

Bridgend Local Development Plan

2006-2021

Cyngor Bwrdeistref Sirol



Habitats Regulations Assessment

Revised March 2012



BRIDGEND COUNTY
BOROUGH COUNCIL

Habitats Regulations Assessment of the Bridgend Local Development Plan – Deposit Proposals

Revised Version

March 2012



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1 Introduction

- 1.1 Habitats Regulations Assessment (HRA) is required under the European Directive (92/43/EEC) on the 'conservation of natural habitats and wild fauna and flora'. The Directive seeks to protect the most valuable habitats and species in Europe. It came into force in the UK in 1994 and was reissued in 2010. The current regulations are known as the 'Conservation of Habitats and Species Regulations 2010'. Alongside the European Birds Directive (79/408/EEC) this legislation sets the framework for the creation of a network of protected sites across Europe.
- 1.2 Natura 2000 sites include those designated as Special Areas of Conservation (SACs) for their species and habitats and Special Areas of Protection (SPAs) designated for the protection of birds. In Wales it has been agreed to also include sites designated under the Ramsar Convention as Natura 2000 network of protected sites. For the purposes of completeness it is also suitable to include those sites that are currently seeking full designation as part of the Natura 2000 network, namely candidate SAC sites, and potential SPA sites.
- 1.3 Initially the Habitats Directive was misinterpreted into UK legislation and did not require the assessment land use plans for their potential to impact on Natura 2000 sites. A ruling from the European Court of Justice in October 2005 identified that this was incorrect and the Directive was being improperly implemented. The revised legislation, The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007 was adopted to rectify this situation and set out the requirement to require the assessment of land use plans.
- 1.4 Any plan or project that has the possibility of impacting on a Natura 2000 site must be assessed to ascertain the likelihood and significance of its effects to the integrity of the site. The Habitats Directive Articles 6(3) and 6(4) sets the requirement for assessment as:
"Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans and projects, shall be subject to Appropriate Assessment of its implications for the site in view of the site's conservation objectives..."

2 The Habitats Regulation Assessment process

- 2.1 Guidance on Habitats Regulations Assessment (HRA) is set out as an annex Wealth Assembly Government Technical Advice Note 5: Nature conservation and planning. This is *'The appraisal of development plans in Wales under the provisions of the Habitats Regulations'* (September 2009).
- 2.2 The HRA process comprises a number of key stages. Screening, to determine the likelihood of impacts on Natura 2000 sites in and around the plan area is the initial stage of HRA. An initial screening was completed on the LDP Pre-Deposit Proposals (November 2008). This is now a full screening, and assessment where necessary, of the Deposit LDP (2011). The intended outcome of this stage is a decision as to whether it is necessary to proceed with further stages of HRA as there is a possibility of significant impacts, or whether these impacts are so unlikely as to make further study unnecessary. This stage of screening area therefore involves:
- identification of all the sites in and round the plan area that may be affected by the LDP (section 3, Appendix 1 and Appendix 9)
 - gaining an understanding of the conservation objectives of the European sites (section 4 and Appendix 3)
 - establishing the main mechanisms by which the LDP could influence the Natura 2000 sites (section 5 and Appendix 4 and 11)
 - drawing out what the specific impacts may be for each site and relevance to the LDP (section 6 and Appendix 5 and 6)
 - looking for the possible impacts of the LDP in combination with other plans, programmes and strategies (section 7 and Appendix 8)
 - concluding the HRA and making decisions on what the next steps of HRA should be (section 9 and Appendix 5 and 6).
- 2.3 Table 2.1 shows the stages of the HRA.

Table 2.1: Stages of Habitats Regulations Assessment

Screening	<ul style="list-style-type: none"> • Identify Natura 2000 (N2K) sites within and adjoining the LDP area and acquire, examine and understand the conservation objectives for each feature of the site. • Consider the changes that policies and proposals in the plan may cause. • Assess whether any elements of the plan are likely to have a significant effect on any interest feature of each N2K site, either indirectly, directly, alone or in combination with other projects and plans. • If no significant effects are likely to occur as a result of implementation, the plan (or certain policies and proposals within it) can be published with no further reference to the Habitat Regulations, i.e. 'screened out' from stage 2. If there are likely significant effects arising from elements of the plan on certain N2K sites, or it is uncertain whether such effects will be significant, progress to stage 2. • At this stage, as set out in the 'Draft Guidance for plan making authorities in Wales' it is acceptable for the screening processes to
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	set out measures for avoiding, cancellation and reduction measures to be applied to remove likely significant effects. This removes the need to moved onto the more detailed appropriate assessment stages.
Appropriate Assessment	<ul style="list-style-type: none"> • Undertake an assessment of the implications of the plan (those policies and proposals within it identified in stage 1 as requiring AA) for each N2K site likely to be affected, in light of their conservation objectives. • Consider how the plan in combination with other plans or projects will interact and affect the site when implemented. • Consider how the effect of the plan on the integrity of the site could be mitigated and consider alternatives or develop mitigation measures. • If it can be demonstrated that the plan will not have an adverse effect on the N2K, the plan can be adopted. If the plan is still likely to have an adverse impact on the site(s) progress to stage 3.
Assessment where no alternatives exist	<ul style="list-style-type: none"> • The competent authority must demonstrate that there are no alternative solutions to the plan which are less damaging. • The competent authority must establish if there are <i>'imperative reasons of overriding public interest'</i> to proceed with the plan or policy. • Identify and agree compensation measures and how these will be monitored.

- 2.4 In practice the stages of HRA shown in the table run together. For instance, at screening stages it is useful to identify strategic or spatial issues in the LDP that may result in impacts on Natura 2000 sites. This allows for the opportunity for these impacts to be avoided early on in the plan preparation process, by seeking alternative approaches or locations for growth.
- 2.5 If the local planning authority determines, with the agreement of statutory bodies, that the LDP is not likely to have significant effects on European sites it may proceed without further reference to the HRA process.
- 2.6 If it is determined that further HRA is required the next steps are likely to include the need for additional information on the proposals and policies of the LDP¹.
- 2.7 This stage of the HRA will be looking for ways that any significant effects can be avoided or mitigated against. In order for the LDP to proceed it would have to be shown that this is possible. Where significant effects are identified it may be possible to mitigate against site specific impacts using 'conventional' mitigation measures. This includes measures to prevent disturbance, use further appropriate assessment, setting planning obligations or conditions. If such an approach is shown to be necessary it will be essential to explicitly state this in the LDP.
- 2.8 For strategic issues, where the impacts can not be identified on a site specific basis, it may be necessary to include a specific policy in the LDP to mitigate or avoid the potential for impact. This may be particularly where the implementation will require a more detailed level of assessment.

¹ This will need to be confirmed through consultation with CCW to determine the method for the further assessment, as well as more detail on the Natura 2000 sites and their sensitivities.

- 2.9 It is necessary for the outcomes of the HRA to be discussed and agreed with CCW and ideally consensus reached on the conclusions of the HRA. A response to the draft of this report from CCW is included as Appendix 10. Input from Environment Agency Wales would also be useful where habitats are reliant on a constant water source.
- 2.10 This version of the HRA screening report is a revised version of the March 2012 version. Minor changes have been made to reflect CCW's comments received during the consultation period on the Deposit LDP. A schedule of changes to the HRA resulting from these comments is shown in Appendix 12.
- 2.11 It should be highlighted here that a HRA at this level does not preclude the need for subsequent appropriate assessment at a more site specific level if identified as necessary when seeking planning permission.

Determining significance

- 2.12 An important part of the HRA is determining whether the LDP is *likely* to have a significant impact on the Natura 2000 sites. The draft assessment guidance on HRA from the Welsh Assembly Government suggests that likely in this context is “*readily foreseeable not merely a fanciful possibility*” and significant means “*not trivial or inconsequential but an effect that is potentially relevant to the site's conservation objectives...The European Court of Justice has held that any effect likely to undermine the conservation objectives of a European sites should be regarded as a likely significant effect...*” (paragraph 2.2.4)².

‘In combination’ effects

- 2.13 The regulatory requirements of HRA sets out a requirement that in addition to determining if the LDP would have a significant effect on Natura 2000 sites on its own, it is also necessary to assess if there would be any significant effects in combination with other plans and projects.
- 2.14 This ‘in-combination’ assessment will need to look for other plans and projects that also require HRA, such as the LDPs of neighbouring local authorities, as well as projects proposed or underway in the area. In order to achieve this it may be suitable to adopt some type of cross boundary working on HRA issues, and the need for a system to be in place to flag up other strategies and plans in the area that may have relevance to the HRA of the LDP.

² Welsh Assembly Government (October 2006) *Draft Guidance – The Assessment of Development Plans in Wales under the provisions of the Habitats Regulations*

3 Identification of Natura 2000 sites

- 3.1 The initial step of the screening process involved identifying the Natura 2000 sites, in and around Bridgend County Borough that the policies and proposals of the LDP could have an impact on.
- 3.2 All Natura 2000 sites within the County Borough or within 15km of the County Borough boundaries have been identified. In addition, impact routes were considered, such as roads or rivers that may increase the risks of development in the County Borough having an impact on Natura 2000 sites. Looking at these routes revealed no additional sites that were not already within the 15km zone. One of the reasons for this is Bridgend County Borough is downstream from many of the sensitive sites, thereby reducing impacts created by water use. However, following consultation CCW request that the River Wye and Usk SAC sites were considered. The sites identified for investigation in the initial screening were:

Inside the County Borough:

- Blackmill Woodlands (SAC)
- Cefn Cribwr Grasslands (SAC)
- Kenfig (SAC)

Outside the County Borough boundaries

- Dunraven Bay – SAC (3.52km)
 - Blaen Cynon – SAC (10.4km)
 - Crymlyn Bog / Cors Crymlyn – SAC/Ramsar (11.6km)
 - Crymlyn Bog / Cors Crymlyn – Ramsar (11.6km)
 - Coedydd Nedd a Mellt – SAC (11.6km)
 - Cardiff Beech Woods – SAC (12.32km)
 - Cwm Cadlan – SAC (13.7km)
 - River Usk – SAC (~30km) – considered at CCW's request
 - River Wye – SAC (~55km) – considered at CCW's request
- 3.3 Of these ten identified sites only four are within 15km of the main towns and villages of Bridgend County Borough. These towns and villages are the most likely locations of allocated development through the LDP, therefore it has been decided to concentrate the appropriate assessment on these sites.
- 3.4 None of the remaining eight sites are likely to be impacted on by development within Bridgend County Borough. Appendix 9 gives more detailed reasons for their exclusion.
- 3.5 The River Wye and Usk the sites have been screened out from further consideration at the current time. At the present time there is little indication that water use in Bridgend is causing an impact. However, if at a later date Environment Agency Wales review or other regional work identifies that water abstraction from Bridgend

County Borough, alone or in combination with other plans, is adversely impacting on these sites further consideration of impacts may be necessary. The HRA suggests additional wording in policy ENV7 *Natural Resource Protection and Public Health*, see paragraph 6.66-6.67 for more details. The LDP may need to recognise the possible change of circumstances and acknowledge the possible need to review policy if it is shown that adverse impacts are occurring or significant additional water abstraction is required to supply growth.

- 3.6 Similarly, several of the identified but excluded sites are shown to be vulnerable to air pollution, see appendix 9. Where this is the case continued monitoring of air quality at these locations will identify if it is continuing to deteriorate. Where deterioration is found it may be suitable to review LDP implementation to determine if it contributing to the deterioration, for instance causing a major growth in car travel or encouraging polluting industry. However, at the current time these sites have been ruled out for further consideration due to the multiple sources and causes of air quality changes, which cannot be directly linked to development in Bridgend County Borough. Monitoring of air quality and water availability at the protected sites could be incorporated into the monitoring of the Bridgend LDP.

- 3.7 The four sites carried through into further assessment are:

Site name	Site designation
Blackmill Woodlands	SAC
Cefn Cribwr Grasslands	SAC
Dunraven Bay (outside the County Borough)	SAC
Kenfig/Cynffig	SAC

- 3.8 The information collated on each of these four sites, particularly in relation to vulnerability is from the information database compiled for the '*Habitat Regulations Assessment (HRA): a toolkit to support HRA screening and appropriate assessment*' (South East Wales Strategic Planning Group, 2008).
- 3.9 Basic site plans are shown in Appendix 1 with Appendix 2 showing maps of buffer zones around the four identified sites. These give an indication of where the key development centres might be that must accommodate development through the LDP. Detailed site plans are available from www.ccw.gov.uk.

4 Natura 2000 site information

- 4.1 Of the list of sites identified in 3.2 three are within Bridgend County Borough and closest to the areas of population that are most likely to be the focus of new development set through the LDP. In addition, details of sites beyond the County Borough boundaries are included where the potential for impact needs to be considered. Site information from the relevant Joint Nature Conservation Committee (JNCC), 'Standard Data Form', and the database compiled as part of the '*Habitat Regulations Assessment (HRA): a toolkit to support HRA screening and appropriate assessment*' (South East Wales Strategic Planning Group, 2008). The toolkit is currently being updated. Appendices 3 and 4 contain full detail tables of each of the identified Natura 2000 sites.

The sites **within** Bridgend County Borough are:

- 4.2 Kenfig - Special Area of Conservation

Site code: UK0012566

Total area: 1191.67 ha (Kenfig Burrows and Merthyr Mawr Warren)

Primary reasons for designation

The Kenfig dune system contains several habitats and species listed under Annex I and Annex II of the Habitats Directive and these are the primary reasons for designation. The site is known as Kenfig, but also includes a dune system that is geographically separate at Merthyr Mawr Warren. Therefore, taking a lead from the data forms produced for the sites the in the descriptions that follow 'Kenfig' refers to both Kenfig Burrows and Merthyr Mawr warren unless specifically stated otherwise.

Kenfig is a largely intact dune system in south Wales with extensive areas of **fixed dune** vegetation; this is a **priority feature** of the site. The habitat includes 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.

Kenfig contains one of the largest series of dune slacks in Wales, including Kenfig Pool, habitat **Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*)**. 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.

Kenfig 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 around 90% of the UK population of Fen orchid *Liparis loeselii*, for which is part of the reason for SAC designation. The dune variety of fen orchid (var. *ovata*) is currently only known to occur in South Wales and on the coast of Brittany³.

³ Bridgend County Borough Council, Report of the Executive Director – Environment Cabinet (19 April 2006), Planning Services

Kenfig Pool is a shallow lake system within the extensive sand dune system of Kenfig. 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. This habitat is characterised as **Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp.**

The combined sites contain some species listed under Annex II of the Habitats Directive and these are also primary reasons for designation. They are Fen Orchid *Liparis loselii* and Petalwort *Petalophyllum ralfsii*. The very rare fen orchid grows in the humid dune slacks and Kenfig NNR holds 90% of the UK population. The dune variety of fen orchid (var. *ovata*) is currently only known to occur in South Wales and on the coast of Brittany.

The current condition of the SAC varies depending on the feature, although aspects are unfavourable declining.

The particular vulnerabilities of the site are:

- **erosion** most likely due to insufficient sand supply
- **falling water tables** from local extraction of water and/or drainage of adjacent land used for agriculture or housing
- **grazing/scrub** suitable levels need to be maintained to retain habitat and reduce scrub
- **recreation and access** people and vehicle access can adversely affect the dune slack SAC features. For instance, trampling can lead to physical damage to the protected vegetation and soil structure and invasion by weed species. Illegal off-road motorcycling and use of 4x4s is a particular problem at the Kenfig Burrows part of the site, uncontrolled horse riding at Merthyr Mawr can cause damage here. Access management and enforcement is necessary to control this.
- **air quality**, parts of the SAC are sensitive to air quality impacts, either directly from high levels of ethylene/ethane or indirectly through changes in water chemistry through deposition of atmospheric nitrogen. Atmospheric nitrogen (NO_x) levels may be exceeded from nearby industrial uses (steel works/chemical works/power station), transport (M4), as well as old landfill sites and agriculture and tips. All SAC features are nutrient sensitive (NO_x eutrophication) and dune vegetation is also acid sensitive.
- **water quality** the major water quality concerns are related to elevated nutrient levels. Elevated levels of nitrogen have been found at Burrows Well on Merthyr Mawr 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
- **non-native species**, including coarse fish (such as introduced carp) can have an impact on the species of ponds and slacks
- the fen orchid, is vulnerable to **dune stabilisation**, petalwort is vulnerable to this, and impacts of drainage and recreation

- there may also be **indirect effects** on dunes include atmospheric nutrient deposition, and coastal squeeze due to rising sea levels and increased storminess. The potential for dredging and marine aggregate extraction, through the disruption of coastal processes, to have cumulative and long-term effects on sand dunes is an area for further investigation.

4.3 Cefn Cribwr Grasslands – Special Area of Conservation

Site code: UK0030113
Total area: 58.35ha
GR: 033741 : 513206

Primary reasons for designation

The Cefn Cribwr Grasslands are several small patches of grassland. The grasslands contain a habitat type listed under Annex I of the Habitats Directive which is the primary reason for its designation, this is *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils. The site also supports an Annex II species, Marsh fritillary butterfly.

This is the Cefn Cribwr Grasslands it 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 heath 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*.

Conservation objectives would seek the site at favourable status, with characteristic coverage and mix of species. For the continued presence of marsh fritillary butterfly there needs to be 50ha of suitable habitat, 10ha of which is in good condition, although this does not all need to be within the SAC and could be on nearby land within a 2km radius. Some suitable nearby sites are identified as nationally protected Special Sites of Scientific Interest (SSSI). The whole site is currently identified as being in unfavourable condition.

The integrity of the site needs to be maintained and its main vulnerabilities have been identified as:

- the need for appropriate grazing
- maintenance of shelter belt, including hedges, woods and mature trees around the site
- hydrological regime, requiring springs and watercourses to feed the site, with more information needed on the role of these and impacts from nearby open-cast mineral workings
- off-site pollution, two of the component SSSIs lie close to open-cast coal workings and other mineral workings. Release of dust from these sites may impact on SSSI but effects are not known, these releases are subject to authorisation from the Environment Agency Wales
- impacts of owners/occupiers of the site, including agricultural improvement

- other impacts include weather and parasites.

4.4 Blackmill Woodlands – Special Area of Conservation

Site code: UK0030090

Total area: 71.01ha

Primary reasons for designation

The Blackmill Woodlands are two distinct areas of sessile oak woodland, they are separated by the A4061 and Ogwr Fawr. The Blackmill Woods contains a habitats listed under Annex I of the Habitats Directive which is the primary reason for its designation.

Woodlands is an example of **old sessile oak woods** at the southern extreme of the habitat's range in Wales, and contributes to representation of the habitat in Wales and in south-west England. The ground flora is restricted by the relative dryness of the site, but the main habitat features of sessile oak *Quercus petraea* canopy, acidic ground flora of *Vaccinium myrtillus* and wavy hair-grass *Deschampsia flexuosa*, and moderate fern and bryophyte cover are present. The woodlands have a long cultural history of management, reflected in the distinctive gnarled appearance of many of the trees.

Long-term management of the site is to see at least 90% of the area covered by semi-natural broadleaved woodland, dominated by oak. At the moment the site is failing on some matters related to condition, including the structure, natural process and regeneration. These failures are mainly related to management issues, such as the number of young seedlings, related to grazing impacts, and insufficient gaps in the canopy.

There are potential impacts on this type of site from air quality, including acidification, photochemical oxidants and particulate matter. All of which can be caused by car/lorry exhaust fumes.

Sites **outside** the County Borough boundaries are:

4.5 Dunraven Bay – Special Area of Conservation

Site code: UK0030139

Site area: 6.47ha

Local Authority Area: Vale of Glamorgan

Primary reason for designation

Dunraven Bay is primarily designated for the presence of an Annex II species, **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.

The vision is for the feature to be in favourable condition with at least 10 mature plants on site. Threats to the site come from possible disturbance and loss of essential groundwater seepage, however the site is very inaccessible therefore direct impacts are unlikely and there is currently no identified threat to groundwater, although its source needs to be verified. In the very long-term the threat to the site will be from coastal erosion.

Conservation objectives

- 4.6 Part of determining significance of impacts is identifying if it would adversely impact on achieving the conservation objectives for the site. Each SAC and SPA site has had a 'Core Management Plan', prepared by Countryside Council for Wales. This sets out the conservation objectives and performance indicators.

