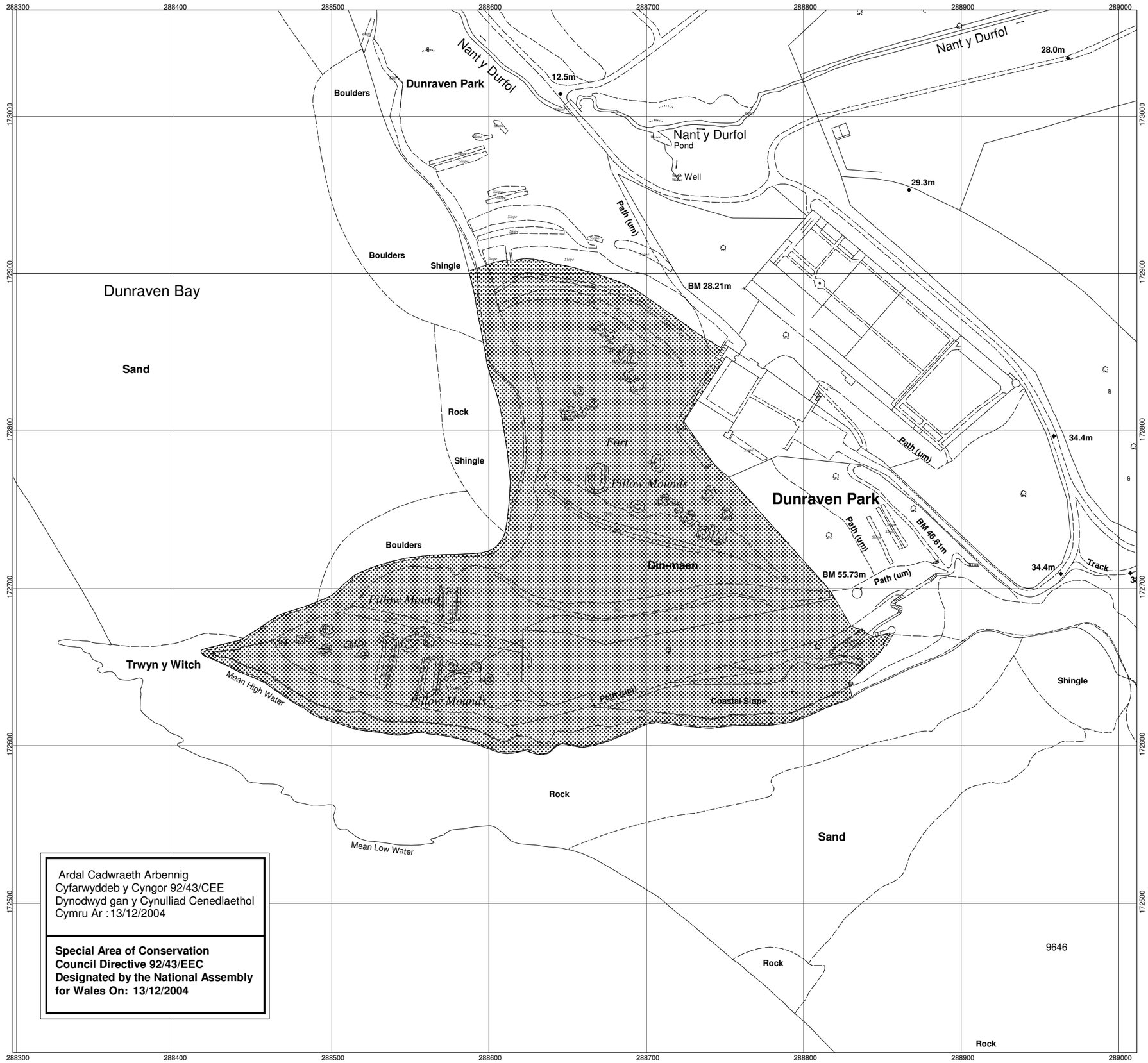
Tafluniad map: Y Grid Cenedlaethol Prydeinig
Projection: British National Grid

Rhif diweddaraf
Version number **3** **17/02/2005**

Graddfa
Scale **1 : 2,500**

Noder: Data wedi ei gipio ar raddfa 1:2,500.
Note: Data captured at 1:2,500 scale.

Noder: Gall ffin newid lle mae'n dilyn llinell Marc Penllanw Cymhedrol ac/neu linell Marc Distyll Cymhedrol.
Note: Where the boundary follows the lines of Mean High and/or Mean Low Water Marks it is subject to change.



Ardal Cadwraeth Arbennig
Cyfarwyddeb y Cyngor 92/43/CEE
Dynodwyd gan y Cynulliad Cenedlaethol Cymru Ar :13/12/2004

Special Area of Conservation Council Directive 92/43/EEC Designated by the National Assembly for Wales On: 13/12/2004

CYNGOR CEFN GWLAD CYMRU
COUNTRYSIDE COUNCIL FOR WALES

CORE MANAGEMENT PLAN
INCLUDING CONSERVATION OBJECTIVES

FOR

Dunraven Bay Special Area of Conservation (SAC)

Version: 1

Date: 21 January 2008

Approved by: David Mitchell

More detailed maps of management units can be provided on request.
A Welsh version of all or part of this document can be made available on request.

Cyngor Cefn Gwlad Cymru
Countryside Council for Wales

NATURA 2000

Ramsar

Llywodraeth Cynulliad Cymru
Welsh Assembly Government
CORFF NODDEDIG | SPONSORED BODY

CONTENTS

PREFACE

This document provides the main elements of CCW's management plan for the site named. It sets out what needs to be achieved on the site, the results of monitoring and advice on the action required. This document is made available through CCW's web site and may be revised in response to changing circumstances or new information. This is a technical document that supplements summary information on the web site.

One of the key functions of this document is to provide CCW's statement of the Conservation Objectives for the relevant Natura 2000 site. This is required to implement the Conservation (Natural Habitats, &c.) Regulations 1994, as amended (Section 4). As a matter of Welsh Assembly Government Policy, the provisions of those regulations are also to be applied to Ramsar sites in Wales.

1. VISION FOR THE SITE

This is a descriptive overview of what needs to be achieved for conservation on the site. It brings together and summarises the Conservation Objectives (part 4) into a single, integrated statement about the site. This relates to Southerndown Coast SSSI as a whole, of which Dunraven Bay SAC is a part.

The rock layers are exposed sufficiently for them to be examined, so that it is clear how each layer relates to the layers above and below in the sequence. The rocks and mineral deposits are clean and accessible in key areas along the current coastline within the site, and this is sustainable in the long term.

Woodland and scrub occurs in the steep sided Cwm Mawr. There is a gradual change from the lower growing shrubs such as gorse and blackthorn intermingled with bramble, which starts in the open mouths of the cwms, to more open mature woodland of ash with occasional sycamore in the steeper-sided parts of the cwms as you travel inland.