5 The Bridgend Local Development Plan

- 5.1 The Local Development Plan (LDP) strategy sets the framework for guiding new development in the County Borough. This includes setting the level of growth the LDP must provide for over the plan period, and the spatial distribution of this growth around the County Borough. This part of the HRA considers how development delivered through the LDP has the potential to impact on the Natura 2000 sites in and near to the County Borough.
- 5.2 The initial screening was of the Pre-Deposit Proposals LDP. From this earlier version of the LDP it was possible to identify some strategic matters related to delivering development that may have the potential to have an adverse impact on the Natura 2000 sites. These strategic issues are also part of the current Deposit stage LDP, with some changes, for instance the amount of proposed housing development has increased from 8100 to 9000 homes. The identified strategic matters are:
- an expected housing growth of 9000 new homes in the County Borough in the plan period
 - provision for a growing economy, with allocation of 164 hectares of new employment land
 - identification of the towns and villages that are to be the focus for the majority of newly allocated development. The areas are likely to include Bridgend, Porthcawl, Maesteg and the Valleys Gateway (north of Bridgend) (other area also will experience growth through existing land committed for development).
 - strategic employment development allocations
 - setting policy for minerals and waste.
- 5.3 The Deposit LDP is more comprehensive and detailed than the previous stage of preparation. The new content of the plan now needs to be screened for potential impacts on the Natura 2000 sites. The additional material that needs to be screened at this stage includes:
- detailed policies, screened to make sure they are not proposing the delivery of development that would adversely harm the sites
 - site specific allocations, the LDP now contains site specific allocation proposals for a variety of land uses, it is essential that there do not harm the integrity of sites and the reasons for designation either through direct land take or indirect impacts.
- 5.4 To enable the screening assessment to identify the potential impacts of policies and proposals on the SACs it is necessary to establish what the likely mechanisms are for impact. These mechanisms are based on the identified vulnerability of sites, as well as issues that could directly impact on these sites.
- 5.5 The LDP can also contain policies to support continued protection and enhancement of biodiversity at Natura 2000 sites and beyond. LDP policies can also help control some of the potential adverse impacts, such as air and water pollution (Appendix 11).
- 5.6 The possible mechanisms or routes for the LDP to have an adverse impact are:

- direct disturbance from development – this includes development directly causing the loss of whole or part of a site, although this is controlled through national protection policies
- human disturbance – where new housing is located near to protected sites it may lead to increased recreational pressures that may cause disturbance of sites and designated features, such as walking, horse riding and illegal uses such as off-road motorcycles and 4x4s. Other human disturbance such as fly tipping and fires could be exacerbated by new residential/economic development nearby
- water quality – the impact development can have on water quality, particularly where growth outstrips treatment capacity, landfill sites, industry and quarrying may also impact on water quality. Water pollution can cause direct impacts on sites and also nutrient enrichment can cause vegetation composition on sites adversely affecting the conservation objectives. On-site air pollutants can also change water quality, for instance causing acidification or eutrophication.
- water quantity – new development gives rise to increased water supply demands, this can result in lowering of water tables quarrying including open-cast mining can cause water table draw down with potential negative impacts. These impacts can adversely impact on sites that are water dependent. Uncertainties in the source of the groundwater that supply several of the sites means that to identify detailed relationships of development and impact is not possible. However, monitoring of groundwater availability and demand is essential to help avoid impacts before they arise (Appendices 5 and 6)
- air quality – many habitats will be adversely affected by poor air quality, through acidification and deposition causing nutrient enrichment that can result in changes in habitat composition and conservation objectives, appendix 7 shows where air quality may be having an impact on the sites
- changes in surrounding supporting habitats – loss of nearby open spaces and habitat links, such as hedgerows, can cause negative impacts on species on site through the loss of supporting breeding populations, linking habitats or shelter features particular where the SAC is divided into a number of distinct areas
- coastal processes – building new coastal defences that change natural process of accretion and erosion may have an adverse impact on coastal sites, changing the fundamental characteristics of the site and therefore the integrity of the designation.

6 Screening of the Deposit LDP impacts

- 6.1 This stage of policy screening follows on from the screening of the Pre-Deposit LDP proposals. This report builds on findings of the earlier screening stage, again reporting on the potential impacts of the strategy on Natura 2000 sites, but also looking at the implications of the more detailed matters included in policies and from site allocations.
- 6.2 The impact identification for the SAC sites was initially completed for the Pre-Deposit proposals. As part of this process each policy was screened to assess where impacts may arise and what this might mean for the integrity of each site and its conservation objectives. The tables in Appendix 4, 5 and 6 identify the ways the LDP could help recognise and avoid the potential for effects. These tables show that there is the potential for the LDP to have an impact on the three sites in the County Borough. These sites are:
- Cefn Cribwr Grasslands SAC
 - Blackmill Woodlands SAC, and
 - Kenfig SAC.
- 6.3 The Pre-Deposit proposals does conclude that adverse impacts of development in the County Borough on the Dunraven Bay SAC are very unlikely, and is screened out from further consideration. More details of the exclusion of this SAC from further consideration is given at paragraph 6.6-6.9.
- 6.4 The screening and initial assessment of the Deposit LDP provides an overview of the vulnerability of the SAC sites. It identifies recommendations for the LDP such as additional policy criteria or explanatory text to recognise potential risks to SAC sites and ensure these are avoided through choices on the location of development or the way sites are delivered.
- 6.5 For each of the three sites carried forward into this stage of screening the impact assessment discusses:
- The relationship with the LDP and where there are potential vulnerabilities to impacts created by the plan
 - The potential impacts of strategic and detailed policies
 - The potential impacts of site allocations
 - Recommendations for avoiding impacts where identified
 - Concluding remarks including the likely significance of any residual impacts.

Dunraven Bay SAC

- 6.6 The screening of the Pre-Deposit proposals conclude that adverse impacts of development in the County Borough on the Dunraven Bay SAC are very unlikely, and the site is screened out from further consideration.
- 6.7 The primary reason for designation as a SAC is the presence of the rare shore dock (*Rumex rupestris*). The greatest risk the continued survival of this species on-site is direct disturbance, especially from cliff falls. This type of harm is extremely unlikely to

arise from development directed through the Bridgend LDP. Therefore, the site was excluded from further consideration primarily for this reason.

- 6.8 However, shore dock (*Rumex rupestris*) are also at risk if springs feeding the flora are lost, as they rely on damp limestone as their habitat. There is no clear evidence of the source of these springs, raising the possibility that it might be within Bridgend County Borough. Therefore, despite this SAC being screened out from further investigation there remains the chance of impacts related to changes in the water table. The importance of water supply in Bridgend County Borough is addressed in the protection of other SAC sites, notably the Kenfig SAC, including the site at Merthyr Mawr Warren that is near Dunraven Bay. Local and national policies promote the more efficient use of water. So, the coverage of water matters elsewhere should be precaution enough to avoid impacts to the SAC.
- 6.9 As with all SAC sites regular monitoring of the conservation objectives and condition of the SAC site should help identify if adverse impacts are arising and if remedial action is necessary.
- 6.10 However, waiting for adverse impacts may be too late to prevent substantial changes to the site. Therefore, should studies by Environment Agency Wales, Welsh Water etc show that groundwater is being over-abstracted it may be necessary for review of LDP policy and growth options to ensure that this is not causing harm to the site. This will include water company's Water Resource Management Plans, and Environment Agency Catchment Abstraction Management Strategies and Review of Consents.

Blackmill Woodlands SAC

- 6.11 This comprises two distinct patches of oak woodland either side of the A4061 near the village of Blackmill.

Vulnerabilities

- 6.12 Air pollution is a possible impact on the long-term survival of this site, particularly through acidification. The source of air pollutants in this area, is predominantly road traffic. The need to reduce car travel and associated emissions is well recognised as an important matter for sustainable development in general and the LDP to address.
- 6.13 The screening identifies development sites that are proposed near the Blackmill Woodlands SAC. The source of air pollutants that may harm the woodland site may arise far from the woodlands, such as secondary pollutants from nitrogen compounds or ozone. Appendix 7 shows that acid and nitrogen deposition, and ozone, all of which are related to combustion exhaust, may already have an adverse impact on the site flora.
- 6.14 A proportion of pollution will be from nearby road travel or possibly industrial sites. The A4061 passes between the two parts of the designated site. This is the main route linking the Ogmore Valleys with the M4 and 'Valleys Gateway' area, passing through the villages of Blackmill, Bryncethin and Sarn. The road also links to Gilfah Gôch and the villages of Rhonnda Cynon Taff. Therefore, development in these locations may give rise to specific local impacts from an increase in road travel. Nitrogen deposition can adversely impact on ground flora health as well as trees, with

possible adverse impacts on conservation objectives for the SAC. High levels of NO_x compounds can also have adverse impacts, although the road would need to be very busy for this to be attributable to local traffic rather than more dispersed pollution impacts.

- 6.15 It is an objective of the LDP to reduce car trips by people who live and/or work in the County Borough. The assessment of impacts assumes that this approach will be actively pursued in planning decisions and will be achieved. The assessment of potential impacts therefore must assume that although car travel may rise the overall increase may be a slower rate than experienced in recent years, leading to a potential plateau. It is also likely that car exhaust will get progressively cleaner, reducing impacts of each car. Therefore, overall pollution impacts may not rise greatly and road travel impacts will remain the same or improve.
- 6.16 Some of the greatest pollution impacts, as identified in the 'Core Management Plan for the Blackmill Woodlands SAC' (CCW, March 2008) are air pollution from 'in-combination' effects of Environment Agency permitted licences, rather than road travel. Therefore, the potential of new industrial development to have cumulative air quality impacts needs to be considered. Consent decisions and permits will be made by the Environment Agency and local authority but policies will also need to be placed to make clear that industrial development that would harm the Natura 2000 sites will not be permitted, including from air pollutants.
- 6.17 There is also the possibility of human disturbance having an adverse impact on the site, although this is less likely, it will be important that this is monitored as part of site management. The potential from disturbance to the site from recreation may be increased by the proposed new bike hub at Blackmill. The assessment of policies identifies this allocation as a potential concern. However, implementation of CCW's management plan for the woodlands and surrounding scrub should help manage the risk of harm and effects are unlikely to be significant.

Screening of the LDP Deposit Policies

- 6.18 The policy review shown in Appendix 5 takes each of the policies of the plan in turn and identifies its potential for adverse impacts on each of the SAC sites. The table in the appendix identifies possible impact pathways, possible impacts and how these can be mitigated. For each policy a conclusion is drawn on if there is potential for significant adverse impacts. For the majority of policies it was concluded that the policy would either have a positive effect or no effect (alone or in combination), paragraphs 6.19 and 6.20 show all the policies where the conclusions indicated that there may still be the potential for an impact.
- 6.19 Strategic policies that have the potential for adverse impacts on the Blackmill Woodland SAC are:
- SP1 that focuses development in Bridgend and the Valleys Gateway
 - SP3 that includes road improvements and aims for improved public transport
 - SP6 the woodland falls in an area of coal protection, extraction of this mineral has the potential to have adverse impacts
 - SP7 identifies the Brynmelyn industrial area as suitable for a waste treatment facility

- SP12 identifies the overall level of housing growth anticipated in LDP, to deliver this requires land allocations in proximity to the SAC.

6.20 Detailed policies that have the potential for adverse impacts on the Blackmill Woodland SAC are:

- PLA7 strategic transport improvements have the potential to have some positive impacts, although highway proposals may increase overall car travel in the County Borough causing a general deterioration in air quality
- ENV12 the SAC falls in an area of coal resource. Although the policy contains a specific criteria to ensure that the SAC is not harmed there remains the potential for adverse impacts depending on delivery of the development
- ENV16 the impacts of this policy will depend on where the new development is located, care needs to be taken to ensure it will not harm SAC sites directly or indirectly
- ENV18 the impacts of this policy will depend on where the new development is located, care needs to be taken to ensure it will not harm SAC sites directly or indirectly
- REG12 the impacts of this policy will depend on where new tourism development is located, care needs to be taken to ensure it will not harm SAC sites directly or indirectly. The policy identifies a location near Blackmill Woodlands SAC for a new 'bike hub' and tourism development nearby at Lakeside Farm Park. There is the potential for increased recreational pressure to have an impact on the site
- COM3 the policy allows for the re-use of buildings or land, there may be the potential for adverse impacts depending on the location of the site, and this will need to be determined on a site-by-site basis.
- COM11 the impacts of this policy could come from areas of previously unmanaged open space become heavily managed for sports pitches, reducing biodiversity and habitats patches with potential adverse impacts to the supporting environments of SACs. The impacts will need to be assessed on a site-by-site basis.

Screening of the LDP Deposit Proposals

- 6.21 The proposals maps were also reviewed to screen the sites allocated for development to determine their potential for impacts, cumulatively and individually. This process is complicated by the fact that some sites are already committed for development, with existing planning consents. These sites should have already been screened for their potential impacts and therefore are assumed to have been found to have no significant adverse impacts. As new sites come forward for development it still may be necessary to screen for in-combination effects with existing commitments and site specific Habitats Regulations Assessment carried out if required.
- 6.22 The review of site allocations is shown in Appendix 6. The screening considers each allocation on a main impact route from the each SAC site, for instance along the A4061 for Blackmill Woodlands. All built development allocations in a 2km boundary are also considered, as this represents a reasonable travel distance for direct disturbance.

- 6.23 There are eight housing allocations within 2km of the SAC, with three of these on the A4061. These allocations are most likely to increase car travel on this road, with commuting trips to and from work. Around 450 of the new houses are already committed for development, around 300 are from new allocations. Housing allocations in the Ogmore Valley may also encourage additional road traffic through the woodlands on the A4061. The housing and mixed use development allocations are:
- PLA3(17) COM2(4) and COM9(1) in Blackmill 43 new homes / employment allocation and a new community building
 - COM2(15) allocation for 19 new homes in Lewistown
 - COM1(35) an allocation for 50 new homes in Bryncethin
 - COM2(16) an allocation for 10 new homes in Llangeinor
 - COM1(36) an allocation for 50 new homes in Brynmenyn
 - PLA3(12), COM1(32), COM10(9) a mixed use development site in Bryncethin including allocation for 130 new homes and an education and training allocation
 - PLA3(11), COM1(34) and part REG1(21) a mixed use development area in Brynmenyn including employment allocation and an allocation for 75 new homes
 - Part of COM1(31) and COM13(6) a very large housing allocation for 323 new homes and open space provision in Bryncethin.
- 6.24 Four employment sites are allocated in the 2km boundary. Each of these sites is already developed for employment purposes, and allocation may see an intensification of use in most circumstances, rather than new land take. This will reduce the overall additional impacts of these types of development on the environment. Identified local allocations are:
- REG1(32) a medium sized site in Blackmill (on the A4061)
 - SP8(2) and REG1(18) the existing Brynmenyn Industrial Estate, also allocated for strategic waste management. Depending on the type of waste management there may be an impact on the SAC, to determined on a site specific basis.
 - REG1(31) a medium sized site in Llangeinor, although outside the valley may have an impact depending on use
 - In the Ogmore Valley there are several employment allocations, although much of the allocated land area is already in use. The largest allocation is at Penllwyngwent Industrial Estate, where land is allocated for an extension and there is the possibility of intensification.
- 6.25 Other allocations noted in the screening that are in close proximity to the SAC are:
- REG12(3) and REG12(1) mountain bike hub at Blackmill and Lakeside Farm Park, Glynogwr, may increase visitors to the area. To control impacts of the bike hub information and management of cycle routes should be sufficient to avoid significant impacts, the scale of development at Lakeside Farm will also have to be suitable for its location and potential impact on the woodlands
 - REG12(5) the continued use of Bryncethin clay pits for temporary tourism uses is unlikely to have an impact on the SAC. However, the potential for impacts and intensity of use should be considered for individual events.

- COM13(6) and COM13(11) open space allocations are unlikely to have any impact on the conservation objectives for this site.
- Mining and quarrying: the Blackmill Woodlands is in an area of coal assets, meaning there may be a need in the future to mine these minerals. If an planning permission is sought for coal extraction a site specific appropriate assessment will be required to identify significant impacts.

6.26 As for all allocations screening may be needed to determine if site specific HRA is required. This assessment will also need to consider the potential for in-combination effects.

Avoiding impacts: recommendations for moving forward

6.27 A summary of the possible impacts are from new development increasing road use, air pollution impacts from industry and possible disturbance.

6.28 **Air quality:** There may be a general increase in road traffic with a risk of further exceeding air quality thresholds. Implementing the LDP strategies for reducing car reliance may help reduce impacts, helped by a gradual improvement in exhaust emissions from new vehicles. The cumulative air quality impacts from industrial development also need to be considered. Planning decisions should need to consider the potential for cumulative impacts from emissions, with support from the Environment Agency and/or local authority department responsible for granting license consents and permits.

6.29 Implementation of some policies of the LDP will help to mitigate against air pollution impacts, both from road traffic and through appropriate industrial uses (Appendix 11). Also, the implementation of other plans and strategies will help in mitigation. This will include delivery of the public transport objectives of the South East Wales Regional Transport Plan and also site specific design such as that of the Department of Transport Design Manual for Roads and Bridges.

6.30 **Recreational disturbance:** Possible impacts through disturbance should be controlled through a site management plan. Visitor information and signage should be sufficient in avoiding cyclists using the bike hub at Blackmill and additional visitors at Lakeside Farm Park, having an adverse impact on the woodland.

6.31 The potential for some impacts may need to be decided as part of a site-by-site assessment. For instance, development of non-allocated sites in proximity to the SAC or if an application is received for coal extraction near the SAC site.

Conclusions

6.32 Development promoted through the LDP does have a risk of causing harm to the designated features of the Blackmill Woodlands SAC. However, no impacts should be significant if development is implemented in a way that takes into account and mitigates against the potential vulnerabilities.

6.33 The screening assessment identifies several ways potential impacts must be mitigated:

- a reduction in car travel needs to be achieved in the County Borough, especially on the A4061, through implementation of the LDP and other plans and strategies
- new industrial development near the site should be assessed for potential to have an adverse effect on air quality that may adversely impact on the SAC, can be avoided through implementation of LDP policy (Appendix 11)
- monitoring of air quality to trigger policy review if air quality is shown to be deteriorating to levels that could cause significant harm to the designated site, monitoring arrangements should be part of the LDP monitoring process.
- development at the bike hub and development at Lakeside Farm Park needs to include measures to ensure increased visitor numbers will not harm the SAC, in line with policy on biodiversity protection
- implementation of the LDP must not adversely impact on the execution of Core Management Plan actions.

- 6.34 The screening concludes that the Deposit Bridgend LDP is unlikely to have any significant adverse impacts on the Blackmill Woodlands SAC. However, this does not rule out the need for site-by-site consideration of planning applications needing further screening and possible appropriate assessment. Monitoring of the site, especially air quality, should be in place to allow for policy review if quality is shown to be deteriorating.

Kenfig SAC

- 6.35 Consisting of Kenfig Burrows and Merthyr Mawr Warren the combined sites are a large and valuable habitat and that could experience a range of impacts.

Vulnerabilities

- 6.36 Many parts of the Kenfig SAC are in a unfavourable condition. Built development, as directed through the LDP, only has a limited role in helping to manage some of the potential impacts on the SAC. The main areas where the LDP may have relevance to the SAC are:
- Water quality
 - Water quantity
 - Air quality
 - Recreation
- 6.37 The exceptional wetness and diversity of the Kenfig dune system is directly dependent on the hydrological and hydro-chemical regime.
- 6.38 The Core Management Plan for the site indicates that the Kenfig Pool (Annex 1: oligio-mesotrophic water) may be fed from a deep limestone aquifer (Davidson and Appleby, 2003). The dune slack vegetation, in addition to the water bodies, is influenced and maintained by both a high water table and maintenance of suitable water quality. Nitrogen enrichment of these areas can change the species composition of the habitat and adversely impact on the conservation objectives for the SAC.

- 6.39 The major water quality concerns in the slacks and the pools relate to elevated macro-nutrient levels. The nature of the underlying limestone aquifer means that off-site activities a considerable distance away can potentially have an impact on the SAC. These impacts can travel long distances in the aquifer, as well as taking a long time to reach the dunes from the source. For instance, the aquifer could convey various pollutants from landfill quarries (ENSIS, 1996). Elevated nitrogen levels have been found at Burrows Well on the Merthyr Mawr part of the SAC.
- 6.40 There is also the possibility that drainage systems leading from the M4 motorway and the town of North Cornelly may have an impact, although the extent is unknown (Core Management Plan). However, it seems likely that most industrial and urban drainage bypasses the site (Monteith (ed.), 1996). The Core Management Plan identifies that three small streams flowing into Kenfig Burrows SAC are thought to be the source of increased levels of plant nutrients.
- 6.41 Furthermore, since the lake is likely to be groundwater fed it is difficult to estimate the exact extent to the catchment area and pinpoint where surface development and water abstraction, may have an impact on the availability of water at the SAC.
- 6.42 Parts of the SAC are sensitive to air quality impacts. These impacts are either direct from high levels of ethylene/ethane or indirectly through changes in water chemistry through deposition of atmospheric nitrogen leading to increased nutrient levels eutrophication. Atmospheric nitrogen (NO_x) levels are not shown to be a critical level yet (appendix 7) but risks of cumulative impacts from nearby industrial uses (steel works/chemical works/power station), transport (M4), old landfill sites and agriculture.
- 6.43 The combined site can also be adversely affected by recreational use. Up to a certain level recreational use can be effective in maintaining the bare ground needed to support the species that are a primary reason for SAC designation. For instance, pedestrian path edges can help provide the habitat for Petalwort, however, those created by scrambling bikes have a negative effect.
- 6.44 Trampling by horses has an impact on the saltmarsh parts of the Merthyr Mawr section of the SAC. The saltmarsh in this area is the main access point to the foreshore and therefore has concentrated use from Ogmere Castle Farm trekking centre. This pressure has created a bare band of sand / silt at the top of the saltmarsh in one of the highest quality parts of the habitat. Increasing pressure on this area may have a further impact.
- 6.45 Minerals dredging may also impact on the coastal processes that are essential for the maintenance of the dune system. Liaison with other interested parties is necessary for continued maintenance such as the Marine Dredging Policy for South Wales and the Swansea Bay Shoreline Management Plan to consider the accretion/erosion issues at Kenfig and Merthyr Mawr.

Screening of the LDP Deposit policies

- 6.46 The previous stage of the HRA screening at Pre-Deposit suggested that new development allocations and the quantity of development takes into account water quality impacts. This should include not developing new homes in areas of known water supply issues. Policies that may help to address water quality and supply impacts are shown in Appendix 11.

- 6.47 The policy review shown in Appendix 5 takes each of the policies of the plan in turn and identifies its potential for adverse impacts on each of the SAC sites. The table in the appendix identifies possible impact pathways, possible impacts and how these can be mitigated. For each policy a conclusion is drawn on if there is potential for significant adverse impacts on either Kenfig or Merthyr Mawr part of the SAC. For the majority of policies it was concluded that the policy would either have a positive effect or no effect (alone or in combination), paragraphs 6.48 and 6.49 show all the policies where the conclusions indicated that there may still be the potential for an impact.
- 6.48 Strategic policies that have the potential for adverse impacts on the Kenfig SAC are:
- SP1 that focuses development in Porthcawl
 - SP3 that includes road improvements
 - SP6 on minerals safeguarding, that may lead to eventual additional mining and quarrying, impacts will depend on the site-by-site development proposals
 - SP7 identifies the Heol-y-Splott, South Cornelly and Village Farm, Pyle (both near Kenfig Burrows) industrial areas as suitable for waste treatment facilities
 - SP9 identifies a strategic employment allocation in close proximity to the SAC, this is Ty Draw Farm, North Cornelly (near Kenfig Burrows)
 - SP11 relates to tourism development, with a focus on Porthcawl, this may have an impact on the Kenfig SAC
 - SP12 includes a strategic allocation for housing on the Porthcawl Waterfront close to the SAC.
- 6.49 Detailed policies that have the potential for adverse impacts on the Kenfig SAC are:
- PLA1: Settlement hierarchy policy identifies some settlements that may be focus of growth in close proximity to the two SAC sites, including Porthcawl
 - PLA7: the strategic transport improvement policy includes measures to help control car use as well as new road building. New roads are likely to increase car use, with a possible deterioration in air quality. The dualling of the A48/A473 may have particular impacts on the Merthyr Mawr Warrant with new car traffic in this area.
 - PLA8: The identification of walking/cycling routes especially at Merthyr Mawr Warren and also at Kenfig may encourage visitors to the area, possibly increasing the impacts of visitor pressure in the two locations.
 - ENV14: The risks of this policy having an impact are low, as it only addresses inert waste. However, this development could be located anywhere and the potential for a proposed site to impact on the SAC should be decided on a site-by-site basis
 - ENV16 the impacts of this policy will depend on where the new development is located, care needs to be taken to ensure it will not harm SAC sites directly or indirectly
 - ENV18: the impacts of this policy will depend on where the new development is located, care needs to be taken to ensure it will not harm SAC sites directly or indirectly
 - REG2: the impacts of this policy will depend on what type of employment is found on these sites. To protect the Kenfig SAC it will be necessary to make sure that new

industrial development does not lead to cumulative air or water quality impacts that adversely impact on the site.

- REG12: Porthcawl is identified as a focus for tourism in the LDP. Visitor pressure has the potential to adversely impact on the nearby Merthyr Mawr part of the SAC. The type of visitor attraction will therefore need to be compatible with the location and existing pressure on the area. For instance, the development of new large horse trekking facilities may need to be resisted.
- COM3: the policy allows for the re-use of buildings or land, there may be the potential for adverse impacts depending on the location of the site, and this will need to be determined on a site-by-site basis.

Screening of LDP Proposals

- 6.50 The proposals maps were also reviewed to screen the sites allocated for development to determine their potential for impacts, cumulatively and individually. This process is complicated by the fact that some sites are already committed for development, with existing planning consents. These sites should have already been screened for their potential impacts, either as individual planning applications or as part of earlier plans. Therefore, these sites are assumed to have been found to have no significant adverse impacts. As new sites come forward for development it still may be necessary to screen for in-combination effects with existing commitments and site specific Habitats Regulations Assessment carried out if required.
- 6.51 The review of site allocations is shown in Appendix 6. The screening considers each allocation for its proximity to the SAC, and therefore likely increase in recreational pressure. The cumulative impact of development may also have an effect on water quality and water availability. These cumulative impacts are assessed as overall levels of development rather than on a site by site basis.
- 6.52 Near **Kenfig Burrows** there are several allocations for housing and mixed use schemes. All of the allocated housing sites the area are committed for development already. The allocations in closest proximity to the Burrows are:
- COM2(23) an allocation for 14 new homes in North Cornelly already committed for development
 - COM2(22) an allocation for 22 new homes in North Cornelly already committed for development
 - COM2(20) an allocation for 48 new homes in North Cornelly, largely committed for development
 - PLA3(18), REG1(29), COM2(21), COM8(3) a mixed use allocation for 45 new homes, employment and a health centre, already committed for development.
- 6.53 There are other types of allocation in the area around **Kenfig Burrows** that have the potential to have the type of impact on the SAC that may effect the site's conservation objectives. These other allocations include:
- SP9(4) Ty Draw Farm in North Cornelly, identified as a high quality strategic employment site and currently undeveloped
 - SP7(1) Heol-y-Splott in South Cornelly and SP8(3) identified as a strategic waste management sites

- REG1(37) Village Farm Industrial Estate is also an existing employment site allocated for continued industrial use.

6.54 Existing uses near the site, such as the M4 that forms the north eastern boundary of the Kenfig Burrows has the potential for impacts, exacerbated in part through development in the County Borough. The Burrows is also adjacent to an areas identified as an area of high purity limestone, which is protected from sterilisation and could be the site of further extraction in the future.

6.55 The screening of site allocations also looked for sites in close proximity to the **Merthyr Mawr Warren** part of the SAC. Identified sites for housing and mixed use in 2km are:

- PLA3(9), COM1(26), REG1(15), COM13(4) a mixed use site in Porthcawl that includes a allocation for 40 new homes, employment and open space
- PLA3(8), COM1(24), COM9(3) a large mixed use redevelopment site in Porthcawl that includes 1350 new homes, although these are already committed for development.
- COM1(28) an allocation for 11 new homes in Porthcawl already committed
- COM1(29) an allocation for 10 new homes in Porthcawl already committed

6.56 All the nearby development sites are in Porthcawl to the west of the SAC site. There is also a large area allocated for development south west of Bridgend. This includes a site already committed for development for over 300 new homes.

6.57 The nearby employment allocations to **Merthyr Mawr Warren** comprise of a mixed use development area in Porthcawl and site SP9(2) at Island Farm Bridgend. There is also a renewable energy from landfill gas facility currently operational at Penybont Treatment Works ENV17(3).

6.58 Land north of the Merthyr Mawr Warren is identified as an area of high purity limestone as well as identified as an area of limestone safeguarding. The potential for quarrying limestone in the future near the SAC would need to be screened/assessed on a site-by-site basis for potential for adverse effects, primarily related to the water table and possibly direct disturbance.

6.59 As for all allocations screening may be needed to determine if site specific HRA is required. This assessment will also need to consider the potential for in-combination effects.

Avoiding impacts: recommendations for moving forward

6.60 The screening of the policies and site allocations reveals the potential for impacts to the Kenfig SAC site.

6.61 **Water availability** the continued maintenance of the humid dune slacks and water bodies relies on a continued water source to the two parts of the SAC. There is incomplete evidence on the source of the groundwater to the two sites.

6.62 All of the identified development allocations in North Cornelly, Pyle and Kenfig Hill, including housing, mixed use and employment, may be upstream of the groundwater

source that feeds Kenfig Pool. Therefore, water abstraction may have an influence on groundwater availability for the pond and the humid dune slacks. The majority of housing development in this area is already committed for development and the LDP can have little influence.

- 6.63 Water availability and water quality impacts to the Merthyr Mawr Warren section of the SAC can come from a wide area. Development in Bridgend could have an impact on water availability at the Merthyr Mawr SAC site.
- 6.64 To avoid impacts all new development the LDP will need to ensure that water efficiency is part of proposals. The Environment Agency is responsible for maintaining water levels and through their review of consents it should be possible to manage abstraction licensing to protect the water resource. Therefore, it is essential that planning decisions are made in keeping with advice from the Environment Agency in zones where there is potential for impact on the SAC.
- 6.65 Current information available in the Water Resources Management Plan (Welsh Water) and the Review of Consents (Environment Agency Wales), indicate water availability may not be an issue at the moment for this site, subject to taking appropriate measure to manage water use in the area. However, development growth may lead to amendments to consents or changes in future consenting regimes. Therefore, the LDP may need to recognise the possible changing circumstances, acknowledging the possible need to review policy if it shown that adverse impacts are occurring or significant additional water abstraction is required to feed growth. There is the possibility that review may require revised growth levels or changes in the distribution of development, although at this time such a policy is not necessary.
- 6.66 To this effect new wording could be added to policy ENV7 *Natural Resource Protection and Public Health* to highlight the importance of protecting water supply as well as preventing pollution. Suggested wording for criteria (6) could be: “6) *Water (including groundwater) supply or pollution*”.
- 6.67 Similarly, the supporting text to policy ENV7 should refer to the need to maintain water supplies. This should emphasise the importance of ensuring there is sufficient water availability prior to development taking place in order to protect vulnerable Natura 2000 sites from harm. Changes to wording could read:

4.1.32 *Various types of pollution and changes to resource availability may cause significant damage to human health, biodiversity, quality of life and residential amenity, as well as having an impact on both the natural and built environment. Policy ENV7 ensures that developments that would result in unacceptably high levels of noise, light, water or air pollution are located away from residential areas and other sensitive uses. The policy will also ensure that development proposals are not located in close proximity to existing sources. In addition, new development would need to demonstrate it would not exacerbate this harm to internationally designated nature conservation sites that are being adversely effected due to over abstraction of water.*

- 6.68 Specific development proposals with potentially locally significant water availability issues will need separate HRA screening and/or assessment. Such proposals may include new or extended quarry development in the area. Quarry dewatering

operations on quarries near protected sites may be a significant issue. This has been under assessment for a considerable period of time as part of the Review of the Mineral Permissions (RoMP) and Review of Mineral Conditions. These documents should inform planning decisions on any quarry applications.

- 6.69 Monitoring of water availability in the catchment is essential to allow for policy review if necessary to prevent adverse impacts on the conservation objectives of the site.
- 6.70 **Water quality**, changes in water quality can have an impact on the vegetation of the two sites. Some nutrient enrichment is evident in the water bodies in and near the site. Kenfig Pool is beginning to show elevated nutrient levels. Evidence shows some elevated levels of nutrients in Burrows Well on Merthyr Mawr. The CCW Core Management Plan identifies that three small streams flowing into Kenfig Burrows SAC are thought to be the source of increased levels plant nutrients.
- 6.71 To avoid impacts from increasing nutrient levels development should only proceed where it can be shown there is sufficient water treatment capacity to remove nutrients from discharges. Therefore, development should only proceed in keeping with advice for the Environment Agency and in keeping with water utilities infrastructure plans.
- 6.72 Run-off from roads is also risk, such as the M4 at Kenfig and possibly the A48 for Merthyr Mawr. New road development should ensure sustainable drainage systems are in place that use natural processes to remove water pollutants and elevated nutrient levels prior to it entering main water bodies.
- 6.73 Specific development proposals with potentially locally significant water quality issues will need separate HRA screening and/or assessment. Such proposals may include new or expanded quarry development in the area.
- 6.74 **Air pollution** elevated levels of air pollution in the area run the risk of direct impacts to vegetation or nutrient enrichment. Some of the greatest impacts will come from increased road traffic in the area. For Merthyr Mawr this is the dualling of the A48 bringing more road use into the area, and for Kenfig Burrows there will be the continued increase in M4 use.
- 6.75 The way that some of these impacts will be mitigated is through the local, regional and national objective to reduce the amount people need to travel by car. LDP policies that will help manage travel demands are shown in Appendix 11. The aim is to reduce the overall need and distance people travel, for instance from home to work, and make more sustainable travel choices when they do need to.
- 6.76 There is also a risk of air quality deterioration from industrial sources. Parts of the SAC may already be experiencing poor air quality. Kenfig Burrows is in close proximity to the Port Talbot steel works and cumulative risks from additional industry may put the site at risk. There are already high levels of PM₁₀s in the area, frequently exceeding quality thresholds. However, this is already subject to management and monitoring.
- 6.77 New industrial development in proximity to the SAC will need to be assessed on a site-by-site basis for potential to have an impact, either alone or in combination. New permissions for certain types of industrial development will need to be made in conjunction with advice of the Environment Agency, particularly where emissions

consents may be required. Expansion of the renewable gas facility at the waste water treatment site in Penybont will need to be kept at a scale to ensure there will be no adverse impacts on the Merthyr Mawr site.

- 6.78 Implementation of some policies of the LDP (Appendix 11) will help to mitigate against air pollution impacts, both from road traffic and through appropriate industrial uses. Also, the implementation of other plans and strategies will help in mitigation. This will include delivery of the public transport objectives of the South East Wales Regional Transport Plan and also site specific design such as that of the Department of Transport Design Manual for Roads and Bridges.
- 6.79 Air quality monitoring near to the site to help identify deterioration and therefore the possible need for review of policy. Where the potential for impacts are found a remediation plan may be necessary.
- 6.80 **Recreational pressure and disturbance** the review of policies and allocations reveals the potential for more development in close proximity to the two parts of the SAC. This raises the potential for more recreational use of these areas as the two sites are National Nature Reserves and available for enjoyment by the community with unrestricted access.
- 6.81 There is no evidence that the sites are overused in general. However, specific impacts often related to illegal use need to be managed, such as use of motorcycles and other vehicles as well as legitimate uses including horse riding at Merthyr Mawr.
- 6.82 To avoid further impacts there needs to be continued monitoring of access and impacts and implementation of site action plans by Kenfig Corporation Trust and Bridgend County Borough Council. This will include management of the public rights of way, including cycle and horse trekking routes, that cross Merthyr Mawr Warren. CCW also have a role in managing horse trekking.
- 6.83 The LDP needs to ensure that planning consents for new leisure development are compatible with their location, and will not increase visitor numbers in sensitive locations and put the SAC at risk of harm.
- 6.84 Policies in the LDP, on tourism and nature conservation protection, need to be sufficiently robust to ensure that they can manage, and refuse where necessary, leisure development that would adversely impact on European sites. Supporting text to tourism policies set out that new tourism development, either alone or in combination, must be assessed for impacts on internationally designated nature conservation sites.
- 6.85 **Changes in coastal processes** have potential to have an impact on the SAC conservation objectives. New sea defence works could adversely impact the accretion of sediment on the seaward side that is the essential habitat for the identified species. Despite this issue being largely beyond the control of the LDP, it will be necessary to consider how development along the coast may impact on the combined site. New development proposed in the LDP that would require additional sea defence works are likely to change sediment transport at the two SAC sites as evidenced by the Porthcawl Waterfront HRA.

- 6.86 Any mitigation measures set out in the Shoreline Management Plan (SMP2) that are relevant to the LDP will need to be taken into account.

Conclusions

- 6.87 Development promoted through the LDP does have a risk of causing harm to the designated features of the Kenfig SAC. However, no impacts should be significant if development is implemented in a way that takes into account and mitigates the potential vulnerabilities.
- 6.88 The screening assessment identifies several ways potential impacts must be mitigated:
- make sure water policies on the efficient use of water in new development are implemented (Appendix 11)
 - monitoring and review if changes are identified in water availability, either on-site or as part of Environment Agency or Welsh Water plans as a result of growth
 - make sure there is capacity in waste water treatment facilities prior to occupation of any new development throughout the lifetime of the plan
 - make sure policies on sustainable drainage are implemented to avoid waste water runoff from hardstanding onto the SAC site
 - screening of individual development proposals where necessary, as required by policy SP4
 - assessing potential for cumulative impacts from industrial development on SAC sites, as required by LDP policy
 - a reduction in car travel needs to be achieved in the County Borough through implementation of the LDP and other plans and strategies (Appendix 11)
 - implementation of the LDP must not adversely impact on the execution of Core Management Plan actions
 - new and extended leisure developments need to be assessed for their potential to increase recreational pressure in sensitive parts of the SAC and therefore compatibility with location
 - ensure advice from the Environment Agency is followed in making decisions on the suitability of new development, including as part of their consents licensing procedures.
- 6.89 The screening concludes that the Deposit Bridgend LDP is unlikely to have any significant adverse impacts on the Kenfig SAC. However, this does not rule out the need for site-by-site consideration of planning applications needing further screening and possible appropriate assessment.

Cefn Cribwr Grasslands SAC

- 6.90 The primary reason for designation of this SAC is the presence on the site of *eu-Molinion* marshy grassland, an Annex 1 habitat. This supports marsh fritillary butterfly *Euphydryas* (*Eurodryas*, *Hypodryas*) *aurini*, an Annex II species, which is also a qualifying species for designation.

Vulnerabilities

- 6.91 The marshy grasslands are characterised by wet heath and scrub. 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. They are dependent on a number of springs and watercourses feeding the site. At the current time the Core Management Plan notes there is a some lack of understanding of the hydrological regime and if the adjacent mineral workings are having an adverse impact. There is no evidence of other land uses having an impact on water availability on the site, although the potential for this type of impact can not be ruled out.
- 6.92 As a precaution development that causes lowering of the water table, either through abstraction to supply new development or through quarrying process needs to be managed appropriately to avoid harm to the SAC.
- 6.93 Grasslands can also be adversely affected by poor air quality and as with other sites this is likely to be from road traffic emissions. Air quality is not currently exceeding threshold levels in this location (Appendix 7) but continued monitoring will be necessary to assess for impacts in the future. Air quality is not identified as a vulnerability of the site in need of management in the Core Management Plan for the SAC. Direct deposition of dust on the site may have an impact. However, the works are now dormant but these impacts may need to be considered if future consent is sought.
- 6.94 The marsh fritillary butterfly that is found on the SAC could also be affected by changes to habitats off the SAC site.
- 6.95 None of the four parts of the SAC 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 meta-population, and in most years marsh fritillaries will not be present.
- 6.96 Each SAC patch is at least 1km from its closest neighbour. Therefore, to retain viable populations on site they must remain connected. Hedgerows, woodland and mature trees in and around the site provide the sheltered conditions which the marsh fritillary require. This means that development between and around the SAC patches will need to be delivered in a way that does not harm these links. Individual areas of habitat will need protecting and may be important to the continued maintenance of Marsh fritillary populations.

Screening of the LDP Deposit policies

- 6.97 The policy review shown in Appendix 5 takes each of the policies of the plan in turn and identifies its potential for adverse impacts on each of the SAC sites. The table in the appendix identifies possible impact pathways, possible impacts and how these can be mitigated. For each policy a conclusion is drawn on if there is potential for significant adverse impacts the four patches of the Cefn Cribwr SAC. For the majority of policies it was concluded that the policy would either have a positive effect or no

effect (alone or in combination), paragraphs 6.96 and 6.97 show all the policies where the conclusions indicated that there may still be the potential for an impact.

6.98 Strategic policies that have the potential for adverse impacts on the Cefn Cribwr SAC are:

- SP1 focuses development in Bridgend near the SAC,
- SP3 includes road improvements near the SAC
- SP6 on minerals safeguarding, the policy may lead to eventual additional mining or quarrying close to the SAC that may have an adverse impact
- SP7 identifies the Heol-y-Splott, South Cornelly as suitable for waste treatment facilities and is near the SAC
- SP9 identifies a strategic employment allocation Ty Draw Farm, North Cornelly near the SAC
- SP12 includes a strategic allocation for housing on the Parc Derwen close to the SAC.