The species-rich neutral grassland covers half of the grassland areas and supports a mixture of grasses and other flowering plants, which bloom in succession from spring to late summer. The yellow pea flowers of birds-foot trefoil mix with the purple heads of betony and black knapweed. In more sheltered grassland areas, where soils are deeper and damp, slightly taller plants such as early summer populations of cowslips thrive. The north-facing slopes of Cwm-Bach are rich in mosses and liverworts, with frequent Neckera species, and calcareous (lime-rich soil) specialists such as rock-pocket moss. Many different insects and other invertebrates also find the conditions they need here. The dry soil and windy conditions limit the growth of these plants, and the turf is rarely very tall, although there is some variation in height. Breeding skylarks display between April and August, carefully hiding their nests in grass-tussocks.

The more calcareous grasslands, where soils are very thin and rocky outcrops occur, cover another quarter of the total grassland area. Such areas are associated with coastal herbs such as buck's horn plantain and wild or sea carrot. The close-cropped grassland is more open, with small patches of bare earth and rocks supporting drought tolerant plants such as wild thyme, knotted clover and yellow-wort, with its characteristic leaves joined in pairs to form a ring around the stem.

Approximately a quarter of the grassland on the site is covered by herb-rich, low-growing coastal grassland over the more exposed areas found on the south-facing seaward margins of both cwms, and part of the cliff edge at Trwyn-y-Witch. Although the turf in at least half of these areas is generally below ankle height, there is some variation in height. Within the lime-rich soils of Cwm Mawr and Cwm Bach, characteristic coastal herbs include bird's-foot trefoil, lady's bedstraw, common rockrose and salad burnet, together with carnation sedge, frequent wild or sea carrot and occasional buck's horn plantain, in a mainly a red fescue-dominated turf. At Trwyn-y-Witch, the buck's horn plantain is far more common in amongst the short red fescue grass, and occurs along with a characteristic coastal plant, thrift. Herbs, particularly cliff-edge species, flourish in a short turf of fescues. The turf has small patches of bare earth supporting drought tolerant plants like wild thyme and carline thistle. There is little or no bracken and scrub.

Species characteristic of disturbance, such as docks and creeping thistle are hard to find in any of the grasslands. Grasses indicative of rich soils such as rye-grass may be present but never dominate. The majority of the semi-improved grassland is reverting to its more unimproved form, with species typical of the surrounding species-rich neutral grassland.

The nationally rare and scarce plants have population sizes and distributions that are large enough to ensure their continued survival into the future. Shore dock can be found where fresh water seepages occur on the lower parts of the cliffs at Dunraven. Scattered across the slopes of Trwyn-y-Witch, Cwm Mawr and on the ramparts of the hill fort above Cwm Bach are frequent clumps of tuberous thistle, with slender, spineless flower stems over low mats of spiny leaves. Purple gromwell flourishes in the low scrub and maritime grassland on the south-facing slope of Cwm Mawr, and Trwyn-y-Witch. Clustered bellflower is scattered through the grasslands of the SSSI. Maidenhair fern grows in damp crevices on the cliff face.

Species-rich intertidal communities are found along this stretch of coast. The intertidal communities include reefs of honeycomb worms. These form crusts on rocky platforms and between boulders in the sand, with a variety of mussels, barnacles, sand binding red seaweeds, wracks and sand encrusted sea squirts. Overhanging rock and crevices harbour a wide variety of small marine animals such as sponges, sea mats and sea squirts and crabs. Caves at the back of the shore provide a habitat for animals that are able to withstand considerable scour from waves and sand. The inter-tidal remains a dynamic environment subject to the influence of the sea, and is mainly undisturbed by human influence.

2. DESCRIPTION OF THE SITE

2.1 Area and Designations Covered by this Plan

Grid reference: SS886727

Unitary authority: Vale of Glamorgan

Area (hectares): 6.47

Designations covered:

The Dunraven Bay SAC is notified as part of a much larger SSSI, Southerdown Coast SSSI. This has additional land or features that are not part of the cSAC interest features. Refer to Section 3.

Detailed maps of the designated sites are available through CCW's web site:

http://www.ccw.gov.uk/interactive-maps/protected-areas-map.aspx

For a summary map showing the coverage of this document see attached Unit Map.

2.2 Outline Description

Dunraven Bay SAC is situated on a southwest facing cliff about 1km south east of the village of Southerndown in the Vale of Glamorgan. The coastline is generally eroding and the 20 or so plants of shore dock growing here on damp coastal limestone are the only remnant of the species former Bristol Channel range. This has now declined to six individuals due to cliff falls removing plants. The Dunraven Bay population is a significant seed-source for recolonisation of Bristol Channel dunes and beachheads when future management restores these habitats to favourable condition.

2.3 Outline of Past and Current Management

The site has been sheep grazed over the years with possibly some hay cuts on an area of flatter ground within the SAC site grassland. It is still sheep grazed, but only in the winter months.

2.4 Management Units

The plan area has been divided into management units to enable practical communication about features, objectives, and management. This will also allow us to differentiate between the different designations where necessary. In this plan all the management units are in one ownership, and have been based on habitat and boundaries on the ground, such as fences. See map showing management units.

The following table confirms the relationships between the management units and the designations covered:

Unit no.	Unit name	SAC	SSSI	NNR/ CCW	Other
Dunraven Bay SAC					
1	**Dunraven Cliff face**	✔	✔		
2	**Dunraven Woodland**	✔	✔		
3	**Dunraven Grassland**	✔	✔		

3. THE SPECIAL FEATURES

3.1 Confirmation of Special Features

Designated feature	***Relationships, nomenclature etc***	***Conservation Objective no. in part 4***
SAC features		
Annex II species that are a primary reason for selection of this site ***1. Rumex rupestris (shore dock)*** **(EU species Code: 1441)***	Referred to as shore dock in this plan.	1
SPA features		
Not applicable		
Ramsar features		
Not applicable		
SSSI features (Southerndown Coast SSSI)		
2. Semi-natural woodland*		2
3. Scrub*		3
4. Species-rich neutral grassland*		4
5. Calcareous grassland*		5
6. Coastal grassland*		6
7. Tuberous thistle *Cirsium tuberosum**		7
8. Purple gromwell *Lithospermum purpurocaeruleum**		8
9. Assemblage of nationally rare and scarce vascular plants*		9
10. Sand-influenced biogenic reefs		10
11. Caves and overhangs*		11
12. Mineralogy of Wales – cliffs and foreshore		12
13 Permian - Triassic red beds		13
14. Hettangian – Pliensbachian*		14

Note: not all features within Southerndown Coast SSSI are present within the SAC. Those present indicated with an asterisk.

3.2 Special Features and Management Units

This section sets out the relationship between the special features and each management unit. This is intended to provide a clear statement about what each unit should be managed for, taking into account the varied needs of the different special features.

All special features are allocated to one of seven classes in each management unit. These classes are:

Key Features
KH - a 'Key Habitat' in the management unit, i.e. the habitat that is the main focus of management and monitoring effort, perhaps because of the dependence of a key species (see KS below). There will rarely be more than one Key Habitat in a unit.
KS – a 'Key Species' in the management unit, often driving both the selection and management of a Key Habitat.
Geo – an earth science feature that is the main focus of management and monitoring effort in a unit.