6.99 Detailed policies that have the potential for adverse impacts on the Cefn Cribwr SAC are:

- PLA1: Settlement hierarchy policy identifies some settlements that may be focus of growth in close proximity to the two SAC sites, including around Tondy in the Valleys Gateway Development will also take place in Pyle and North Cornelly adjacent to the SAC
- PLA7: new road developments could have air quality impacts and continued growth of car travel may result in increased traffic on the M4 with possible impacts on the SAC
- ENV14: The risks of this policy having an impact are low, as it only addresses inert waste. However, this development could be located anywhere and the potential for a proposed site to impact on the SAC should be decided on a site-by-site basis
- ENV16 the impacts of this policy will depend on where the new development is located, care needs to be taken to ensure it will not harm SAC sites directly or indirectly
- ENV18 the impacts of this policy will depend on where the new development is located, care needs to be taken to ensure it will not harm SAC sites directly or indirectly
- REG2: the impacts of this policy will depend on what type of employment is found on protected sites, especially the industrial estate in Pyle. To protect the Cefn Cribwr SAC it will be necessary to make sure that new industrial development on these sites does not lead to a deterioration in air quality or loss of habitat features.
- REG12 the impacts of this policy will depend on where new tourism development is located, care needs to be taken to ensure it will not harm SAC sites directly or indirectly and future land use on site is compatible with protecting the site's conservation objectives. There is an identified site for the expansion of leisure activities at the Fun Farm in Cefn Cribwr. Despite being physically separated from the SAC future land use on the site will need to ensure it does not harm the potential to support Marsh fritillary meta-populations. Site investigation may be necessary.

- COM3 the policy allows for the re-use of buildings or land, there may be the potential for adverse impacts depending on the location of the site, and this will need to be determined on a site-by-site basis.
- COM12 the impacts of this policy could come from areas of previously unmanaged open space become heavily managed for sports pitches, reducing biodiversity and habitats patches with potential adverse impacts to Marsh fritillary meta-populations. The impacts will need to be assessed on a site-by-site basis and sites managed to avoid impacts.

6.100 Near **Cefn Cribwr SAC** there are several allocations for housing and mixed use schemes. The screening of sites identifies that the majority of allocations for housing are committed for development, therefore the LDP can have little additional influence. The allocations in closest proximity to the SAC are:

- PLA3(10), PLA8(3), COM1(30), REG1(21) and COM10(8) this is a large mixed use development site in Tondy to include 436 new homes, education facilities a supermarket and other retail
- PLA3(18), COM2(21) and COM8(3) an allocation for 45 new homes committed for development in North Cornelly, also includes a health facility
- COM2(23) COM2(22) two sites allocated for 14 and 22 homes respectively in North Cornelly, already committed for development
- COM2(14) COM2(13) two sites allocated for 39 and 29 homes respectively in Kenfig Hill, already committed for development

6.101 There are also some employment land allocations in the close proximity to the SAC site patches. These allocated sites are:

- REG1(20) a relatively small employment allocation already in use in Tondy
- SP7(3), REG1(37) a large industrial area at Village Farm, Pyle. Allocated for employment use and a site for strategic waste management. The site has potential for intensification of use, although is all already previously developed land.
- REG5 Stormy Down Airfield is an employment allocation adjacent to the Cornelly limestone quarries
- SP9(3) Ty Draw in North Cornelly is a new employment allocation and the site is currently undeveloped.
- REG1(27) in Pyle is small employment site that is previously developed land.

6.102 There are also some other allocations near the site, these include both built development and open space allocations. The allocations are:

- REG12(1) the continued role of the Fun Farm at Cefn Cribwr for leisure activities
- COM8(2) a new health centre at Aberkenfig
- COM12(7) an area of playing fields near the SAC to the east of Pyle
- PLA7(27) a road improvement between Sarn and Maesteg
- ENV2(2, 6, 9, 10) green wedge allocations.

6.103 Two patches of the SAC fall into secondary coal resource areas and the sites are also in close proximity to existing quarries. Bryn Bach part of the SAC borders directly

onto an opencast quarry and the 200 hectares (40 hectare of extraction site) lies directly to the north of Caeon and Bryn Bach parts of the SAC. This raises the potential for new or expansion of mineral workings in the future.

- 6.104 As for all allocations screening may be needed to determine if site specific HRA is required. Where they are prepared development briefs should identify the need for HRA. Any assessment will also need to consider the potential for in-combination effects.

Avoiding impacts: recommendations for moving forward

- 6.105 **Air Quality:** Planning applications for new and expanded minerals working near the SAC site will need investigation on a site-by-site basis. Assessments may require research on the impacts of lime dust on the site to establish the existence and significance of any adverse effects. These emissions are subject to the authorisation of other competent authorities, particularly the Environment Agency.
- 6.106 Implementation of some policies of the LDP will help to mitigate against air pollution impacts, both from road traffic and through appropriate industrial uses (Appendix 11). Also, the implementation of other plans and strategies will help in mitigation. This will include delivery of the public transport objectives of the South East Wales Regional Transport Plan and also site specific design such as that of the Department of Transport Design Manual for Roads and Bridges.
- 6.107 Air quality monitoring near to the site to help identify deterioration and therefore the possible need for review of policy. Where the potential for impacts are found a remediation plan may be necessary.
- 6.108 **Direct land take:** Direct land-take impacts also need to be avoided relating to extensions of minerals working in the area. Policy does favour retention of European sites therefore this type of impact is very unlikely.
- 6.109 **Supporting meta-populations:** In order to protect the integrity of this SAC it will be necessary for the LDP to consider how to protect green space and linking features around the designated site as well as on the site itself. This is essential in order to support the continued viability of species within the protection area, such as the marsh fritillary butterfly. Habitat protection will need to be a consideration of all built development in the area, as well as part of the design of new open space and management of green wedges.
- 6.110 Development outside development boundaries is controlled through LDP policy. However, the LDP could further protect the Cefn Cribwr site from indirect impacts by explicitly stating in policy or supporting text that development within 2km of the site will need to be assessed for impact on site integrity. This would require retaining and enhancing suitable marshy grassland habitats and inter-site connectivity.
- 6.111 **Water availability:** The quantity of new built development in the area is unlikely to have an impact on water availability on the SAC site. Furthermore, much of the residential development in the area is committed for development already limiting on the impact on the LDP in controlling these issues.

- 6.112 New and extended minerals workings could also have an impact on the hydrological regime on the site. Possible impacts on the water table could reduce water availability that is needed to support the marshy grassland. Therefore, further investigation of the possibility of this type of impact may be necessary.
- 6.113 The Environment Agency will have a continued important role to play in monitoring water availability and reviewing consents licensing. The Environment Agency will also have an input into future decisions on new and extended minerals works.
- 6.114 **Water quality:** Continued management of surrounding land uses will be necessary to protect against contamination of water resources that may impact on the SAC site. Management will include impacts on minerals workings as well as nearby new development, such as roads and industrial development.
- 6.115 Existing LDP policies on managing water impacts are shown in appendix 11.

Conclusions

- 6.116 Development policies and specific allocations of the LDP are unlikely to have a significant adverse impact on the conservation objectives of the Cefn Cribwr SAC. However, there remains the potential for the development of unallocated sites and new and extended minerals workings to have some adverse effects.
- 6.117 The screening assessment identifies several ways potential impacts must be mitigated:
- make sure water is used efficiently in all new development as part of implementing policies on sustainable construction (Appendix 11)
 - make sure there is capacity in waste water treatment facilities prior to occupation of any new development
 - avoid waste water runoff from hardstanding onto the SAC site, for instance through use of sustainable drainage systems
 - individual development proposals may need to be screened and assessed for their potential harm, in particular new or extended minerals workings
 - development around the designated patches needs to be managed to avoid impact on site connectivity
 - implementation of the LDP must not adversely impact on the execution of Core Management Plan actions
 - ensure advice from the Environment Agency is followed in making decisions on the suitability of new development, including as part of their consents licensing procedures.
- 6.118 The screening concludes that the Deposit Bridgend LDP is unlikely to have any significant adverse impacts on the Cefn Cribwr SAC. However, this does not rule out the need for site-by-site consideration of planning applications needing further screening and possible appropriate assessment.
- 6.119 A general issue the HRA identifies is frequently the policies of the LDP refer to the protection of SAC sites. It should be noted that the same level of protection should be given to other Natura 2000 sites, which include Special Protection Areas (SPA)

and Ramsar sites. This HRA screening does not identify any SPA or Ramsar sites, however, this does not entirely rule out potential on this type of site if new evidence should become available during the lifetime of the LDP.

7 In-combination effects

- 7.1 It is important to consider other plans and projects that may also have an influence over the Natura 2000 sites, and how the LDP could affect these to change the significance of impact on the sites. This is a requirement of Article 6(3) of the Habitats Directive.
- 7.2 Only plans, programmes and strategies that are identified as having the potential to have an impact on the 'screened in' SAC sites are reviewed for potential in-combination impacts. The identification of potential in-combination impacts is in Appendix 8.
- 7.3 Most significantly in this instance it will be the LDPs of the neighbouring local authority areas that it will be important to consider. In this case it is the Neath Port Talbot County Borough, Vale of Glamorgan and Rhondda Cynon Taff County Borough. These LDPs are at various stages of completion.
- 7.4 It is necessary to be selective about which other plans, programmes and strategies may have an in-combination impact. The process has therefore focused on those plans that may have impacts on similar issues than the impacts already identified for the LDP. These impacts are:
- Water quality and availability
 - Air quality
 - Habitat fragmentation
 - Recreational pressure
 - Changes in coastal processes.
- 7.5 The plans where in-combination impacts have been considered are on a national, regional and local level, as well as the potential for specific projects. Plans from a variety of authors are reviewed, including neighbouring authorities, Wales regional groups, Welsh Assembly Government and the Environment Agency.

National Plans

- 7.6 The majority of National Plans reviewed for in-combination impacts do not set direct policy for making development decisions. Appendix 8 shows many of the aims and objectives of these higher level plans will be implemented through lower tier policies, including the LDP. Therefore, direct in-combination impacts of these plans cannot be identified.
- 7.7 For the Wales Spatial Plan the policies and proposals of neighbouring local authorities need to be considered. This is to identify how these might have an impact following strategic guidance of the Wales Spatial Plan.
- 7.8 Tourism strategies have the potential to have in-combination impacts, although the proposals for growth will need to be implemented through other plans, again including the LDP. Proposals for more tourism in Bridgend County Borough could have the potential to have in-combination impacts if not managed correctly. Therefore, development applications for leisure facilities will have to take into account the

proposed location and the potential for impacts on SAC sites from the cumulative increase in visitors in the wider area. The Kenfig SAC may be at particular risk of increased visitor pressure, particularly at Merthyr Mawr Warren. Implementation of the Valleys Regional Park will need to make sure there is a co-ordinated approach to delivering leisure development in the area to avoid impacts on protected sites. In addition to joint working of local authorities other bodies will need to contribute to good management such as mountain bike organisations, off-road vehicle clubs and the British Horse Society.

Regional Plans

- 7.9 Transport issues relating to air quality and water resources have been identified as risks to the SAC sites screened into this assessment. Therefore, in-combination impacts relating to transport need to be reviewed.
- 7.10 Sewta transport plans are intended to encourage more sustainable forms of travel. These provisions will help reduce air quality impacts relating to car travel. However, the plans also include new roads and may encourage travel by car in some areas. The LDP will be influential in delivering both improved sustainable transport schemes and new roads, and therefore will have in-combination impacts. Monitoring of the effectiveness of schemes to reduce car use is essential.
- 7.11 Housing, leisure and economic growth throughout South Wales may have an impact on road traffic, particularly on the M4. Monitoring needs to be carried for any cumulative deterioration in air quality. Areas near Port Talbot Steel Works may be particularly at risk from combined impacts with industrial emissions.
- 7.12 Water plans for the area prepared by the Environment Agency and Dŵr Cymru Welsh Water. These show that it is unlikely that future growth plans in water needs will have an adverse impact on the SAC sites under review in this assessment. Therefore, there will be no in-combination impacts.
- 7.13 The Head of the Valleys Plan may bring more development into the wider area, resulting in increase in traffic and water use. However, the plan does not cover the Bridgend Valleys.

Local Plans

Neath Port Talbot County Borough

- 7.14 Work has yet to begin on developing LDP policy for the local authority. The existing development plan is the Neath Port Talbot Unitary Development Plan (UDP), which was adopted in 2008. Development proposals in this area that have the potential for in-combination impacts include:
- The intensification of use at the Port Talbot Docks, aided by the construction of the Port Talbot Peripheral Distributor road.
 - Intensification of employment use at Kenfig Industrial Estate and M4 Junction 38 in Margam, in close proximity to Kenfig SAC (Kenfig Burrows)
- 7.15 These proposals may create more traffic on the M4 passing through Bridgend County Borough. Intensification of industrial use may also have an impact on air quality.

Therefore, there is the potential for air quality effects on the nearby Kenfig SAC (Kenfig Burrows) and other SAC in the area.

- 7.16 Wales-wide and local strategies to reduce car use and ensure more freight is moved by rail and water may help reduce the impacts. The forthcoming LDP should include provisions for managing car use in the County Borough to help maintain or improve air quality. In addition, the LDP will need to ensure consents for new industrial activities would not result a harmful increase in air pollution, either individually or cumulatively.
- 7.17 New development in Neath Port Talbot may also have an impact on water availability and water quality. The potential for these impacts will need to be controlled in a similar way as in Bridgend County Borough. Controls will need to include:
- ensuring all new development makes efficient use of water
 - consent licensing and review by the Environment Agency Wales
 - avoiding potentially polluting surface water run-off from directly from new areas of hardstanding, including new roads.
- 7.18 In addition, the continuing operation of the steel works has the potential for cumulative air quality impacts. The Environment Agency are tasked with the monitoring and periodic review of permits where necessary. PM₁₀ levels have been shown to be high in the area with frequent breaches of emission targets. The poor air quality in this area raises the risk of in-combination impacts with development in the County Borough.
- 7.19 Monitoring of air quality at SAC sites will be necessary to identify impacts.
- Rhondda Cynon Taff County Borough*
- 7.20 The LDP for the County Borough has been through public examination stage, with the full draft of the plan and all proposals completed (Planning Inspectors report was published in February 2011).
- 7.21 The policies and proposals of this plan that have the greatest potential to have in-combination impacts are:
- The major development site to the east of Pencoed almost on the Bridgend County Borough boundary on the former Llanilid Open Cast Coal mine. Much of this site already has planning permission for a mix of uses, based around a film studio. However, there is an additional allocation of 1700 homes, retail, school, community facilities and public open space.
 - The large development site at Tonyrefail / Brynfolan for housing. The route from this village to central Bridgend is along the A4093 and A4061, the road that passes through the Blackmill Woodlands SAC.
- 7.22 The land allocations in Rhondda Cynon Taff are suitability distant from the SAC sites under review in this screening exercise so as not to have water quality or availability impacts, nor is direct disturbance likely. The most likely type of impact is a continued deterioration in air quality from increased travel. It is hoped that the mix of uses on these schemes will help reduce the overall travel demand they would otherwise create.

- 7.23 Monitoring of air quality at SAC sites will be necessary to identify impacts. This may be particularly important at the Blackmill Woodland SAC site where air quality thresholds are already being breached.

Vale of Glamorgan

- 7.24 The LDP in for this Local Authority has only reached Draft Preferred Strategy (2007) due a delay in the plan preparation process. The plan only pinpoints the settlements for development, none of these are close to the SAC sites being screened in this policy. The UDP for the area only runs to 2011 and therefore is rapidly becoming obsolete, however, it remains the development plan for the area.
- 7.25 These two plans contain a number of strategic and other proposals that may have potential for in-combination impacts. However, the part of the Vale of Glamorgan that borders on Bridgend County Borough is very rural in character, meaning little development is likely to be take place here. The only proposal from the UDP that is identified in the area is a quarry extension to the north west of Lithalun Quarry is allocated for the further exaction of limestone. However, this is likely to have little impact on the SAC sites within Bridgend County Borough identified through screening.
- 7.26 The 'Vale of Glamorgan Appropriate assessment screening report' states 'it is considered highly unlikely that the draft Preferred strategy...would result in development likely to have a significant effect on the integrity of the primary features of this designated site'. Although it is identified that it is suitable to take a precautionary approach to the possible impacts.
- 7.27 The emerging LDP should be monitored for the potential for additional impacts arising that may have in-combination impacts.

Site specific plans and proposals

- 7.28 Plans and proposals for development will come forward in and adjacent to the County Borough throughout the lifetime of the plan. Many of the larger development schemes in the County Borough are already identified in the LDP such as the regeneration areas of Porthcawl and the Valleys Gateway. The assessment of the impacts of these plans is already part of the assessment.
- 7.29 Other development beyond the County Borough boundaries may also have an impact. Most significant may be changes to the Port Talbot Steel Works that already has an environmental impact. There are plans by preliminary plans by Tata to expand coal mining in the Margam area and any proposals of this type will need to be fully assessed for impacts on the Natura 2000 sites alone and in-combination/cumulatively with other development in the area. This may also be exacerbated by new traffic and industrial development associated with the final phase of the Port Talbot distributor road near the steelworks.

8 Summary and recommendations

- 8.1 This stage of the Habitats Regulations Assessment (HRA) of the Deposit Bridgend Local Development Plan (LDP) concludes that the plan will have no significant impacts on Natura 2000 sites, alone or in-combination.
- 8.2 However, there is the caveat that new development must mitigate against potential adverse impacts that could adversely effect the three identified Special Areas of Conservation (SAC).
- 8.3 Recommendations for mitigation of potential impacts on **Blackmill Woodlands** SAC are:
- a reduction in car travel needs to be achieved in the County Borough, especially on the A4061, through implementation of the LDP and other plans and strategies
 - new industrial development near the site should be assessed for potential to have an adverse effect on air quality that may adversely impact on the SAC, can be avoided through implementation of LDP policy (Appendix 11)
 - monitoring of air quality to trigger policy review if air quality is shown to be deteriorating to levels that could cause a significant adverse impact
 - development at the bike hub and development at Lakeside Farm Park needs to include measures to ensure increased visitor numbers will not harm the SAC, in line with policy on biodiversity protection
 - implementation of the LDP must not adversely impact on the execution of Core Management Plan actions.
- 8.4 Recommendations for mitigation of potential impacts on **Kenfig** SAC are:
- make sure water policies on the efficient use of water in new development are implemented (Appendix 11)
 - monitoring and review if changes are identified in water availability, either on-site or as part of Environment Agency or Welsh Water plans as a result of growth
 - make sure there is capacity in waste water treatment facilities prior to occupation of any new development throughout the lifetime of the plan
 - make sure policies on sustainable drainage are implemented to avoid waste water runoff from hardstanding onto the SAC site
 - screening of individual development proposals where necessary, as required by policy SP4
 - assessing potential for cumulative impacts from industrial development on SAC sites, as required by LDP policy
 - a reduction in car travel needs to be achieved in the County Borough through implementation of the LDP and other plans and strategies (Appendix 11)
 - implementation of the LDP must not adversely impact on the execution of Core Management Plan actions
 - new and extended leisure developments need to be assessed for their potential to increase recreational pressure in sensitive parts of the SAC and therefore compatibility with location

- ensure advice from the Environment Agency is followed in making decisions on the suitability of new development, including as part of their consents licensing procedures.

8.5 Recommendations for mitigation of potential impacts on **Cefn Cribwr** SAC are:

- make sure water is used efficiently in all new development as part of implementing policies on sustainable construction (Appendix 11)
- make sure there is capacity in waste water treatment facilities prior to occupation of any new development
- avoid waste water runoff from hardstanding onto the SAC site, for instance through use of sustainable drainage systems
- individual development proposals may need to be screened and assessed for their potential harm, in particular new or extended minerals workings
- development around the designated patches needs to be managed to avoid impact on site connectivity
- implementation of the LDP must not adversely impact on the execution of Core Management Plan actions
- ensure advice from the Environment Agency is followed in making decisions on the suitability of new development, including as part of their consents licensing procedures.

8.6 The LDP should set out in policy and supporting text the overriding importance that should be given to the protection of Natura 2000 sites. These sites must be protected from harmful impacts of development (alone or in-combination) that would prevent the sites' conservation objectives being met. Only in exceptional circumstances will development be permitted significantly harmful impacts are identified.

8.7 It may be necessary to adopt a precautionary approach to those Natura 2000 sites in and out of the County Borough that are reliant on maintained water levels. To help protect these areas the HRA screening suggests additional wording in policy ENV7 and supporting text relating to water supply and availability.

8.8 All SAC sites will continue to be monitored by appropriate bodies. Where adverse impacts are shown to be occurring that are likely to be related to development growth there may need to be a re-screening of all relevant plan. Re-screening may include the Bridgend and neighbouring authorities LDP. Review of LDPs may then be necessary to avoid further adverse impacts, in exceptional circumstances this could include review of housing and employment growth and suitability of land allocation. Monitoring targets, indicators and trigger points for protected sites could be included as part of the LDP monitoring framework.