Other Features
Sym - habitats, species and earth science features that are of importance in a unit but are not the main focus of management or monitoring. These features will benefit from management for the key feature(s) identified in the unit. These may be classed as 'Sym' features because:

a) they are present in the unit but are of less conservation importance than the key feature; and/or
b) they are present in the unit but in small areas/numbers, with the bulk of the feature in other units of the site; and/or
c) their requirements are broader than and compatible with the management needs of the key feature(s).

Nm - an infrequently used category where features are at risk of decline within a unit as a result of meeting the management needs of the key feature(s), i.e. under Negative Management. These cases will usually be compensated for by management elsewhere in the plan, and can be used where minor occurrences of a feature would otherwise lead to apparent conflict with another key feature in a unit.
Mn - Management units with no special feature present but which are of importance for management of features elsewhere on a site e.g. livestock over-wintering area included within designation boundaries.
x – Features not present in the management unit.

The tables below sets out the relationship between the special features and management units identified in this plan:

<u>Background information on Dunraven Bay SAC</u>

Dunraven Bay SAC is part of the much larger Southerndown Coast SSSI. This SSSI has a large number of other features, in addition to shore dock.

Where shore dock is present (i.e. on the cliff face) it is the focus of management. In other units, management concentrates on the main habitat present.

Dunraven Bay SAC	**Management unit**		
	1	**2**	**3**
Unit name	**Cliff face**	**Woodland**	**Dunraven grassland**
SAC	✔	✔	✔
SSSI	✔	✔	✔
SAC features			
1. Shore dock	**KS**	x	***x***
SSSI features			
3. Semi-natural woodland	*x*	Sym	x
4. Scrub	*x*	Sym	x
5. Species-rich neutral grassland	*x*	x	**KH**
6. Calcareous grassland	*x*	x	sym
7. Coastal grassland	*x*	x	sym
8. Tuberous thistle *Cirsium tuberosum*	*x*	x	sym
9. Purple gromwell *Lithospermum purpurocaeruleum*	*x*	**KS**	sym
10. Assemblage of nationally scarce vascular plants	*x*	part present (sym)	part present (sym)
11. Sand-influenced biogenic reefs	*x*	*x*	*x*
12. Caves and overhangs	sym	*x*	*x*
13. Mineralogy of Wales – cliffs and foreshore	sym	*x*	*x*
14. Permian - Triassic red beds	*x*	*x*	*x*
15. Hettangian - Pliensbachian	*x*	*x*	*x*

4. CONSERVATION OBJECTIVES

Background to Conservation Objectives

a. Outline of the legal context and purpose of conservation objectives.

Conservation objectives are required by the 1992 'Habitats' Directive (92/43/EEC). The aim of the Habitats Directives is the maintenance, or where appropriate the restoration of the 'favourable conservation status' of habitats and species features for which SACs and SPAs are designated (see Box 1).

In the broadest terms, 'favourable conservation status' means a feature is in satisfactory condition and all the things needed to keep it that way are in place for the foreseeable future. CCW considers that the concept of favourable conservation status provides a practical and legally robust basis for conservation objectives for Natura 2000 and Ramsar sites.

Box 1
Favourable conservation status as defined in Articles 1(e) and 1(i) of the Habitats Directive

"The conservation status of a natural habitat is the sum of the influences acting on it and its typical species that may affect its long-term natural distribution, structure and functions as well as the long term survival of its typical species. The conservation status of a natural habitat will be taken as favourable when:

- Its natural range and areas it covers within that range are stable or increasing, and
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- The conservation status of its typical species is favourable.

The conservation status of a species is the sum of the influences acting on the species that may affect the long-term distribution and abundance of its populations. The conservation status will be taken as 'favourable' when:

- population dynamics data on the species indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis."

Achieving these objectives requires appropriate management and the control of factors that may cause deterioration of habitats or significant disturbance to species.

As well as the overall function of communication, Conservation objectives have a number of specific roles:

- Conservation planning and management.

  The conservation objectives guide management of sites, to maintain or restore the habitats and species in favourable condition.

- Assessing plans and projects.

  Article 6(3) of the 'Habitats' Directive requires appropriate assessment of proposed plans and projects against a site's conservation objectives. Subject to certain exceptions, plans or projects may not proceed unless it is established that they will not adversely affect the integrity of sites. This role for testing plans and projects also applies to the review of existing decisions and consents.

- Monitoring and reporting.

  The conservation objectives provide the basis for assessing the condition of a feature and the status of factors that affect it. CCW uses 'performance indicators' within the conservation objectives, as the basis for monitoring and reporting. Performance indicators are selected to provide useful information about the condition of a feature and the factors that affect it.

The conservation objectives in this document reflect CCW's current information and understanding of the site and its features and their importance in an international context. The conservation objectives are subject to review by CCW in light of new knowledge.

b. Format of the conservation objectives

There is one conservation objective for each feature listed in part 3. Each conservation objective is a composite statement representing a site-specific description of what is considered to be the favourable conservation status of the feature. These statements apply to a whole feature as it occurs within the whole plan area, although section 3.2 sets out their relevance to individual management units.

Each conservation objective consists of the following two elements:

1 Vision for the feature
2 Performance indicators

As a result of the general practice developed and agreed within the UK Conservation Agencies, conservation objectives include performance indicators, the selection of which should be informed by JNCC guidance on Common Standards Monitoring[1].

There is a critical need for clarity over the role of performance indicators within the conservation objectives. **A conservation objective, because it includes the vision for the feature, has meaning and substance independently of the performance indicators, and is more than the sum of the performance indicators**. The performance indicators are simply what make the conservation objectives measurable, and are thus part of, not a substitute for, the conservation objectives. Any feature attribute identified in the performance indicators should be represented in the vision for the feature, but not all elements of the vision for the feature will necessarily have corresponding performance indicators.

As well as describing the aspirations for the condition of the feature, the Vision section of each conservation objective contains a statement that the factors necessary to maintain those desired conditions are under control. Subject to technical, practical and resource constraints, factors which have an important influence on the condition of the feature are identified in the performance indicators.

[1] Web link: http://www.jncc.gov.uk/page-2199

4.1 Conservation Objective for Feature 1: *Rumex rupestris* (shore dock) (EU Species Code: (1441)

Vision for feature 1

The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:

- There are at least 10 mature plants at the site
- The plant present are flowering and setting seed
- The population is stable and viable in the long term.

Performance indicators for Feature 1

The performance indicators are part of the conservation objective, not a substitute for it. Assessment of plans and projects must be based on the entire conservation objective, not just the performance indicators.

Performance indicators for feature condition		
Attribute	***Attribute rationale and other comments***	***Specified limits***
A1. Extent of *Rumex rupestris*	A minimum number of plants are required to be present. They should not all be concentrated in one area, to reduce the chances of loss through cliff fall.	Shore dock continues to be present in Areas A and B (see Appendix 2)
A2. Condition of *Rumex rupestris*	A mature plant is one where inflorescence is greater than 10cm tall	At least 10 mature flowering plants.
Performance indicators for factors affecting the feature		
Factor	***Factor rationale and other comments***	***Operational Limits***
F1. Erosion and cliff fall	No limits have been set for this factor as they are beyond the control of the site manager.	None set.
F2. Scrub	There is the potential for scrub to spread onto areas where shore dock grows, shading it out.	*Upper limit*: no increase in area of scrub from 2003 area. *Lower Limit*: none set.

Other factors considered include – Availability of water seeping down the cliff face. Shore dock appears to prefer slightly damp ground.

FEATURES 2 TO 14 TO BE COMPLETED AT A LATER DATE.

5. ASSESSMENT OF CONSERVATION STATUS AND MANAGEMENT REQUIREMENTS

This part of the document provides:

- A summary of the assessment of the conservation status of each feature.
- A summary of the management issues that need to be addressed to maintain or restore each feature.

5.1 Conservation Status and Management Requirements of Feature 1: *Rumex rupestris* (shore dock) (EU Species Code: (1441)

Conservation Status of Feature 1

In September 2003, 14 plants with flowering spikes greater than 10cm were identified (10 of which were confirmed as being shore dock). There was at least one plant found in each of the two areas, A and B. Therefore these two attributes were considered to be favourable.

In October 2004, 10 plants were identified again with at least one plant in Area A and one in Area B. Therefore these attributes are again considered to be favourable. It is noted however that due to lateness in the season it was extremely difficult to locate the plants, even with binoculars and it is likely that more plants were present.

In 2006 a cliff fall swept away 4 of the plants, leaving 6 remaining. The feature is therefore considered to be **unfavourable**.

Management Requirements of Feature 1

The population is vulnerable to factors outside of the control of the site manager. The most obvious of are cliff falls, indeed a single event could lead to the extinction of the population within the SAC. Because a cliff fall has removed nearly half the plants at the site, the **conservation status** of this population is considered to be unfavourable. This is likely to remain so until measures are undertaken within the wider landscape of the Bristol Channel to restore and secure the survival of other sub-populations. This monitoring result applies to the SAC and the SSSI feature.

FEATURES 2 TO 14 TO BE COMPLETED AT A LATER DATE.

6. ACTION PLAN: SUMMARY

This section takes the management requirements outlined in Section 5 a stage further, assessing the specific management actions required on each management unit. This information is a summary of that held in CCW's Actions Database for sites, and the database will be used by CCW and partner organisations to plan future work to meet the Wales Environment Strategy targets for sites.

Unit Number	CCW Database Number	Unit Name	Summary of Conservation Management Issues	Action needed?
001	000852	Cliff face	The known site for shore dock is vulnerable to natural cliff falls and nothing can be done about this. Seeds from this population are held in the Wakehurst Place seed bank. CCW to monitor, and consider whether it would be appropriate to try to establish new plants at Dunraven Bay.	No
002	000853	Woodland	The woodland and scrub on the South side of Trwyn-y-Witch is important as the locality for stinking hellebore and as one of two localities within the SSSI for purple gromwell (the other is Cwm Mawr). Needs limited management to keep open the hellebore site. Purple gromwell favours woodland edge.	Yes
003	000854	Dunraven grassland	Grassland within the SAC is grazed by sheep during the winter months. This is considered beneficial, although the type and timing of grazing is dictated by the heavy recreational use of Trwyn y Witch. The Vale of Glamorgan Council's Heritage Coast Team manages and monitors recreation here.	Yes

7. GLOSSARY

This glossary defines the some of the terms used in this **Core Management Plan**. Some of the definitions are based on definitions contained in other documents, including legislation and other publications of CCW and the UK nature conservation agencies. None of these definitions is legally definitive.

Action A recognisable and individually described act, undertaking or **project** of any kind, specified in section 6 of a **Core Management Plan** or **Management Plan**, as being required for the **conservation management** of a site.

Attribute A quantifiable and monitorable characteristic of a **feature** that, in combination with other such attributes, describes its **condition**.

Common Standards Monitoring A set of principles developed jointly by the UK conservation agencies to help ensure a consistent approach to **monitoring** and reporting on the **features** of sites designated for nature conservation, supported by guidance on identification of **attributes** and monitoring methodologies.

Condition A description of the state of a feature in terms of qualities or **attributes** that are relevant in a nature conservation context. For example the condition of a habitat usually includes its extent and species composition and might also include aspects of its ecological functioning, spatial distribution and so on. The condition of a species

population usually includes its total size and might also include its age structure, productivity, relationship to other populations and spatial distribution. Aspects of the habitat(s) on which a species population depends may also be considered as attributes of its condition.

Condition assessment The process of characterising the **condition** of a **feature** with particular reference to whether the aspirations for its condition, as expressed in its **conservation objective**, are being met.

Condition categories The **condition** of **feature** can be categorised, following **condition assessment** as one of the following[2]:

Favourable: maintained;
Favourable: recovered;
Favourable: un-classified
Unfavourable: recovering;
Unfavourable: no change;
Unfavourable: declining;
Unfavourable: un-classified
Partially destroyed;
Destroyed.

Conservation management Acts or undertaking of all kinds, including but not necessarily limited to **actions,** taken with the aim of achieving the **conservation objectives** of a site. Conservation management includes the taking of statutory and non-statutory measures, it can include the acts of any party and it may take place outside site boundaries as well as within sites. Conservation management may also be embedded within other frameworks for land/sea management carried out for purposes other than achieving the conservation objectives.

Conservation objective The expression of the desired **conservation status** of a **feature,** expressed as a **vision for the feature** and a series of **performance indicators**. The conservation objective for a feature is thus a composite statement, and each feature has one conservation objective.

Conservation status A description of the state of a **feature** that comprises both its **condition** and the state of the **factors** affecting or likely to affect it. Conservation status is thus a characterisation of both the current state of a feature and its future prospects.

Conservation status assessment The process of characterising the **conservation status** of a **feature** with particular reference to whether the aspirations for it, as expressed in its **conservation objective**, are being met. The results of conservation status assessment can be summarised either as 'favourable' (i.e. conservation objectives are met) or unfavourable (i.e. conservation objectives are not met). However the value of conservation status assessment in terms of supporting decisions about **conservation management**, lies mainly in the details of the assessment of feature **condition**, **factors** and trend

[2] See JNCC guidance on Common Standards Monitoring http://www.jncc.gov.uk/page-2272

information derived from comparisons between current and previous conservation status assessments and condition assessments.

Core Management Plan A CCW document containing the conservation objectives for a site and a summary of other information contained in a full site **Management Plan**.

Factor Anything that has influenced, is influencing or may influence the **condition** of a **feature**. Factors can be natural processes, human activities or effects arising from natural process or human activities, They can be positive or negative in terms of their influence on features, and they can arise within a site or from outside the site. Physical, socio-economic or legal constraints on **conservation management** can also be considered as factors.