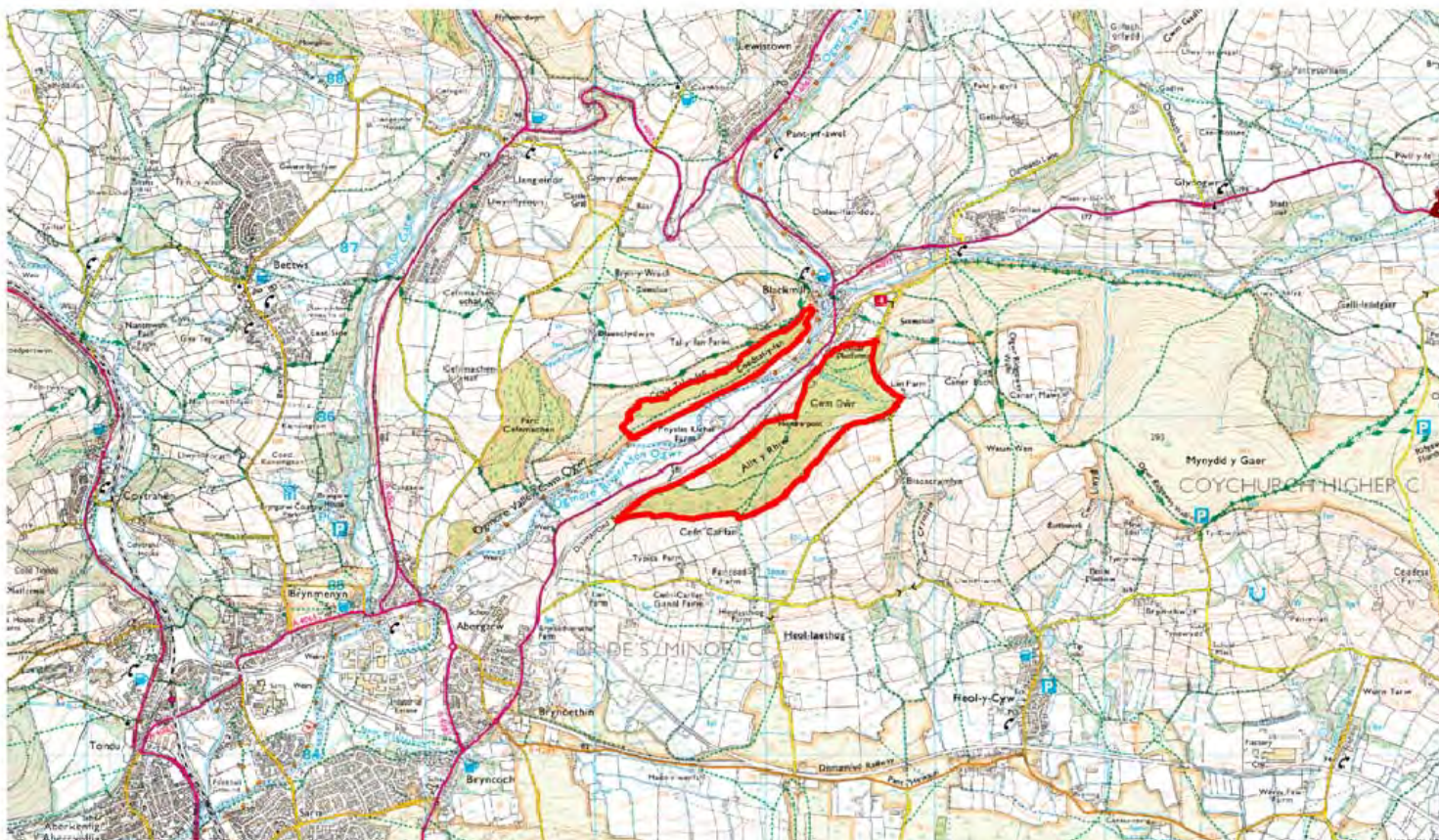
8.9 The LDP should also clarify that the same level of protection will be given to Special Protection Areas and Ramsar sites that is given to SAC sites. These sites are all part of the Natura 2000 network.

8.10 The plan should make clear that passing through LDP screening does not exempt development proposals undergoing project specific HRA including in-combination effects, if required. The LDP may need to make clear that where assessments can

not ascertain that there will be no adverse effects progressing the development would not be in keeping with LDP policy and will not be permitted.

Appendix 1

Natura 2000 Sites / European nature conservation sites
in and near Bridgend County Borough



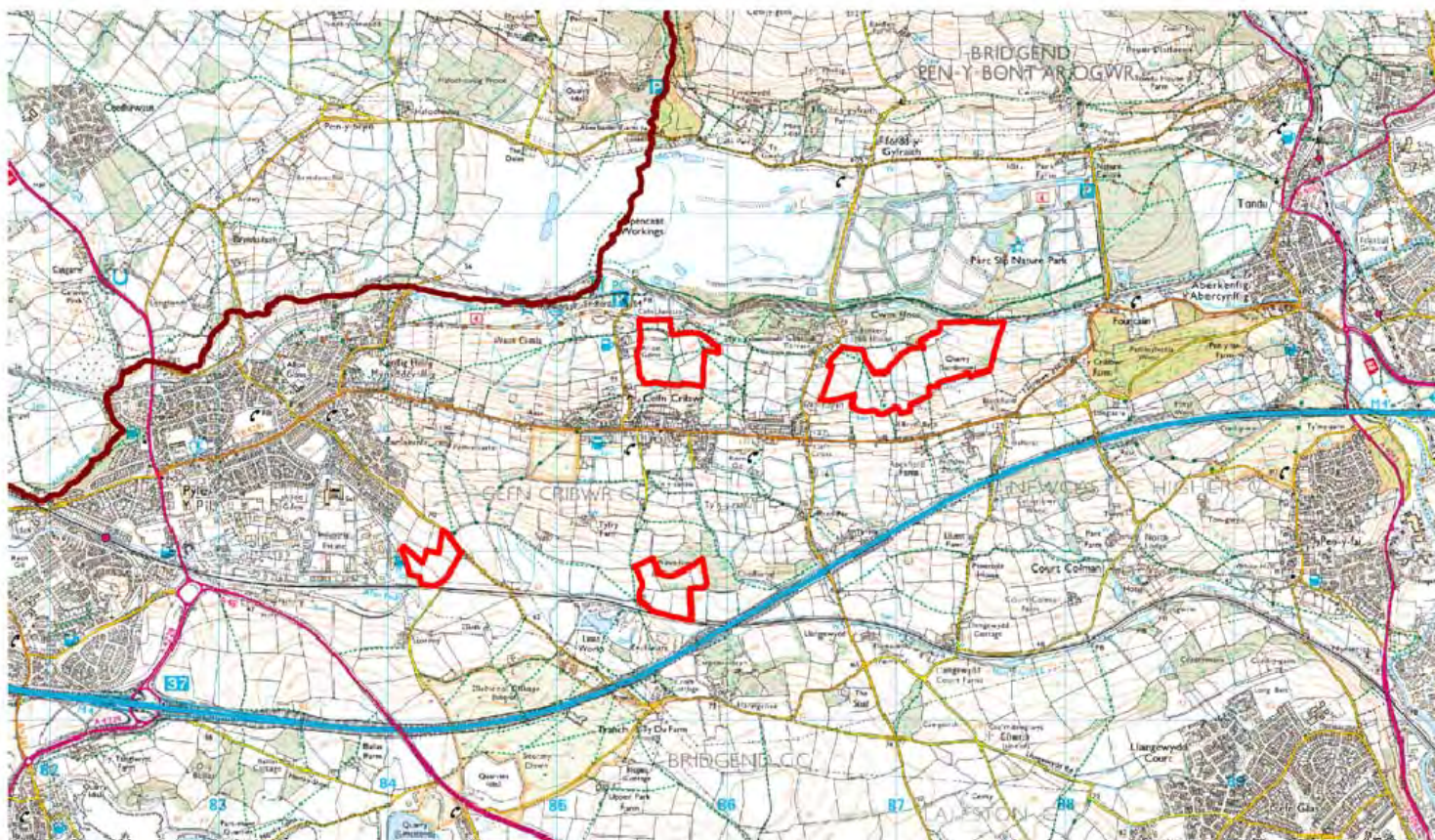
Title: Blackmill Woodlands Special Area of Conservation

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Scale: 1:30000





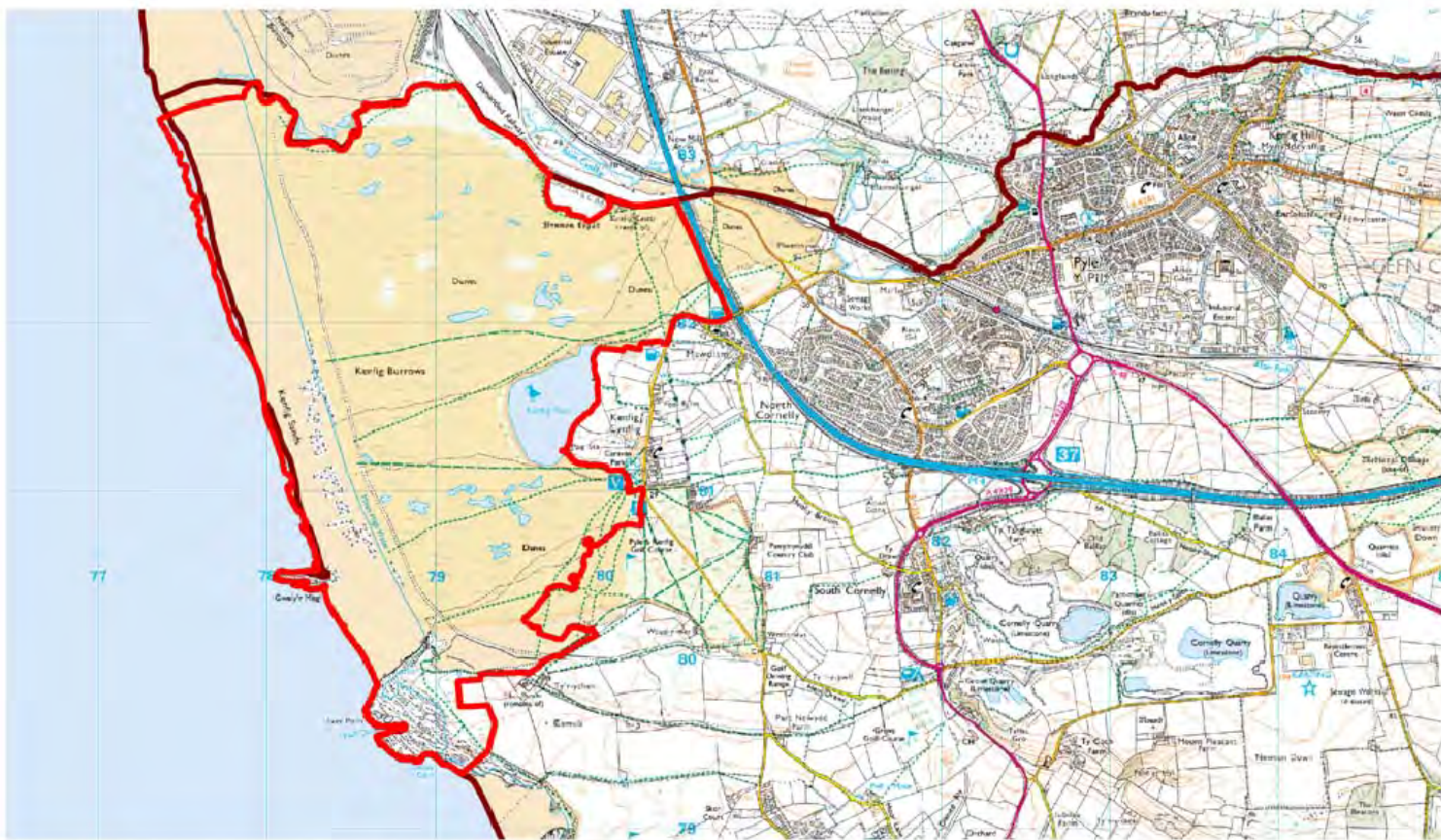
Title: Cefn Cribwr Grasslands Special Area of Conservation

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Scale: 1:30000





Title: Kenfig (Kenfig Burrows) Special Area of Conservation

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Title: Kenfig (Merthyr Mawr Warren) Special Area of Conservation

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Title: Dunraven Bay Special Area of Conservation

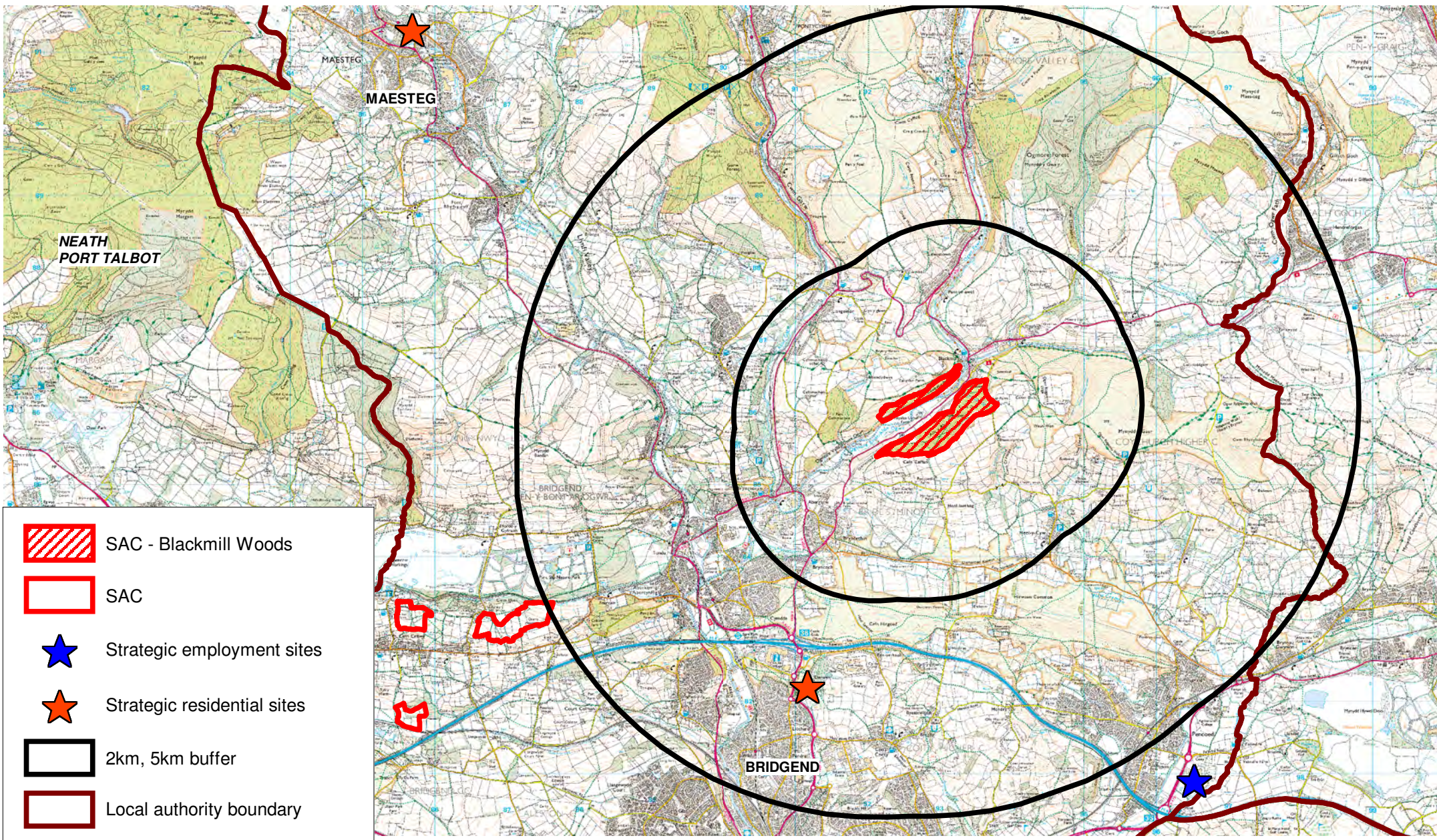
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Appendix 2

2 and 5km buffer zones around the SAC sites identified for further investigation



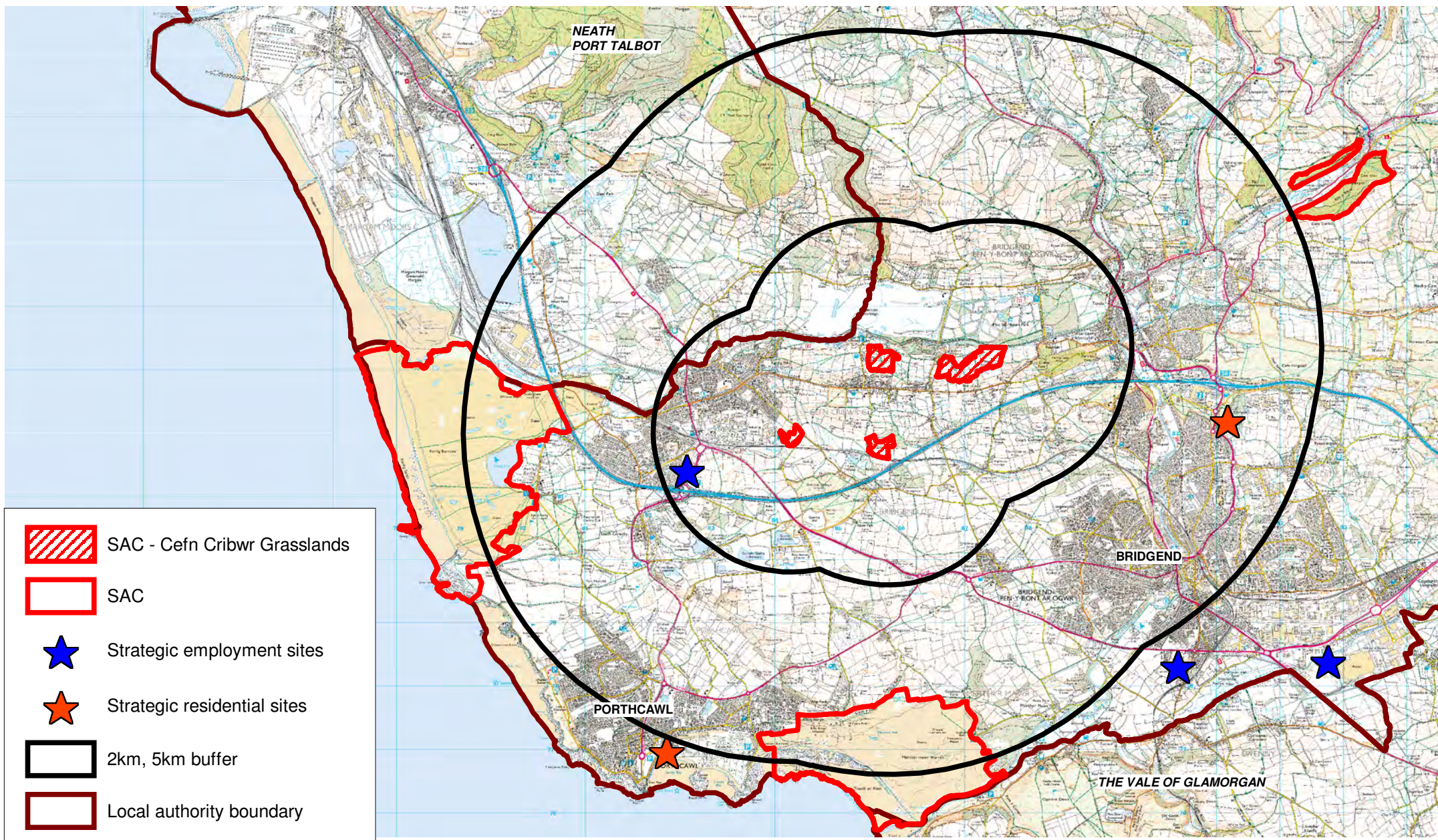
2km and 5 km Buffers for Blackmill Woods Special Area of Conservation