Favourable condition See **condition** and **condition assessment**

Favourable conservation status See **conservation status** and **conservation status assessment.**[3]

Feature The species population, habitat type or other entity for which a site is designated. The ecological or geological interest which justifies the designation of a site and which is the focus of conservation management.

Integrity See **site integrity**

Key Feature The habitat or species population within a **management unit** that is the primary focus of **conservation management** and **monitoring** in that unit.

Management Plan The full expression of a designated site's legal status, **vision**, **features**, **conservation objectives**, **performance indicators** and management requirements. A complete management plan may not reside in a single document, but may be contained in a number of documents (including in particular **the Core Management Plan**) and sets of electronically stored information.

Management Unit An area within a site, defined according to one or more of a range of criteria, such as topography, location of **features**, tenure, patterns of land/sea use. The key characteristic of management units is to reflect the spatial scale at which **conservation management** and **monitoring** can be most effectively organised. They are used as the primary basis for differentiating priorities for conservation management and monitoring in different parts of a site, and for facilitating communication with those responsible for management of different parts of a site.

Monitoring An intermittent (regular or irregular) series of observations in time, carried out to show the extent of compliance with a formulated standard or degree of deviation from an expected norm. In **Common Standards Monitoring**, the formulated standard is the quantified expression of favourable **condition** based on **attributes**.

Operational limits The levels or values within which a **factor** is considered to be acceptable in terms of its influence on a **feature**. A factor may have both upper and lower

[3] A full definition of favourable conservation status is given in Section 4.

operational limits, or only an upper limit or lower limit. For some factors an upper limit may be zero.

Performance indicators The **attributes** and their associated **specified limits**, together with **factors** and their associated **operational limits,** which provide the standard against which information from **monitoring** and other sources is used to determine the degree to which the **conservation objectives** for a **feature** are being met. Performance indicators are part of, not the same as, conservation objectives. See also **vision for the feature**.

Plan or project **Project:** Any form of construction work, installation, development or other intervention in the environment, the carrying out or continuance of which is subject to a decision by any public body or statutory undertaker.
Plan: a document prepared or adopted by a public body or statutory undertaker, intended to influence decisions on the carrying out of **projects.** Decisions on plans and projects which affect Natura 2000 and Ramsar sites are subject to specific legal and policy procedures.

Site integrity The coherence of a site's ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it is designated.

Site Management Statement (SMS) The document containing CCW's views about the management of a site issued as part of the legal notification of an SSSI under section 28(4) of the Wildlife and Countryside Act 1981, as substituted.

Special Feature See **feature**.

Specified limit The levels or values for an **attribute** which define the degree to which the attribute can fluctuate without creating cause for concern about the **condition** of the **feature**. The range within the limits corresponds to favourable, the range outside the limits corresponds to unfavourable. Attributes may have lower specified limits, upper specified limits, or both.

Unit See **management unit.**

Vision for the feature The expression, within a **conservation objective**, of the aspirations for the **feature** concerned. See also **performance indicators.**

Vision Statement The statement conveying an impression of the whole site in the state that is intended to be the product of its **conservation management.** A 'pen portrait' outlining the **conditions** that should prevail when all the **conservation objectives** are met. A description of the site as it would be when all the **features** are in **favourable condition**.

Cyngor Cefn Gwlad Cymru
Countryside Council for Wales

Unedau Rheoli
Management Units

Dunraven Bay

Map 1 / 1

Côd Safle y GE
EC Site Code **UK0030139**

Ardal Cadwraeth Arbennig (ACA)
Special Area of Conservation (SAC)

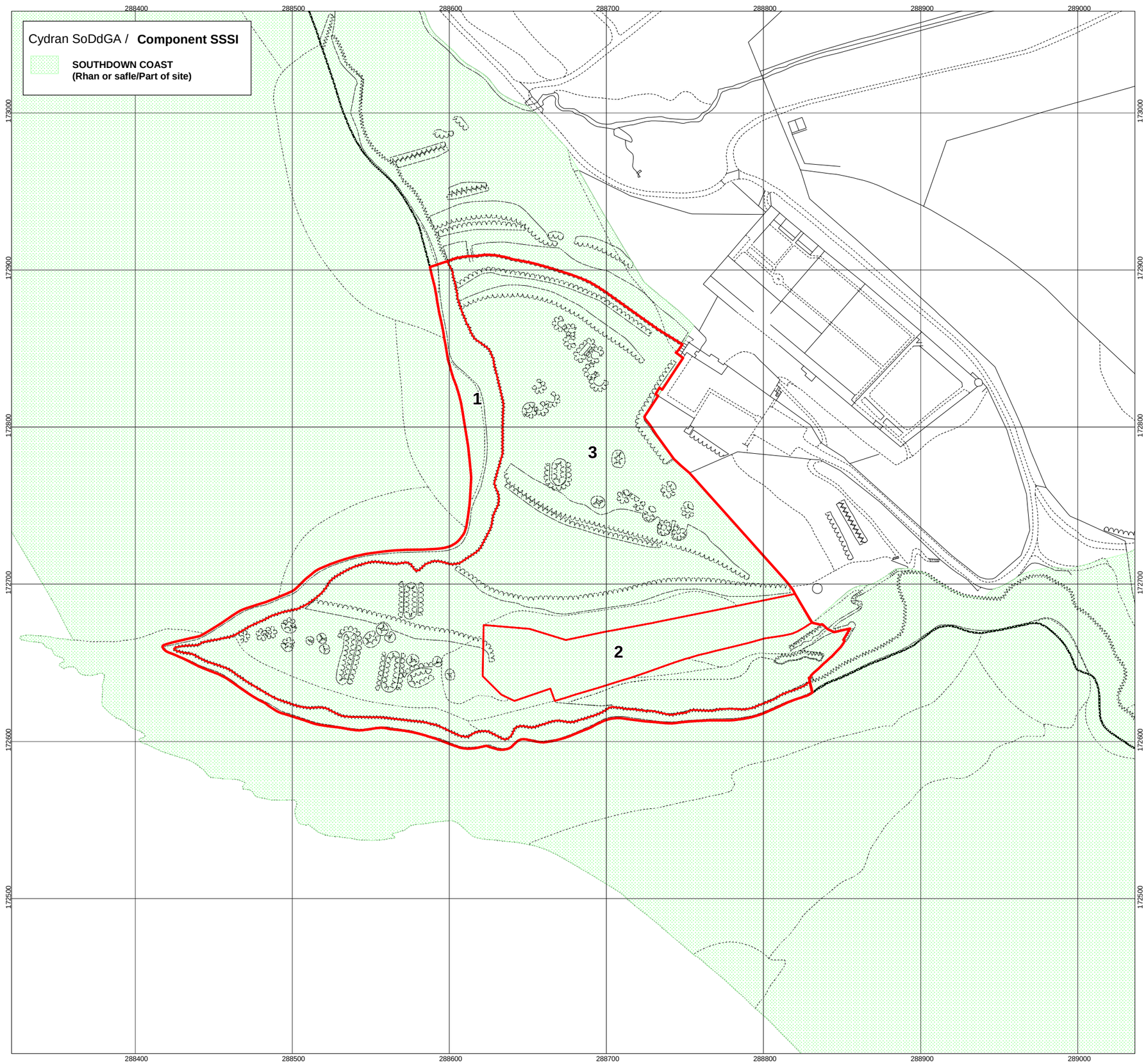
1 Ffiniau'r unedau a chyfeirnodau
Boundary of unit and Ref number

Tafluniad map: Y Grid Cenedlaethol Prydeinig
Projection: British National Grid

G/N

Graddfa
Scale **1:2,500** **05/04/2008**

Noder:Data wedi ei gipio ar raddfa 1:2,500.
Note: Data captured at 1:2,500 scale.



STANDARD DATA FORM for sites within the ‘UK national site network of European sites’

Special Protection Areas (SPAs) are classified and Special Areas of Conservation (SACs) are designated under:

- the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales (including the adjacent territorial sea) and to a limited extent in Scotland (reserved matters) and Northern Ireland (excepted matters);
- the Conservation (Natural Habitats &c.) Regulations 1994 (as amended) in Scotland;
- the Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland; and
- the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) in the UK offshore area.

Each SAC or SPA (forming part of the UK national site network of European sites) has its own Standard Data Form containing site-specific information. The information provided here generally follows the same documenting format for SACs and SPAs, as set out in the Official Journal of the European Union recording the Commission Implementing Decision of 11 July 2011 (2011/484/EU).

Please note that these forms contain a number of codes, all of which are explained either within the data forms themselves or in the end notes.

More general information on SPAs and SACs in the UK is available from the SPA homepage and SAC homepage on the JNCC website. These webpages also provide links to Standard Data Forms for all SAC and SPA sites in the UK.

https://jncc.gov.uk/

NATURA 2000 - STANDARD DATA FORM

For Special Protection Areas (SPA),
Proposed Sites for Community Importance (pSCI),
Sites of Community Importance (SCI) and
for Special Areas of Conservation (SAC)

SITE **UK0030139**

SITENAME **Dunraven Bay**

TABLE OF CONTENTS

1. SITE IDENTIFICATION

Back to top

1.1 Type	1.2 Site code
B	UK0030139

1.3 Site name

Dunraven Bay

1.4 First Compilation date	1.5 Update date
2000-10	2015-12

1.6 Respondent:

Name/Organisation:	Joint Nature Conservation Committee
Address:	Joint Nature Conservation Committee Monkstone House City Road Peterborough PE1 1JY
Email:	

Date site proposed as SCI:	2000-10
Date site confirmed as SCI:	2004-12
Date site designated as SAC:	2004-12
National legal reference of SAC designation:	Regulations 11 and 13-15 of the Conservation of Habitats and Species Regulations 2010 (http://www.legislation.gov.uk/uksi/2010/490/contents/made).

2. SITE LOCATION

Back to top

2.1 Site-centre location [decimal degrees]:

Longitude	Latitude
-3.6025	51.44222222

2.2 Area [ha]:

6.45

2.3 Marine area [%]

0.0

2.4 Sitelength [km]:

0.0

2.5 Administrative region code and name

NUTS level 2 code	Region Name
UKL2	East Wales

2.6 Biogeographical Region(s)

Atlantic (100.0 %)

3. ECOLOGICAL INFORMATION

Back to top

3.1 Habitat types present on the site and assessment for them

Annex I Habitat types						Site assessment			
Code	PF	NP	Cover [ha]	Cave [number]	Data quality	A|B|C|D	A|B|C		
						Representativity	Relative Surface	Conservation	Global
1230			1.19	0	G	D			
6210			1.19	0	G	D			

- **PF:** for the habitat types that can have a non-priority as well as a priority form (6210, 7130, 9430) enter "X" in the column PF to indicate the priority form.
- **NP:** in case that a habitat type no longer exists in the site enter: x (optional)
- **Cover:** decimal values can be entered
- **Caves:** for habitat types 8310, 8330 (caves) enter the number of caves if estimated surface is not available.
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation)

3.2 Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site evaluation for them

Species					Population in the site					Site assessment	
		Scientific									

G	Code	Name	S	NP	T	Size		Unit	Cat.	D.qual.	A|B|C|D	A|B|C		
						Min	Max				Pop.	Con.	Iso.	Glo.
P	1441	Rumex rupestris			p	11	50	i		M	B	B	A	B

- **Group:** A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Type:** p = permanent, r = reproducing, c = concentration, w = wintering (for plant and non-migratory species use permanent)
- **Unit:** i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see reference portal)
- **Abundance categories (Cat.):** C = common, R = rare, V = very rare, P = present - to fill if data are deficient (DD) or in addition to population size information
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation); VP = 'Very poor' (use this category only, if not even a rough estimation of the population size can be made, in this case the fields for population size can remain empty, but the field "Abundance categories" has to be filled in)

4. SITE DESCRIPTION

Back to top

4.1 General site character

Habitat class	% Cover
N14	17.5
N16	12.5
N05	26.5
N09	18.5
N10	25.0
Total Habitat Cover	100

Other Site Characteristics

1 Terrestrial: Soil & Geology: nutrient-poor,neutral,basic,limestone 2 Terrestrial: Geomorphology and landscape: coastal,slope,crags/ledges,lowland 4 Marine: Geomorphology: cliffs

4.2 Quality and importance

Rumex rupestris for which this is considered to be one of the best areas in the United Kingdom.

4.3 Threats, pressures and activities with impacts on the site

The most important impacts and activities with high effect on the site

Negative Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i|o|b]
H	K01		B

Positive Impacts			
Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i|o|b]
M	U		I

Rank: H = high, M = medium, L = low
Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification,
T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions
i = inside, o = outside, b = both

4.5 Documentation

The Natural Resources Wales weblink below provides access to information on its designated sites. Detailed information about this Natura 2000 site can be accessed via the Management Plan link provided in Section 6.2. See also the 'UK Approach' document for more information (link via the JNCC website).

Link(s): https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/protected-areas-of-lan

http://jncc.defra.gov.uk/pdf/Natura2000_StandardDataForm_UKApproach_Dec2015.pdf

5. SITE PROTECTION STATUS (optional)

Back to top

5.1 Designation types at national and regional level:

Code	Cover [%]	Code	Cover [%]	Code	Cover [%]
UK04	100.0				

6. SITE MANAGEMENT

Back to top

6.1 Body(ies) responsible for the site management:

Organisation:	Natural Resources Wales
Address:	
Email:	

6.2 Management Plan(s):

An actual management plan does exist:

- [X] Yes — Name: DUNRAVEN BAY
  Link: https://www.naturalresources.wales/media/671785/Dunraven%20Core%20SAC%20plan%2015.4.08.pdf
- [ ] No, but in preparation
- [ ] No

EXPLANATION OF CODES USED IN THE SPECIAL AREA OF CONSERVATION (SAC) AND SPECIAL PROTECTION AREA (SPA) STANDARD DATA FORMS

The codes in the table below generally follow those explained in the official European Union guidelines for the Standard Data Form (also referencing the relevant page number).