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Scale: 1:70000





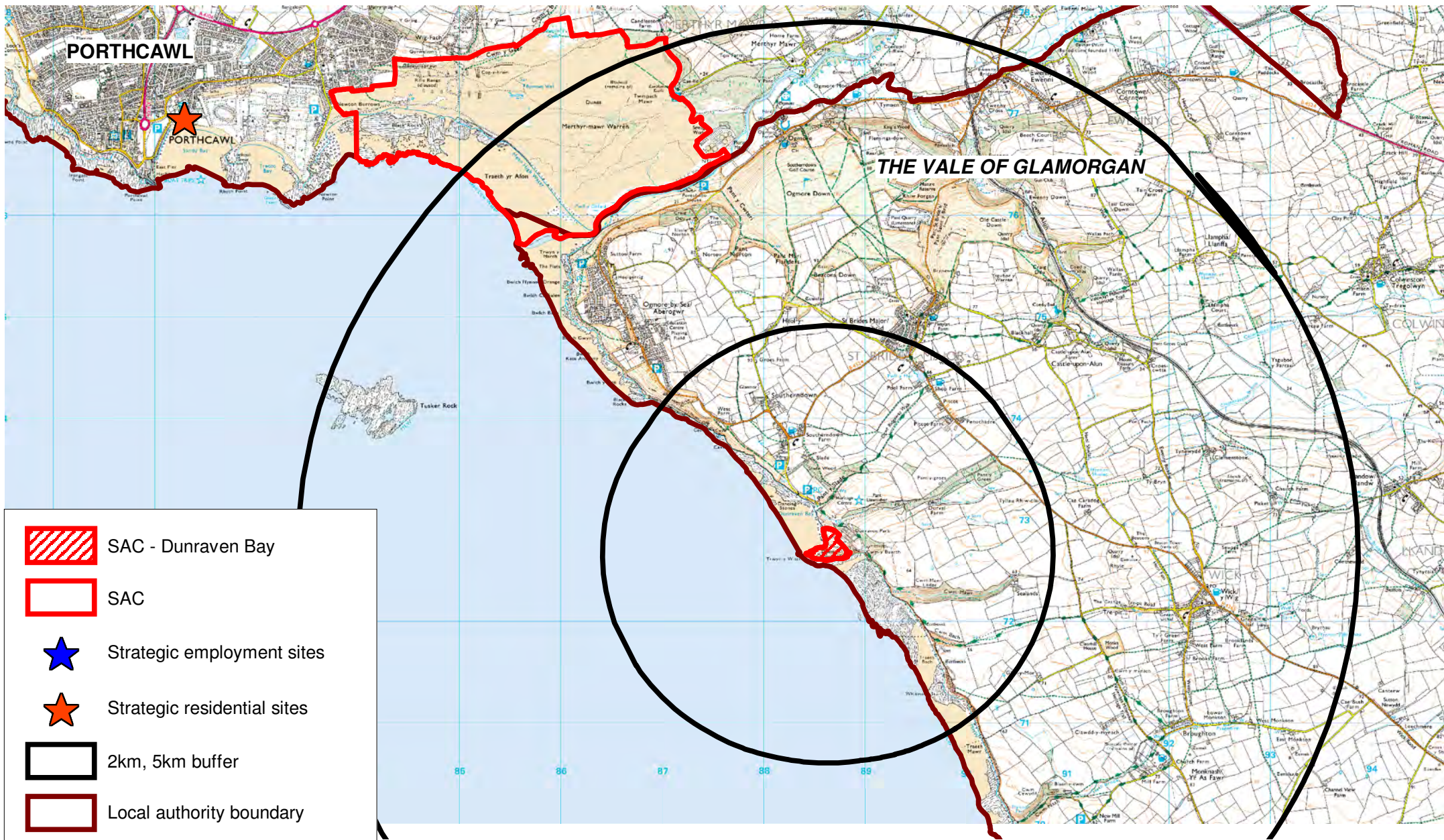
2km and 5 km Buffers for Cefn Cribwr Grasslands Special Area of Conservation

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Scale: 1:80000





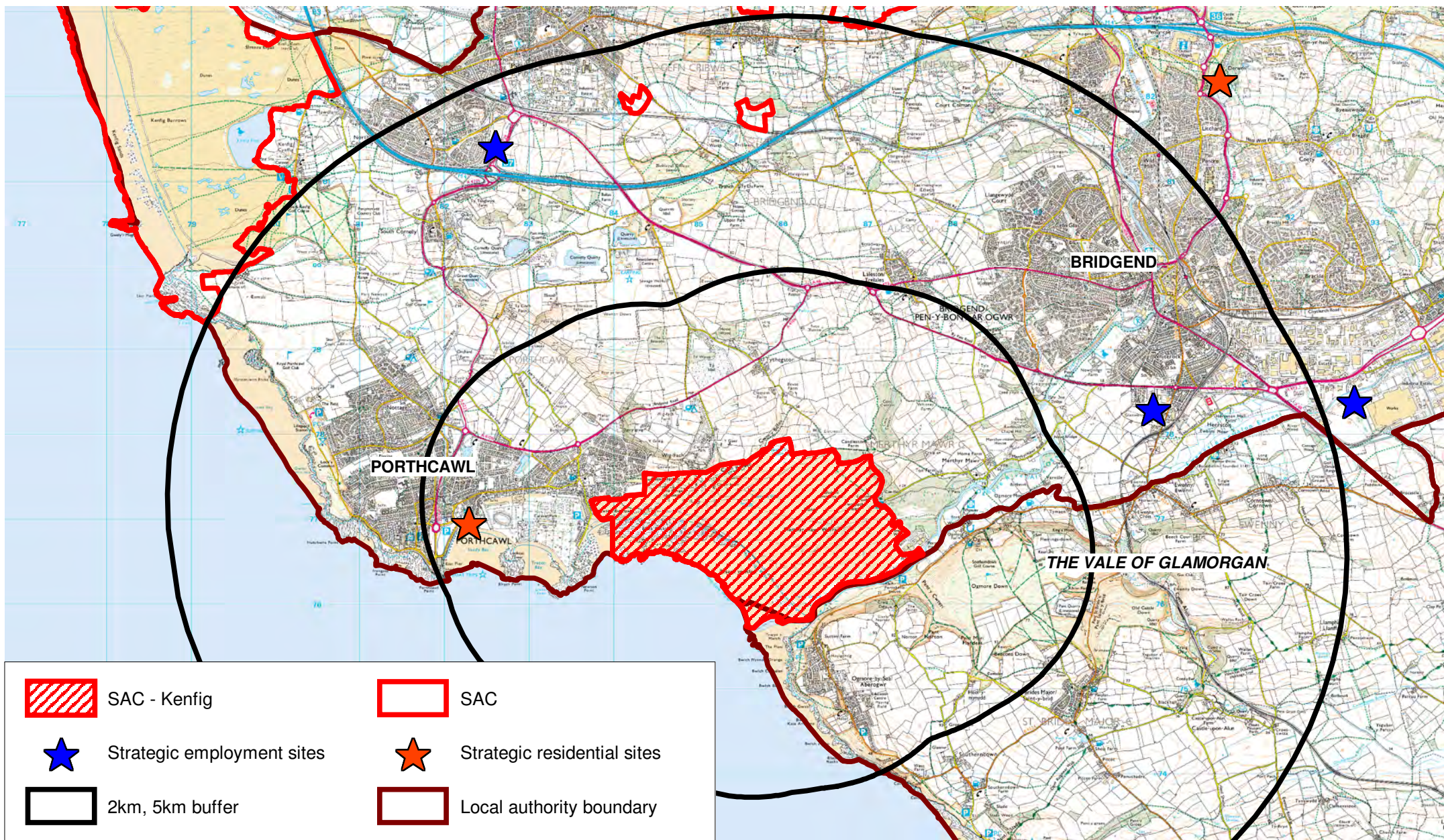
2km and 5 km Buffers for Dunraven Bay Special Area of Conservation

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Scale: 1:60000





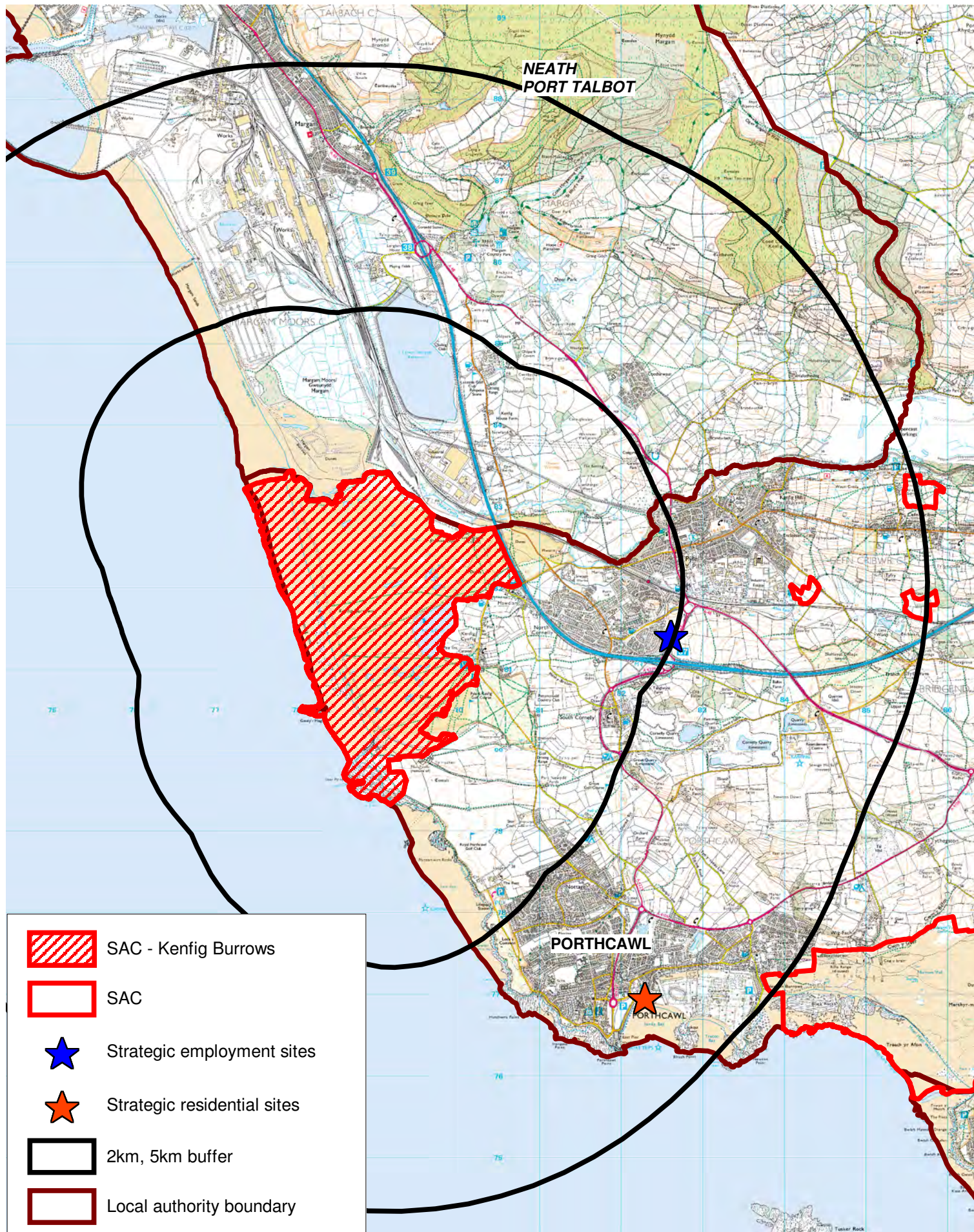
2km and 5 km Buffers for Kenfig (Merthyr Mawr Warren)
Special Area of Conservation

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Scale: 1:60000





2km and 5 km Buffers for Kenfig (Kenfig Burrows) Special Area of Conservation

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Scale: 1:60000



Appendix 3

SAC site forms

extract from the: *Habitat Regulations Assessment (HRA): a toolkit to support HRA screening and appropriate assessment* (South East Wales Strategic Planning Group, 2008) – information database

Site Name: Blackmill Woodlands Location Grid Ref: SS929859 JNCC Site Code: <u>UK0030090</u> Size: 71.01 Designation: SAC	Habitats Regulations Assessment: Data Proforma
Site Description	<p>Blackmill Woodlands is an example of old sessile oak woods at the southern extreme of the habitat's range in Wales, and contributes to representation of the habitat in Wales and in south-west England. The site is situated within Bridgend County Borough and is approximately 3km away from the City of Bridgend. The A4061 runs directly between the two areas that comprise to make up the SAC. The ground flora is restricted by the relative dryness of the site, but the main habitat features of sessile oak <i>Quercus petraea</i> canopy, acidic ground flora of <i>Vaccinium myrtillus</i> and wavy hair-grass <i>Deschampsia flexuosa</i>, and moderate fern and bryophyte cover are present. The woodlands have a long cultural history of management, reflected in the distinctive gnarled appearance of many of the trees.</p>
Qualifying Features	<p>Annex I Habitats primary reason for selection:</p> <ul style="list-style-type: none"> ■ <u>Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles</u>
Conservation Objectives	<p>Conservation Objective for Feature 1: Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles</p> <p>Vision for feature 1 There is only one feature for the site, and so the vision for this feature is the same as that for the site: At least 90% of the site will be covered by semi-natural broadleaved woodland. The trees will be locally native broadleaved species, with a dominance of oak in the canopy. In the long term, the canopy will include trees of a wide range of age classes, with particular attention given to retaining old or veteran trees and encouraging natural regeneration of tree species, in particular oak. Dead wood, standing and fallen, will be maintained where possible to provide habitat for invertebrates, fungi and other woodland species. The tree canopy will not be completely closed; approximately 10% of the woodland will include a naturally occurring dynamic, shifting pattern of gaps.</p> <p>It is required that the feature be in a favourable conservation status, where all of the conditions set out in the Performance Indicators table are satisfied, and all factors affecting the achievement of these conditions are under control.</p> <p>Performance indicators for Feature 1</p> <p>The performance indicators are part of the conservation objective, not a substitute for it. Assessment of plans and</p>

	projects must be based on the entire conservation objective, not just the performance indicators. The performance indicators can be found within the Blackmill Woodlands Management Plan .																		
Component SSSIs	<ul style="list-style-type: none">Blackmill Woodlands - is composed of 2 management units Allt Y Rhiw (Unit 1) and Craig Tal Y Fan (Unit 2), the SAC covers the same area. A map of the management units can be viewed on the CCW website.																		
Key Environmental Conditions (factors that maintain site integrity)	<ul style="list-style-type: none">Management of woodland - focus on restoring an uneven age structure and providing increased opportunity for natural regeneration through removal of grazing and gap creation/maintenance.																		
SAC Condition Assessment	<p>Conservation Status of Feature 1: Old sessile oak woods with Ilex and Blechnum in the British Isles</p> <table><tr><td>Broad Attribute</td><td>Allt Y Rhiw (Unit 1)</td><td>Craig Tal Y Fan (Unit 2)</td></tr><tr><td>Extent</td><td>PASS</td><td>PASS</td></tr><tr><td>Structure and Natural Processes</td><td>FAIL</td><td>FAIL</td></tr><tr><td>Regeneration</td><td>FAIL</td><td>FAIL</td></tr><tr><td>Composition</td><td>PASS</td><td>PASS</td></tr><tr><td>Quality Indicators</td><td>PASS</td><td>PASS</td></tr></table> <p>The results shown above indicate that both Allt y Rhiw and Craig Tal-y-Fan failed to meet the limits set for two of the broad attributes, namely Structure, Natural Process and Regeneration. A closer look at the data reveals that both woodland blocks had insufficient gaps in the canopy, although the average number of gaps per sample was slightly higher for Craig Tal Y Fan than for Allt Y Rhiw. With regard to regeneration, seedlings > 5cm high were seen throughout Allt Y Rhiw and as a result this woodland block passed the limits set for this attribute. However fewer seedlings were seen throughout Craig Tal Y Fan and this woodland block failed this attribute. It is worth noting however that this attribute needs to be assessed over a ten-year period. Both woodland blocks failed to have sufficient seedlings and saplings within canopy gaps. To summarise, the feature within this site is considered to be in unfavourable condition. However Unit 1 should be classified as unfavourable recovering and Unit 2 as unfavourable declining.</p>	Broad Attribute	Allt Y Rhiw (Unit 1)	Craig Tal Y Fan (Unit 2)	Extent	PASS	PASS	Structure and Natural Processes	FAIL	FAIL	Regeneration	FAIL	FAIL	Composition	PASS	PASS	Quality Indicators	PASS	PASS
Broad Attribute	Allt Y Rhiw (Unit 1)	Craig Tal Y Fan (Unit 2)																	
Extent	PASS	PASS																	
Structure and Natural Processes	FAIL	FAIL																	
Regeneration	FAIL	FAIL																	
Composition	PASS	PASS																	
Quality Indicators	PASS	PASS																	

Vulnerabilities (includes existing pressures and trends)	<ul style="list-style-type: none"> ■ Grazing - Sheep grazing has, and continues to have, a major impact on the condition of the site with significant problems as a result of the heavy grazing in the Craig Tal-y-Fan (unit 2) woodland block. Excessive sheep grazing leads to a severely impoverished ground flora and severely inhibits the growth or recruitment of young seedlings and saplings for regeneration. Cessation of all grazing over a long period could be detrimental to the field layer, especially bryophytes, as they can become shaded out. The ideal is either to mimic the very low level within a natural woodland ecosystem, or to periodically vary grazing pressure. ■ Air pollution* - Possible in-combination effect of EA permitted licences, currently under investigation. <ul style="list-style-type: none"> ○ Acidification. ○ Eutrophication. ○ Photochemical oxidants. ○ Particulate matter.
Landowner/ Management Responsibility	<p>These woodlands are situated entirely on Common Land, and are subject to rights of common. These include the lopping of branches for firewood which has resulted in the distinctive gnarled shape of many of the trees.</p>
HRA/AA Studies undertaken that address this site	<p>HRA Screening of the County Council of the City and County of Cardiff Local Development Plan Preferred Strategy Sept 2007. www.cardiff.gov.uk/ObjView.asp?Object_ID=9788</p> <ul style="list-style-type: none"> ■ The Screening states that the most likely mechanism for the Preferred Strategy to have a significant effect on this site is through airborne pollution. <p>AA Screening of the Vale of Glamorgan Local Development Plan Preferred Strategy Dec 07. http://www.valeofglamorgan.gov.uk/files/Living/Planning/Policy/LDP/Appropriate_Assessment_Screening_Report.pdf</p> <ul style="list-style-type: none"> ■ It is considered unlikely that the Vale of Glamorgan LDP Draft Preferred Strategy LDP would result in development likely to have a significant effect on the integrity of the primary features of this site. The remaining activities that could adversely affect the designated site are extremely localised and site specific and will not be affected by the draft preferred strategy.

* Air Pollution Information System (APIS). Oak Woodland. Available from:
http://www.apis.ac.uk/cgi_bin/habitat_result.pl?habResult=Oak+woodland&choice=allHabs&haborspec=habitat&submit.x=23&submit.y=8

<p>Site Name: Cefn Cribwr Grasslands Location Grid Ref: SS870830 JNCC Site Code: <u>UK0030113</u> Size: 58.35 Designation: SAC</p>	<p>Habitats Regulations Assessment: Data Proforma</p>
<p>Site Description</p>	<p>The site(s) is situated to the east of Bridgend in close proximity to the M4. This is one of four sites representing <i>Molinia</i> 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 <i>Molinia</i> – <i>Cirsium dissectum</i> fen-meadow, including the heathy sub-type with cross-leaved heath <i>Erica tetralix</i>, as well as other forms with a stronger representation of grasses, rushes and small sedges. Transitions to stands of more acidic <i>Molinia</i> and <i>Juncus</i> pasture, dry neutral grassland and wet scrub vegetation are well-represented. Uncommon and declining species associated with the <i>Molinia</i> meadows at this site include the nationally rare viper's-grass <i>Scorzonera humilis</i> and the nationally scarce soft-leaved sedge <i>Carex montana</i>.</p> <p>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.</p>
<p>Qualifying Features</p>	<p>Annex I Habitats primary reason for selection:</p> <ul style="list-style-type: none"> ■ <u>Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>)</u> <p>Annex II Species qualifying feature:</p> <ul style="list-style-type: none"> ■ <u>Marsh fritillary butterfly</u> <i>Euphydryas</i> (<i>Eurodryas</i>, <i>Hypodryas</i>) <i>aurinia</i>
<p>Conservation Objectives</p>	<p>Conservation Objective for Feature 1: Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>)</p> <p>Vision for feature 1</p> <p>The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:</p> <ul style="list-style-type: none"> ■ 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 <i>Molinia caerulea</i>; meadow thistle <i>Cirsium dissectum</i>; <i>Carex hostiana</i>; <i>Carex pulicaris</i>; devil's bit scabious <i>Succisa pratensis</i>; carnation sedge <i>Carex panicea</i>; saw wort <i>Serratula tinctoria</i> and; tormentil <i>Potentilla erecta</i>.