1.1 Site type

CODE	DESCRIPTION	PAGE NO
A	SPA (classified Special Protection Area)	53
B	cSAC, SCI or SAC (candidate Special Area of Conservation, Site of Community Importance, designated Special Area of Conservation)	53
C	SPA area/boundary is the same as the cSAC/SCI/SAC i.e. a co-classified/designated site (Note: this situation only occurs in Gibraltar)	53

3.1 Habitat code

CODE	DESCRIPTION	PAGE NO
1110	Sandbanks which are slightly covered by sea water all the time	57
1130	Estuaries	57
1140	Mudflats and sandflats not covered by seawater at low tide	57
1150	Coastal lagoons	57
1160	Large shallow inlets and bays	57
1170	Reefs	57
1180	Submarine structures made by leaking gases	57
1210	Annual vegetation of drift lines	57
1220	Perennial vegetation of stony banks	57
1230	Vegetated sea cliffs of the Atlantic and Baltic Coasts	57
1310	Salicornia and other annuals colonizing mud and sand	57
1320	Spartina swards (Spartinion maritimae)	57
1330	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	57
1340	Inland salt meadows	57
1420	Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi)	57
2110	Embryonic shifting dunes	57
2120	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")	57
2130	Fixed coastal dunes with herbaceous vegetation ("grey dunes")	57
2140	Decalcified fixed dunes with Empetrum nigrum	57
2150	Atlantic decalcified fixed dunes (Calluno-Ulicetea)	57
2160	Dunes with Hippopha• rhamnoides	57
2170	Dunes with Salix repens ssp. argentea (Salicion arenariae)	57
2190	Humid dune slacks	57
21A0	Machairs (* in Ireland)	57
2250	Coastal dunes with Juniperus spp.	57
2330	Inland dunes with open Corynephorus and Agrostis grasslands	57
3110	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)	57
3130	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea	57
3140	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.	57
3150	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation	57

CODE	DESCRIPTION	PAGE NO
3160	Natural dystrophic lakes and ponds	57
3170	Mediterranean temporary ponds	57
3180	Turloughs	57
3260	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation	57
4010	Northern Atlantic wet heaths with Erica tetralix	57
4020	Temperate Atlantic wet heaths with Erica ciliaris and Erica tetralix	57
4030	European dry heaths	57
4040	Dry Atlantic coastal heaths with Erica vagans	57
4060	Alpine and Boreal heaths	57
4080	Sub-Arctic Salix spp. scrub	57
5110	Stable xerothermophilous formations with Buxus sempervirens on rock slopes (Berberidion p.p.)	57
5130	Juniperus communis formations on heaths or calcareous grasslands	57
6130	Calaminarian grasslands of the Violetalia calaminariae	57
6150	Siliceous alpine and boreal grasslands	57
6170	Alpine and subalpine calcareous grasslands	57
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)	57
6230	Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)	57
6410	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)	57
6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	57
6510	Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)	57
6520	Mountain hay meadows	57
7110	Active raised bogs	57
7120	Degraded raised bogs still capable of natural regeneration	57
7130	Blanket bogs (* if active bog)	57
7140	Transition mires and quaking bogs	57
7150	Depressions on peat substrates of the Rhynchosporion	57
7210	Calcareous fens with Cladium mariscus and species of the Caricion davallianae	57
7220	Petrifying springs with tufa formation (Cratoneurion)	57
7230	Alkaline fens	57
7240	Alpine pioneer formations of the Caricion bicoloris-atrofuscae	57
8110	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)	57
8120	Calcareous and calcshist screes of the montane to alpine levels (Thlaspietea rotundifolii)	57
8210	Calcareous rocky slopes with chasmophytic vegetation	57
8220	Siliceous rocky slopes with chasmophytic vegetation	57
8240	Limestone pavements	57
8310	Caves not open to the public	57
8330	Submerged or partially submerged sea caves	57
9120	Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion)	57
9130	Asperulo-Fagetum beech forests	57
9160	Sub-Atlantic and medio-European oak or oak-hornbeam forests of the Carpinion betuli	57
9180	Tilio-Acerion forests of slopes, screes and ravines	57
9190	Old acidophilous oak woods with Quercus robur on sandy plains	57
91A0	Old sessile oak woods with Ilex and Blechnum in the British Isles	57
91C0	Caledonian forest	57
91D0	Bog woodland	57
91E0	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)	57
91J0	Taxus baccata woods of the British Isles	57

3.1 Habitat representativity (abbreviated to 'Representativity' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent representatively	57
B	Good representatively	57
C	Significant representatively	57
D	Non-significant presence representatively	57

3.1 Relative surface

CODE	DESCRIPTION	PAGE NO
A	> 15%-100%	58
B	> 2%-15%	58
C	≤ 2%	58

3.1 Degree of conservation (abbreviated to 'Conservation' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	59
B	Good conservation	59
C	Average or reduced conservation	59

3.1 Global assessment (abbreviated to 'Global' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	59
B	Good value	59
C	Significant value	59

3.2 Population (abbreviated to 'Pop.' in data form)

CODE	DESCRIPTION	PAGE NO
A	> 15%-100%	62
B	> 2%-15%	62
C	≤ 2%	62
D	Non-significant population	62

3.2 Degree of conservation (abbreviated to 'Con.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	63
B	Good conservation	63
C	Average or reduced conservation	63

3.2 Isolation (abbreviated to 'Iso.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Population (almost) Isolated	63
B	Population not-isolated, but on margins of area of distribution	63
C	Population not-isolated within extended distribution range	63

3.2 Global Grade (abbreviated to 'Glo.' or 'G.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	63
B	Good value	63
C	Significant value	63

3.3 Other species – essentially covers bird assemblage types

CODE	DESCRIPTION	PAGE NO
WATR	Non-breeding waterbird assemblage	UK specific code
SBA	Breeding seabird assemblage	UK specific code

BBA	Breeding bird assemblage (applies only to sites classified pre 2000)	UK specific code

4.1 Habitat class code

CODE	DESCRIPTION	PAGE NO
N01	Marine areas, Sea inlets	65
N02	Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins)	65
N03	Salt marshes, Salt pastures, Salt steppes	65
N04	Coastal sand dunes, Sand beaches, Machair	65
N05	Shingle, Sea cliffs, Islets	65
N06	Inland water bodies (Standing water, Running water)	65
N07	Bogs, Marshes, Water fringed vegetation, Fens	65
N08	Heath, Scrub, Maquis and Garrigue, Phygrana	65
N09	Dry grassland, Steppes	65
N10	Humid grassland, Mesophile grassland	65
N11	Alpine and sub-Alpine grassland	65
N14	Improved grassland	65
N15	Other arable land	65
N16	Broad-leaved deciduous woodland	65
N17	Coniferous woodland	65
N19	Mixed woodland	65
N21	Non-forest areas cultivated with woody plants (including Orchards, groves, Vineyards, Dehesas)	65
N22	Inland rocks, Screes, Sands, Permanent Snow and ice	65
N23	Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites)	65
N25	Grassland and scrub habitats (general)	65
N26	Woodland habitats (general)	65

4.3 Threats code

CODE	DESCRIPTION	PAGE NO
A01	Cultivation	65
A02	Modification of cultivation practices	65
A03	Mowing / cutting of grassland	65
A04	Grazing	65
A05	Livestock farming and animal breeding (without grazing)	65
A06	Annual and perennial non-timber crops	65
A07	Use of biocides, hormones and chemicals	65
A08	Fertilisation	65
A10	Restructuring agricultural land holding	65
A11	Agriculture activities not referred to above	65
B01	Forest planting on open ground	65
B02	Forest and Plantation management & use	65
B03	Forest exploitation without replanting or natural regrowth	65
B04	Use of biocides, hormones and chemicals (forestry)	65
B06	Grazing in forests/ woodland	65
B07	Forestry activities not referred to above	65
C01	Mining and quarrying	65
C02	Exploration and extraction of oil or gas	65
C03	Renewable abiotic energy use	65
D01	Roads, paths and railroads	65
D02	Utility and service lines	65
D03	Shipping lanes, ports, marine constructions	65
D04	Airports, flightpaths	65
D05	Improved access to site	65
E01	Urbanised areas, human habitation	65
E02	Industrial or commercial areas	65

CODE	DESCRIPTION	PAGE NO
E03	Discharges	65
E04	Structures, buildings in the landscape	65
E06	Other urbanisation, industrial and similar activities	65
F01	Marine and Freshwater Aquaculture	65
F02	Fishing and harvesting aquatic ressources	65
F03	Hunting and collection of wild animals (terrestrial), including damage caused by game (excessive density), and taking/removal of terrestrial animals (including collection of insects, reptiles, amphibians, birds of prey, etc., trapping, poisoning, poaching, predator control, accidental capture (e.g. due to fishing gear), etc.)	65
F04	Taking / Removal of terrestrial plants, general	65
F05	Illegal taking/ removal of marine fauna	65
F06	Hunting, fishing or collecting activities not referred to above	65
G01	Outdoor sports and leisure activities, recreational activities	65
G02	Sport and leisure structures	65
G03	Interpretative centres	65
G04	Military use and civil unrest	65
G05	Other human intrusions and disturbances	65
H01	Pollution to surface waters (limnic & terrestrial, marine & brackish)	65
H02	Pollution to groundwater (point sources and diffuse sources)	65
H03	Marine water pollution	65
H04	Air pollution, air-borne pollutants	65
H05	Soil pollution and solid waste (excluding discharges)	65
H06	Excess energy	65
H07	Other forms of pollution	65
I01	Invasive non-native species	65
I02	Problematic native species	65
I03	Introduced genetic material, GMO	65
J01	Fire and fire suppression	65
J02	Human induced changes in hydraulic conditions	65
J03	Other ecosystem modifications	65
K01	Abiotic (slow) natural processes	65
K02	Biocenotic evolution, succession	65
K03	Interspecific faunal relations	65
K04	Interspecific floral relations	65
K05	Reduced fecundity/ genetic depression	65
L05	Collapse of terrain, landslide	65
L07	Storm, cyclone	65
L08	Inundation (natural processes)	65
L10	Other natural catastrophes	65
M01	Changes in abiotic conditions	65
M02	Changes in biotic conditions	65
U	Unknown threat or pressure	65
XO	Threats and pressures from outside the Member State	65

5.1 Designation type codes

CODE	DESCRIPTION	PAGE NO
UK00	No Protection Status	67
UK01	National Nature Reserve	67
UK04	Site of Special Scientific Interest (GB)	67
UK05	Marine Conservation Zone	67
UK06	Nature Conservation Marine Protected Area	67
UK86	Special Area (Channel Islands)	67
UK98	Area of Special Scientific Interest (NI)	67
IN00	Ramsar Convention site	67
IN08	Special Protection Area	67
IN09	Special Area of Conservation	67

Appendix 6.

Scoping Response (October 2025)

Chapter on Transport

his chapter sets out the proposed scope, methodology and key data sources for the Traffic & Movement chapter of the Environmental Statement (ES) that will be produced to assess the outline planning application for the proposed development. This chapter will be authored by Transport Planning Link. The approach will follow the Institute of Environmental Management & Assessment (IEMA) Environmental Assessment of Traffic and Movement Guidelines (July 2023).

The Local Authorities Highways Officer has advised they I have no comments on the scoping opinion at this stage as the data is too coarse to be able to comment. Details on the highway layout and arrangement are still being decided, and traffic flows are still being modelled. It will need a robust transport statement to be included within the transport section in any EIA.

Summary: A robust transport statement and assessment will need to be undertaken and included within the Transport Chapter.

7.2 ASPECTS SCOPED OUT

The SA proposes to scope out cumulative effects, waste, air quality, noise, ground conditions, lighting, utilities, energy, landscape and visual and land uses from the Environmental Statement. This are assessed below:

Cumulative Effects

The SA proposes to scope out cumulative effects from the Environmental Statement, as the screening opinion identified no existing development, and / or approved development that was deemed likely to have cumulative effect alongside the proposed development as such agree with that this can be scoped out.

Waste

Its agreed that waste impacts are unlikely to be significant and likely to be those normally produced from construction sites and can be dealt with via a waste management plan as part of the planning process.

Pollution and Nuisance (noise, vibration, air quality, lighting, heat and radiation)

Shared Regulatory Services have I have reviewed Scoping Assessment, it is noted that the applicant wishes to scope out noise. However, there are numerous potential noise sources comprising new cafes and restaurants, leisure uses, shops, arts, community facilities, and a hotel as well as the MUGA, skate parks, additional car parking and flexible public realm areas which can potentially include accommodation for motorhomes etc. There is also an existing Aldi and bus station where new housing is proposed alongside these. Therefore, all these noise sources will need to be assessed to determine the likely significant effects of the proposed development on the environment with respect to noise and vibration effects during the construction and operation of the development and the suitability of where the residential dwellings will be located with respect to the other noise sources.

The methodology regarding construction noise and assessment of traffic noise is agreed. It is also noted that there are to be flexible public realm areas that could be used to provide space for holiday motorhomes and accommodation and new public parking areas to provide up to 250 spaces and the enhancement of the Hillsboro Car Park to increase capacity up to 400 spaces. The applicant will be expected to demonstrate where the holiday homes and accommodation will be located and how it will be ensured that these camping areas do not impact on existing or proposed dwellings and demonstrate that sufficient facilities will be provided e.g. toilet and washing facilities.

Fixed plant and other noise sources which fall within the scope of BS4142 must be assessed in accordance with that standard, including garden amenity spaces as opposed to using