	<ul style="list-style-type: none"> ■ Cross-leaved heath <i>Erica tetralix</i> and common heather <i>Calluna vulgaris</i> will also be common in some areas. ■ Rushes and species indicative of agricultural modification, such as perennial rye grass <i>Lolium perenne</i> and white clover <i>Trifolium repens</i> will be largely absent from the eu-Molinion marshy grassland. ■ Scrub species such as willow <i>Salix</i> (excluding <i>Salix repens</i>) and birch <i>Betula</i> will also be largely absent from the eu-Molinion marshy grassland. ■ All factors affecting the achievement of the foregoing conditions are under control. <p>Performance indicators for feature 1</p> <p>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. The performance indicators can be found within the <u>Cefn Cribwr Grasslands Management Plan</u>.</p> <p>Conservation Objective for Feature 2: Marsh fritillary butterfly <i>Euphydryas</i> (<i>Eurodryas</i>, <i>Hypodryas</i>) <i>aurinia</i></p> <p>Vision for feature 2</p> <p>The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:</p> <ul style="list-style-type: none"> ■ 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 <i>Succisa pratensis</i> 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 <i>Molinia caerulea</i>, with <i>S. pratensis</i> present throughout and a vegetation height of 10-20cm over the winter period. ■ Suitable marsh fritillary habitat is defined as stands of grassland where <i>Succisa pratensis</i> 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 <i>Molinia caerulea</i>, frequent "large-leaved" devil's-bit scabious <i>Succisa pratensis</i> 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. ■ The marshy grassland will be well sheltered by hedgerows and mature trees.
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	<ul style="list-style-type: none"> ■ All factors affecting the achievement of the foregoing conditions are under control. <p>Performance indicators for feature 2</p> <p>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. The performance indicators can be found within the Cefn Cribwr Grasslands Management Plan.</p>
Component SSSIs	<ul style="list-style-type: none"> ■ Bryn-Bach, Cefn Cribwr. ■ Pen y Castell Cefn Cribwr. ■ Waun-fawr, Cefn Cribwr. ■ Caeau Cefn Cribwr. <p>There are 12 management units of which numbers 1 to 10 comprise to form the Cefn Cribwr Grasslands SAC. A map showing the management units can be viewed on the CCW website.</p>
Key Environmental Conditions (factors that maintain site integrity)	<ul style="list-style-type: none"> ■ 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. 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. 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. ■ Shelter belts - Hedgerows, woodland and mature trees in and around the site provide the sheltered conditions which the marsh fritillary requires. These should be retained and managed. On each component SSSI <ul style="list-style-type: none"> ○ 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.

	<ul style="list-style-type: none"> ■ Hydrological regime - The eu-Molinion marshy grassland is dependent on a number of springs and watercourses feeding the site. CCW states that 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.
SAC Condition Assessment	<p>Conservation status for Feature 1: Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinia caerulea</i>)</p> <p>This assessment relates to monitoring results from 2001 and provisional results from monitoring undertaken in 2007.</p> <p>The current status of the feature is Unfavourable</p> <p>The status within each management unit where Eu-Molinion is Key Habitat:</p> <p>Caeau Cefn Cribwr SSSI: MU1 Unfavourable MU2 Unfavourable MU3 Unfavourable MU5 Unfavourable</p> <p>Pen y Castell SSSI: MU1 Unfavourable MU2 Unfavourable</p> <p>Bryn Bach SSSI: MU1 Unfavourable</p> <p>Waun Fawr SSSI: MU1 Unfavourable</p> <p>Conservation status for Feature 2: Marsh fritillary butterfly <i>Euphydryas</i> (<i>Eurodryas</i>, <i>Hypodryas</i>) <i>aurinia</i></p> <p>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</p> <p>The status within each management unit where marsh fritillary butterfly is the Key species:</p>

	<p>Caeau Cefn Cribwr SSSI: MU5 Unfavourable MU7 Unfavourable MU8 Unfavourable</p> <p>Pen y Castell SSSI: MU1 Unfavourable MU2 Unfavourable</p> <p>Bryn Bach SSSI: MU1 Unfavourable MU3 Unfavourable</p>
Vulnerabilities (includes existing pressures and trends)	<ul style="list-style-type: none"> ■ Inappropriate Grazing - There is a danger of under/over grazing. ■ Burning - is not a sympathetic habitat management tool for maintaining marsh fritillary populations. Burning should only be employed in the restoration of Eu Molinion/marshy grassland, where marsh fritillaries are known not to breed. ■ 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. 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. ■ Off-site pollution - Two of the component SSSIs lie close to opencast coal workings and other active mineral workings. 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. CCW states that further investigation is required to establish the existence and significance of any adverse effects. ■ 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. ■ Weather conditions - Weather conditions have an effect on the breeding success of the marsh fritillary. In

	<p>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.</p> <ul style="list-style-type: none"> ■ Parasites - The larvae of marsh fritillaries can be parasitised by species of braconid wasp of the <i>Cotesia</i> 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.
Landowner/ Management Responsibility	<ul style="list-style-type: none"> ■ N/A
HRA/AA Studies undertaken that address this site	<p>AA Screening of the Vale of Glamorgan Local Development Plan Preferred Strategy Dec 07. http://www.valeofglamorgan.gov.uk/files/Living/Planning/Policy/LDP/Appropriate_Assessment_Screening_Report.pdf</p> <ul style="list-style-type: none"> ■ It is considered highly unlikely that the Draft Preferred Strategy for the Vale of Glamorgan LDP would result in development likely to have a significant effect on the integrity of the primary features of the designated site(s). However, Marsh Fritillary butterflies have been recorded within the Vale of Glamorgan and while it is considered highly unlikely that they originated from the Cefn Cribwr Grassland site, the species has been known to range up to 15 kilometres from its primary habitat. In addition, as the Vale supports a number of similar grassland habitats, it is considered that a precautionary approach should be adopted and further investigations undertaken.

Site Name: Dunraven Bay Location Grid Ref: SS886727 JNCC Site Code: <u>UK0030139</u> Size: 6.47 Designation: SAC	Habitats Regulations Assessment: Data Proforma
Site Description	<p>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.</p>
Qualifying Features	<p>Annex II Species primary reason for selection:</p> <ul style="list-style-type: none"> ■ <u>Shore dock</u> <i>Rumex rupestris</i>
Conservation Objectives	<p>Conservation Objective for Feature 1: <i>Rumex rupestris</i> (shore dock)</p> <p>Vision for feature 1</p> <p>The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:</p> <ul style="list-style-type: none"> ■ 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. <p>Performance indicators for Feature 1</p> <p>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. The performance indicators can be found within the <u>Dunraven Bay Management Plan</u>.</p>
Component SSSIs	<ul style="list-style-type: none"> ■ Southerndown Coast SSSI <p>A map of the site can be viewed on the <u>CCW website</u>.</p>

Key Environmental Conditions (factors that maintain site integrity)	<ul style="list-style-type: none"> ■ Manage Scrub - no increase in area of scrub from 2003 area. ■ Hydrological regime - Availability of water seeping down the cliff face, Shore dock appears to prefer slightly damp ground.
SAC Condition Assessment	<p>Conservation Status of Feature 1: <i>Rumex rupestris</i> (shore dock)</p> <p>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.</p> <p>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.</p> <p>In 2006 a cliff fall swept away 4 of the plants, leaving 6 remaining. The feature is therefore considered to be unfavourable.</p>
Vulnerabilities (includes existing pressures and trends)	<p>The <i>Rumex rupestris</i> colony has a naturally very restricted distribution within the site, being limited to a small area of groundwater seepage. It is accessible only with difficulty and this gives it natural protection from grazing animals and accidental damage by people. It is important that the hydrological regime is maintained but there are no known threats to it at present. Research will be undertaken to ascertain the source of the groundwater.</p> <p>In the very long term, the current site of the <i>R. rupestris</i> colony will be lost as a result of coastal erosion. Nothing can be done to prevent this, but the natural processes of erosion may be expected to simultaneously create replacement habitat for this plant in the immediate vicinity.</p>
Landowner/ Management Responsibility	<ul style="list-style-type: none"> ■ N/A
HRA/AA Studies undertaken that address this site	<p>AA Screening of the Vale of Glamorgan Local Development Plan Preferred Strategy Dec 07. http://www.valeofglamorgan.gov.uk/files/Living/Planning/Policy/LDP/Appropriate_Assessment_Screening_Report.p df</p> <ul style="list-style-type: none"> ■ The Screening concludes that development resulting from the LDP in the proximity of the SAC is therefore unlikely to be of scale that would result in a detrimental impact upon the site. While increased pressure for recreation could result from increased housing provision, the location of the site within the Glamorgan Heritage Coast, which is actively managed for conservation, affords it significant protection. In addition, the location of the species population on an inaccessible liassic limestone cliff face means that it is highly unlikely to be impacted

	<p>upon by increases in recreational pressure. While increases in airborne pollution could impact upon the site, its location within industrial south Wales means that it is already subject to high levels of pollution and it is therefore considered unlikely that development resulting from the LDP would result in a significant detrimental effect on the integrity of the primary features of the designated site. Notwithstanding the above it is considered that the sites close proximity to Bridgend could result in in-combination effects on the site and that a precautionary approach should be adopted and further investigations undertaken.</p>
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Site Name: Kenfig/ Cynffig Location Grid Ref: SS790813 JNCC Site Code: <u>UK0012566</u> Size: 1191.67 Designation: SAC	Habitats Regulations Assessment: Data Proforma
Site Description	<p>Kenfig is a largely intact dune system in south Wales with extensive areas of fixed dune vegetation with red fescue <i>Festuca rubra</i> and lady's bedstraw <i>Galium verum</i> and semi-fixed dune grassland with marram <i>Ammophila arenaria</i> and red fescue. The site also 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 <i>Salix repens</i> ssp. <i>argentea</i>, 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.</p> <p>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 <i>Phragmites australis</i> are found on the pool's seaward side. Grey club-rush <i>Scirpus lacustris</i> ssp. <i>tabernaemontani</i>, sea club-rush <i>Scirpus maritimus</i>, branched bur-reed <i>Sparganium erectum</i> and yellow iris <i>Iris pseudacorus</i> are also present.</p> <p>The site is also designated as it is one of two sites selected for petalwort <i>Petalophyllum ralfsii</i> 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. It also holds the largest populations of fen orchid <i>Liparis loeselii</i> 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. <i>ovata</i>, 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.</p>
Qualifying Features	<p>Annex I Habitats primary reason for selection:</p> <ul style="list-style-type: none"> ■ <u>Fixed dunes with herbaceous vegetation ('grey dunes')* Priority feature</u> ■ <u>Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>)</u> ■ <u>Humid dune slacks</u> ■ <u>Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.</u> <p>Annex I Habitats qualifying feature:</p> <ul style="list-style-type: none"> ■ <u>Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)</u> <p>Annex II Species primary reason for selection:</p>

	<ul style="list-style-type: none"> ■ <u>Petalwort</u> <i>Petalophyllum ralfsii</i> ■ <u>Fen orchid</u> <i>Liparis loeselii</i>
Conservation Objectives	<p>Conservation Objective for Feature 1 and 2: Humid dune slacks and Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>)</p> <p>NB The division between ‘humid dunes’ and ‘dunes with <i>Salix repens</i> ssp. <i>argentea</i> is unclear and difficult to define. The humid dune slack habitat includes both successional young and mature slacks, which equate to NVC communities SD13-16. The dunes with <i>Salix repens</i> spp. <i>argentea</i> equate to drier areas of mature dune slack, and the low hummocks found around dune slacks which support <i>Salix repens</i>. 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.</p> <p>Vision for feature 1</p> <p>The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:</p> <ul style="list-style-type: none"> ■ Dunes with <i>Salix repens</i> 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 <p>Performance indicators for Feature 1 & 2</p> <p>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. The performance indicators can be found within the <u>Kenfig Management Plan</u>.</p> <p>Conservation Objective for Feature 3: Fixed dunes with herbaceous vegetation (‘grey dunes’)</p> <p>Vision for feature 3</p> <p>The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:</p> <ul style="list-style-type: none"> ■ Fixed dunes with herbaceous vegetation (grey dunes) will occur where older, shifting dunes become more

	<p>stabilised and in early successional stages become colonised by lichens and other species indicative of the transition from less mobile habitat.</p> <ul style="list-style-type: none"> ■ 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 <p>Performance indicators for Feature 3</p> <p>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. The performance indicators can be found within the <u>Kenfig Management Plan</u>.</p> <p>Conservation Objective for Feature 4: Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.</p> <p>Vision for feature 4</p> <p>The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:</p> <ul style="list-style-type: none"> ■ Submerged Chara beds (mainly <i>Chara aspera</i> and <i>C. virgata</i>) 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 <i>Potamogeton gramineus</i> and <i>P. x nitens</i> are present in other embayments and pools, including <i>Tolypella glomerata</i> 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. <p>Performance indicators for Feature 4</p>
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	<p>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. The performance indicators can be found within the <u>Kenfig Management Plan</u>.</p> <p>Conservation Objective for Feature 5: Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)</p> <p>Vision for feature 5</p> <p>The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:</p> <ul style="list-style-type: none"> ■ 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; <i>Limonium binervosum</i>, and <i>Frankenia laevis</i> ■ 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 <p>Performance indicators for Feature 5</p> <p>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. The performance indicators can be found within the <u>Kenfig Management Plan</u>.</p> <p>Conservation Objective for Feature 6: Petalwort <i>Petalophyllum ralfsii</i></p> <p>Vision for feature 6</p> <p><i>Petalophyllum ralfsii</i> 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:</p> <p>The species will be found where conditions are suitable in sufficient numbers to form a viable and sustainable population</p> <p>The population will vary from year to year depending on conditions, especially in drier years, but the long term</p>
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	<p>population will remain steady and sustainable Suitable dune slacks will have patches of bare ground that is being colonised by jelly lichens (<i>Collema</i> spp.) and <i>Barbula</i> mosses. The factors affecting the feature are under control</p> <p>Performance indicators for Feature 6</p> <p>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. The performance indicators can be found within the Kenfig Management Plan.</p> <p>Conservation Objective for Feature 7: Fen orchid <i>Liparis loeselii</i></p> <p>Vision for feature 7</p> <p>The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:</p> <ul style="list-style-type: none"> ▪ Sufficient suitable habitat is present to support the populations ▪ The factors affecting the feature are under control <p>Performance indicators for Feature 7</p> <p>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. The performance indicators can be found within the Kenfig Management Plan.</p>
Component SSSIs	<ul style="list-style-type: none"> ▪ Cynffig/ Kenfig (units 1 to 9) ▪ Merthyr Mawr Warren (10 to 16) <p>The two SSSIs above are divided into 16 management units of which numbers 1, 2, 5 to 9 and 10 to 15 comprise to form the Kenfig SAC. The management units can be viewed on maps available on the CCW website.</p>
Key Environmental Conditions (factors that maintain site integrity)	<ul style="list-style-type: none"> ▪ Hydrological regime - 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. 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.

	<ul style="list-style-type: none"> ■ Water quality - management should aim to protect and maintain the required 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. The limits set for Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. to achieve stable nutrient levels are: <ul style="list-style-type: none"> ○ Upper limit: <ul style="list-style-type: none"> ○ 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 ○ No excessive growth of cyanobacteria or green algae ○ Lower Limit: <ul style="list-style-type: none"> ○ >5mg l⁻¹ dissolved O₂ throughout the water column ■ Air quality - management should aim to protect and maintain the required air quality. Critical level or exposure (over the averaging/summing period): <ul style="list-style-type: none"> ○ Acid - 4 keq ha⁻¹ yr⁻¹ (calendar year) ○ NO_x as NO₂ - 30 µg m⁻³ (calendar year) ○ SO₂ – 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) ■ Manage/Restrict 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. 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 <i>P. ralfsii</i> habitat should be continued, with access to sensitive habitats discouraged via deviation onto other less sensitive habitat. ■ Maintain natural coastal 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
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	<p>of embryo and successional young slacks on site.</p> <ul style="list-style-type: none"> ■ Management of Grazing/ Scrub - Humid dune slacks and dunes with <i>Salix repens</i> 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. 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. 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. 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. 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 <i>Epipactis palustris</i>. ■ Fishery (Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp) - No further fish species introduction. Removal of the few remaining carp is an essential prerequisite to the site achieving favourable status.
SAC Condition Assessment	<p>Conservation Status and Management Requirements of Feature 1 & 2: Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>) and Humid dune slacks</p> <p>These two features have been considered together as the issues and management of both are intimately linked.</p> <p>Conservation Status of Feature 1 & 2 No distinction has been made between the Humid dune slacks and Dunes with <i>Salix repens</i> ssp. <i>argentea</i> as outlined in the conservation objectives, 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 successional 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 <i>Salix repens</i> ssp. <i>argentea</i> at Kenfig SAC are considered to be in unfavourable declining condition (August 2006 SAC Monitoring Report).</p>

	<p>Conservation Status and Management Requirements of Feature 3: Fixed dunes with herbaceous vegetation (‘grey dunes’)</p> <p>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.</p> <p>Conservation Status and Management Requirements of Feature 4: Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.</p> <p>Conservation Status of Feature 4 The Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. feature of Kenfig/Cynffig SAC is considered to be in unfavourable recovering conservation status (2006).</p> <p>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)</p> <p>Conservation Status and Management Requirements of Feature 5: Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)</p> <p>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).</p> <p>Conservation Status and Management Requirements of Feature 6: Petalwort <i>Petalophyllum ralfsii</i></p> <p>Conservation status of Feature 6 The <i>Petalophyllum ralfsii</i> of Kenfig/Cynffig SAC is considered to be in unfavourable declining conservation status (November 2007).</p> <p>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 <i>P. ralfsii</i> used to have a much wider distribution and that it was regularly found with greater than 50 thalli per m² in more than two discrete locations within more than two dune slacks.</p> <p>Conservation Status and Management Requirements of Feature 6:</p>
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	<p>Fen Orchid <i>Liparis loeselii</i></p> <p>Conservation status of Feature 6 The <i>Liparis loeselii</i> of Kenfig/Cynffig SAC is considered to be in unfavourable declining conservation status (July 2007).</p> <p>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 <i>L. loeselii</i> 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.</p>
<p>Vulnerabilities (includes existing pressures and trends)</p>	<ul style="list-style-type: none"> ■ Erosion and progradation - Unless artificially constrained, the seaward edges of sand dunes can be a highly mobile feature, though there is a natural trend to greater stability further inland. Very few dune systems are in overall equilibrium, and a majority of those in the UK demonstrate net erosion rather than net progradation; insufficient sand supply is frequently the underlying cause. ■ Falling water tables - As a result of local extraction of water and/or drainage of adjacent land used for agriculture or housing. ■ Grazing - In the absence of human interference, most stable dunes, with the exception of those experiencing severe exposure, would develop into scrub and woodland. The preponderance of grassland and heath vegetation on British dunes is due to a long history of grazing by livestock. Continued grazing is normally necessary to maintain the typical fixed dune communities, but over-grazing, particularly when combined with the provision of imported feedstuffs, can have damaging effects. A more widespread problem is under-grazing, leading to invasion by coarse grasses and scrub, though rabbits are locally effective in maintaining a short turf. Kenfig National Nature Reserve (NNR) has been grazed by sheep in recent years, and grazing is currently under review. Selected dune slacks are mown in order to provide appropriate conditions for the maintenance of these species and the vegetation. ■ Scrub - 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. ■ 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

	<p>severe erosion has been caused by vehicle or visitor pressure. The first action should be to manage the source of the problem. 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 <i>P. ralfsii</i> habitat should be continued, with access to sensitive habitats discouraged via deviation onto other less sensitive habitat.</p> <ul style="list-style-type: none"> ■ Natural successional changes - within the dune systems are detrimental to the plant communities of the dune grassland and humid dune slacks as well as to <i>Liparis loeselii</i> and <i>Petalophyllum ralfsii</i>, which are species of early successional changes. ■ Air quality*: <ul style="list-style-type: none"> ○ Eutrophication. ○ Photochemical oxidants. ○ Particulate matter. ■ 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. ■ Non-native species - 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). There should be no new non-native invasive species on the UKTAG Red List present. No increase in <i>Elodea canadensis</i>. This species is currently rare. ■ The Fen Orchid is also under threat from: <ul style="list-style-type: none"> ○ Natural processes of succession in dune slacks. ○ Work undertaken to stabilise sand dunes. ■ The Pealwort is also under threat from: <ul style="list-style-type: none"> ○ Loss of habitat due to development, dune stabilisation and natural succession. ○ Drainage. ○ Recreation.
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* Air Pollution Information System (APIS). Sand Dunes. Available from:

http://www.apis.ac.uk/cgi_bin/habitat_result.pl?habResult=Sand+dunes&choice=allHabs&haborspec=habitat&submit.x=17&submit.y=7

	<ul style="list-style-type: none"> ○ Botanical collection. <p>Indirect effects on dunes include atmospheric nutrient deposition, and coastal squeeze due to rising sea levels and increased storminess. The potential for dredging and marine aggregate extraction, through the disruption of coastal processes, to have cumulative and long-term effects on sand dunes is an area for further investigation.</p>
Landowner/ Management Responsibility	<p>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.</p>
HRA/AA Studies undertaken that address this site	<p>AA of the Neath Port Talbot UDP June 2007: http://www.neath-porttalbot.gov.uk/pdf/udp_200706_appropriate_assessment.pdf</p> <ul style="list-style-type: none"> ▪ The assessment of potential impacts concluded that the plan policies provide a rigorous test which would prevent a significant impact either alone or in-combination on a European site. The potential impacts that policies were assessed against were: <ul style="list-style-type: none"> ○ Water quality; ○ Water quantity; ○ Air Pollution; ○ Human interference; and ○ Invasive species. <p>AA Screening of Porthcawl Design Code and Land Use Guidance SPG August 07. http://www.bridgend.gov.uk/Web1/groups/public/documents/report/024319.pdf#xml=?IdcService=GET_EXTERNAL_XML_HIGHLIGHT_INFO&QueryText=%3cNOT%3e+xDepartment+%3cMATCHES%3e+%60A+%2d+Z%60+AND+%3cNOT%3e+dDocName+%3cSUBSTRING%3e+%60MapFile_%60+AND+%28Appropriate+assessment+screening%29&SortField=SCORE&SortOrder=Desc&dDocName=z303234333139&sCollectionID=Web1&HighlightType=PdfHighlight</p> <ul style="list-style-type: none"> ▪ The Screening identified two processes that require further study as they have the potential to effect the site as a result of the SPG. These processes were identified as: <ul style="list-style-type: none"> ○ sediment transportation pathways and linkage; and ○ hydrological pathways and processes. <p>AA Screening of the Vale of Glamorgan Local Development Plan Preferred Strategy Dec 07. http://www.valeofglamorgan.gov.uk/files/Living/Planning/Policy/LDP/Appropriate_Assessment_Screening_Report.p</p>

	<p><u>df</u></p> <ul style="list-style-type: none"> ■ The Screening concludes that development resulting from the LDP in the proximity of the SAC is therefore unlikely to be of scale that would result in a detrimental impact upon the site. Notwithstanding this, there are three operational quarries (Ewenny, Pant, Lithalun) within 3 kilometres of the SAC. Mineral extraction and/or after use of the site could therefore impact upon the SAC however this is considered to be unlikely due to the distance and ground contours. However, the site should be subject to a more detailed assessment at a later stage of the LDP development.
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Appendix 4
HRA Screening of Pre-Deposit LDP
Special Areas of Conservation in and around Bridgend County Borough
and the possible impacts of development

In order to identify what effect the implementation of the LDP could have on Natura 2000 sites in the vicinity of Bridgend County Borough it is necessary to consider what factors may have an impact on the integrity of the site and its purpose for designation. Using the 'Site Issue Briefings' for the sites under consideration it is possible to draw together the characteristics of the site and those factors that, at least in part, could be influenced by the application of the policies and proposals of the LDP. This provides essential background information needed for the continuing assessment as part of HRA as the LDP emerges.

Sources of information:

'Standard Data Forms' (JNCC) and 'Site Issue Briefing' (CCW) for:

Kenfig Burrows Special Area of Conservation

Blackmill Woodlands Special Area of Conservation

Cefn Cribwr Grasslands Special Area of Conservation

Dunraven Bay Special Area of Conservation

Joint Nature Conservation Committee

www.jncc.gov.uk/ProtectedSites

Report of the Executive Director – Environment Cabinet 19th April 2006 (Planning Services, Bridgend County Borough Council)

Blackmill Woodlands SAC	
Other designation	Blackmill Woodlands SSSI
Local authority area:	Bridgend County Borough
Description	Two distinct areas of old oak woods.
Primary reasons for SAC designation (and condition)	Annex I habitats that are a primary reason for selection of this site: <ul style="list-style-type: none"> • old sessile oak woods (unfavourable – recovering November 2002)
Proximity to possible development locations (indicative only)	<5km: north Bridgend, Aberkenfig, n. Pencoed 5-10km south and west Bridgend, Maesteg, Kenfig Hil, Nant-y-moel, s. Pencoed, Brackla 10-15km rest of County Borough
Possible impact	
Air pollution	The acidification impact of air pollution, particularly for road traffic and other fossil fuel burning, has had and will continue to have an impact on habitats. Policies of the LPD that encourage growth near woodlands, or additional traffic on the A4061 dividing the sites will need to be monitored. The air quality table in Appendix 6 shows that the SAC is currently at risk from air pollution, and this trend may continue.
Human disturbance – fly tipping	The impacts of fly tipping has an effect on part of the site. Policies relating to waste disposal and facilities, as well as new development in the area will need to be kept under consideration.
HRA and the LDP	
Matters for consideration in the LDP	<p>Possible impacts would be from increased traffic movements as a result of new development, particularly if this gives rise to more trips on the A4061, having an impact on the vegetation on site.</p> <p>Direct damage from development is a possibility and therefore there is a need to ensure strong protection policies for the SAC.</p> <p>As the LDP is developed and greater certainty is added on the location and scale of new development the potential for impacts will need to be revisited.</p>

HRA next steps

Impacts of the LDP on the Blackmill Woodlands SAC cannot be ruled out at this stage and therefore further assessment of impacts will be necessary at the next stage of LDP preparation.

Kenfig SAC		
Other designation	Kenfig Pool and Dunes SSSIs Merthyr Mawr Warrens SSSI Kenfig Pool and Dunes National Nature Reserve (NNR) and Local Nature Reserve (LNR) Merthyr Mawr Warren NNR	
Local authority area:	Bridgend County Borough	
Description	Two large dune systems either side of the Afon Ogwr. Include steep mobile sand dunes, salt meadows, fixed dunes and slacks and rich flora including rare fen orchid and petalwort.	
Primary reasons for SAC designation (and condition)	<p>Annex I habitats that are a primary reason for selection of this site:</p> <ul style="list-style-type: none"> Fixed dunes with herbaceous vegetation (`grey dunes`) (*Priority feature) (Unfavourable – declining (08/2006)) Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>) (unfavourable – declining (08/2006)) Humid dune slacks (unfavourable – declining (08/2006)) Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. (unfavourable – recovering (09/2005)) <p>Annex II species that are a primary reason for selection of this site:</p> <ul style="list-style-type: none"> Petalwort <i>Petalophyllum ralfsii</i> (unfavourable (10/2001)) Fen orchid <i>Liparis loeselii</i> (unfavourable – declining (10/2001)) 	
Proximity to possible development locations (indicative only)	<p>Kenfig:</p> <p><5km: Pyle, Kenfig Hill, Porthcawl</p> <p>5-10km western Bridgend, Maesteg, Aberkenfig,</p> <p>10-15km rest of County Borough with the exception of Nant-y-moel</p>	<p>Merthyr Mawr:</p> <p><5km: Bridgend, Porthcawl, Pyle/Kendfig</p> <p>5-10km: Aberkenfig, Brackla, Pencoed</p> <p>10-15km: Nantyffyllon, Pontycymmer, Omgmore Vale</p>
Possible impact		
Changes in coastal processes	<p>The dune system is dynamic, needing to accrete and erode in order to maintain the existing form and species diversity. Changes in coastal processes stopping sand accumulating, cause the dunes to stop growing and become eroded and stops growth of species that favour more bare sand. This cessation of new sediment may <u>be caused by development impacts west along the coast</u> and mineral dredging, with the latter being managed by several initiatives include 'Marine Aggregate Dredging Policy for South Wales – Consultation Document'. Dredging has stopped and dune stabilisation measures implemented. LDP can have an influence on the need for hard engineered sea defences as well as suitable policies on controlling marine dredging.</p>	

Water quality	Kenfig pool on the site is predominantly rainwater and groundwater fed. Therefore activities affecting the aquifer even some considerable distance away, in time and geographically, could have an impact on the site. Major concerns include high nutrient levels, with elevated levels found and evidence that water bodies at Merthyr Mawr also are becoming nutrient enriched. This has impact on the types and abundance of species out of keeping with site designation. The water impacts are likely to be from (amongst other things) landfill, existing and disused, and quarrying in the surrounding catchment. Therefore the LDP has a role to play in protecting water quality by ensuring there is sufficient waste water treatment to meet needs in the area.
Water quantity	Significant changes in the quantity of water at the two sites could impact on sites, drying out could effect species diversity and threaten the existence of petalwort and fen orchid features. Very low water tables could lead to the sites becoming very saline as salt water intrudes the site. The possible causes of changes in the water table are many but precise relationships are hard to define, and there may be relationships with deepening of several quarries nearby. Impacts could also be from domestic/industrial water abstraction.
Air quality	<p>Several features in Kenfig are potentially sensitive to air quality impacts, either through direct impacts to sensitive plant species from high levels of ethylene/ethane; or indirect through changes in water chemistry. Acidification is unlikely to be an impact due to underlying geology. Atmospheric NO_x levels may be exceeded at the site due to nearby sources including industrial (Margam Steel works and Bagland Bay), agricultural, old landfill sites, transport (particularly M4), wind blown particulates.</p> <p>Merthyr Mawr is shown in to be at particular risk of in-combination impacts of air and water pollution causing nutrient enrichment that adversely impact on the dune slacks, where the petalwort and fen orchid are normally located, and this could cause accelerated rates of vegetation change. Traffic impacts of new development directed through the LDP may therefore have an impact on the site, as could the locations of new potentially polluting industries. Air quality, as shown in Appendix 6, is currently not at levels that would adversely impact on the SAC, although trends need to be monitored.</p>
Human impacts/recreational pressure	Kenfig Dunes and Pool and Merthyr Mawr Warren have a long history of use, historically for agriculture and industry, but now predominantly for recreation. Main access and impact are near Candleston Castle at Merthyr Mawr and Kenfig NNR visitor centre and car park. The majority of recreational pressures have minimal impact, and this is mainly from litter, fires and coarse fishing, although it has the potential to cause habitat degradation. Kenfig Dunes are also common land and this has implications for management such as grazing, and little time in the summer for active management. Recreational use can also have positive benefits on site erosion and therefore maintenance of habitats. Development in the vicinity of the SAC will need to help ensure visitor pressure is not so great as it adversely impacts on the site designation features.

	Recent evidence shows that the site may be being damaged by recreational use of vehicles on the site, this also has the potential to be exacerbated by an increase in the amount of people living in the area as a result of new housing development.
HRA and the LDP	
Matters for consideration in the LDP	<p>As with all the SACs direct impact from development needs to be avoided. Other impacts from new housing development in the vicinity can give be increased recreational pressure on the site, this can have negative impacts if levels of use are too high or not managed carefully. New development could also give rise to the need for increased levels of water abstraction, with impacts on the humid dunes and slacks. Increased development and higher levels of car use can have an adverse impact on the site from nutrient enrichment, through water and air pollution.</p> <p>Quarrying, even a distance from the site may have impacts on the water table. Therefore where possible the LDP should ensure there are appropriate controls and standards to be met when granting permissions for new or extended quarries.</p> <p>The LDP needs to manage new mineral workings to avoid the impacts on the water table and the quantity of water feeding the SAC.</p> <p>At this stage it is important to ensure that the LDP does not give rise to any new development on the coast that is likely to further interrupt the movements of sediment that feed the dune system. Further investigation of the impacts of mineral dredging will also need to be considered, particularly in conjunction with the other nearby coastal minerals authorities that undertake dredging, there is the potential here for in-combination impacts.</p>
HRA next steps	Impacts of the LDP on the Kenfig SAC cannot be ruled out at this stage and therefore further assessment of impacts will be necessary at the next stage of LDP preparation.

Cefn Cribwr Grasslands SAC	
Other designation	Bryn-bach, Cefn Cribwr SSSIs Caeau, Cefn Cribwr SSSIs Penycastell, Cefn Cribwr SSSIs Waun-fawr, Cefn Cribwr SSSIs
Local authority area:	Bridgend County Borough
Description	Four distinct grassland sites to the west of Bridgend. Special interest includes marshy and species rich neutral grassland with wet heath and scrub, supporting a population of the nationally scarce marsh fritillary butterfly plus other nationally scarce and declining plan species.
Primary reasons for SAC designation (and condition)	Annex I habitats that are a primary reason for selection of this site: <ul style="list-style-type: none"> • <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) (unfavourable – declining October 2002) Annex II species that are present as a qualifying feature but not the primary reason for site selection: <ul style="list-style-type: none"> • Marsh Fritillary Butterfly <i>Euphydryas</i> (<i>Eurodryas</i>, <i>Hypodryas</i>) <i>aurinia</i> (unfavourable September 2003)
Proximity to possible development locations (indicative only)	<5km: Bridgend, Porthcawl, Kenfig Hill, Pyle, Aberkenfig 5-10km Maesteg, Blaengarw, Pontycymmer, Ogmores Vale, Pencoed, Brackla 10-15km rest of County Borough
Possible impact	
Water quantity	If there was a general drying of the site by fall in the groundwater or springs on the site this would cause a loss of the marshy grassland and changes in species composition. These impacts could be brought about through abstraction and de-watering of sites, with particular significance of the continued and possible extended workings at Cefn Cribwr quarry abutting the north eastern grassland area. Therefore consideration of impacts on the grassland needs to be taken into account when considering new development and minerals sites, and their supply and other water needs.
Air quality	Habitats are at risk of acidification and deposition of nitrogen compounds and above critical loads this can have an impact. The further impacts of road traffic on this site need to be avoided. Therefore development that gives rise to significant increases in road travel should be avoided, as should polluting industries located near SAC sites. Air quality, as shown in Appendix 6, is currently not at levels that would adversely impact on the SAC, although trends need to be monitored.

Loss of site	Housing, employment or other development could impact on the site through the direct loss of habitat, as could new mineral workings, and this will need to be managed through the LDP.
Life cycle, population dynamics and habitat requirements of the marsh fritillary	Supporting a suitable size population of butterfly for its long-term survival could be effected by habitat size shrinking, the loss of peripheral or nearby sites, barriers created by new development or the loss of joining routes and hedgerows and the risks of isolation. This means impacts on areas of open space and natural vegetation wider than the SAC itself may need to be taken into account in order to protect the integrity of the site.
<hr/> HRA and the LDP	
Matters for consideration in the LDP	<p>In order to protect the integrity of this SAC it will be necessary for the LDP to consider how to protect green space and linking features around the designated site as well as on the site itself. This is essential in order to support the continued viability of species within the protection area, such as the marsh fritillary butterfly.</p> <p>Water levels will need to be maintained and therefore development and mineral abstraction requiring dewatering and abstraction will need to be controlled.</p> <p>The LDP will have to consider whether it is possible to control impacts of continued and further quarry operation through policy, to ensure impacts to the SAC are suitably managed.</p>
HRA next steps	Impacts of the LDP on the Cefn Cribwr Grasslands SAC cannot be ruled out at this stage and therefore further assessment of impacts will be necessary at the next stage of LDP preparation.
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Dunraven Bay SAC	
Other designation	Southerndown Coast SSSI
Local authority area:	Vale of Glamorgan
Description	South west facing cliff on the Bristol Channel. Around 20 shore dock plants are growing on the damp coastal limestone and these are all that is left of the plant in its Bristol Channel range. This area provides a seed-source for this plant to spread to new areas along the Channel, subject to suitable habitat management.
Primary reasons for SAC designation (and condition)	Annex II species that are a primary reason for selection of this site: <ul style="list-style-type: none"> • Shore dock <i>Rumex rupestris</i> (favourable 10/2003)
Proximity to possible development locations (indicative only)	<5km: none 5-10km Bridgend, Porthcawl, Brackla 10-15km Pencoed, Pyle, Kenfig Hill, Aberkenfig,
Possible impact	
Groundwater	Groundwater is required to maintain the habitat needed for Shore dock, therefore changes to the water levels could impact on the plant. Care will therefore need to be taken in delivering and controlling development requiring new or higher levels of abstraction, other development that will lower the water table, including quarries. The exact source of groundwater is not yet established, therefore cause and effect impacts will be difficult to predict.
Disturbance by humans	Increased population in the local area could have an impact on the recreation near the site, and could directly disturb the habitat.
HRA and the LDP	
Matters for consideration in the LDP	This area is outside of Bridgend County Borough, yet the town of Bridgend is within 10km from the site. There is the potential for development, particularly if this gave rise to an increased water demand to have an impact on the Dunraven SAC. New development also has the potential to increase visitor pressure on the area.
HRA next steps	Impacts of the LDP on the Dunraven Bay SAC cannot be ruled out at this stage, although impacts from development in Bridgend County Borough are very unlikely. It may be suitable to look again at potential impacts if further evidence is identified on the source of groundwater, and possible links with Bridgend County Borough.

Appendix 5
Screening of Deposit LDP Policies

Key

- A policy will have **no effect at all or only positive effects** on the SAC
- B policy will have **no significant adverse effect (alone or in combination)** on the SAC
- C policy could be likely to have a **significant effect alone** on the SAC
- D policy could be likely to have a **significant effect in combination** on the SAC
- E policy would have **uncertain effects** on the SAC that should be addressed in a **lower tier assessments including proposal specific appropriate assessment**
- F impact on the SAC depends on **how the option is implemented**

Policy	Possible impact pathways	Potential impacts	Potential for mitigation	Risk
Policy SP1 Regeneration-led development Sets the overarching strategy for development – although does not quantify growth	This policy sets out the spatial strategy for the LDP, including the distribution of growth to defined settlements. This includes focusing development in Porthcawl and Bridgend, both of which are in proximity to SAC sites – Blackmill Woodlands, Kenfig and Cefn Cribwr Grasslands. The location of development may result in impacts to the SACs. Growth in Porthcawl risks increasing impacts on the Kenfig SAC through visitor pressure. The general effect of increased amounts of growth may also result in air quality related impacts on the SACs, such as the Blackmill Woodlands.	Potential for significant impacts although this will depend on implementation.	Mitigation will be through implementation of policy. Site by site mitigation may be necessary for specific site allocations or development proposals.	Kenfig: E Merthyr Mawr: E Cefn Cribwr: E Blackmill: E
Policy PLA1: Settlement hierarchy and urban management	This policy simply sets the settlement hierarchy, it gives no detail of the quantity of development directed to each area. Therefore, the likelihood of impacts cannot be predicted.	Potential for significant impacts although this will depend on implementation and the distribution of growth.	Mitigation will be through implementation of policy. Site by site mitigation may be necessary for specific site allocations or development proposals. The spatial distribution of development should be included in this policy to show the cumulative growth in any one location.	Kenfig: E Merthyr Mawr: E Cefn Cribwr: E Blackmill: E
Policy PLA2: Implementation of regeneration strategies	Regeneration strategies have been prepared for multiple parts of the County Borough. This policy does not set any parameters for development that would have an adverse impact. However, the allocations and cumulative groups of new development have the potential to result in adverse impacts where they are in proximity or on an impact route to a Natura 2000 site.	The policy does not have a direct relationship to development implementation	NA	Kenfig: B Merthyr Mawr: B Cefn Cribwr: B Blackmill: B
Policy SP2: Design and Sustainable place making principles	This policy is broad in its coverage, setting out criteria that all new development is required to meet. These criteria include policies on using land efficiently, safeguarding biodiversity and avoiding water pollution. Ultimately this policy should be positive in protecting the designated area, although any potential impacts will highly depend on how successfully it is	Likely to be positive impacts if fully implemented	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A

Policy	Possible impact pathways implemented.	Potential impacts	Potential for mitigation	Risk
Policy PLA4: Climate Change and Peak Oil	This policy recognises methods intended to help climate change mitigation and adaptation. The policy includes a criteria that addresses the protection of wildlife links and habitats to help their adaptation to changing climates.	Overall, the policy should have a positive impact.	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Policy SP3: Strategic transport planning principles	The intent of this policy is to increase the viability of alternatives to car travel in the County Borough. This may have positive implications in relation to improving or maintaining air quality, and therefore potentially avoid adverse impacts on SACs from poor air quality. Specific proposals of other policies have the potential to have adverse impacts on Natura 2000 sites based on their location or as a result of potentially increasing air pollution.	Potential for adverse or positive impacts will depend on implementation.	Mitigation of potential impacts will be through individual allocations and the spatial distribution of development.	Kenfig: F Merthyr Mawr: F Cefn Cribwr: F Blackmill: F
Policy PLA5: Development in transport corridors	This policy sets out the protection of defined transport corridors. Despite these routes being for road travel and therefore contributing to poor air quality and acid deposition, the policy is not promoting their increased use or expansion of any of these routes. For this reason the policy is unlikely to have any impact on Natura 2000 sites.	No impact.	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Policy PLA6: Development west of the railway line	This policy prevents new development in a specific part of Pencoed that would increase traffic. The location is not very near any protected sites and any development not permitted here is likely to be developed elsewhere. Therefore, the policy has a neutral impact.	No impact	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Policy PLA7: Strategic transport improvements	The policy lists all of the proposed transport improvements in the County Borough. All the proposals with the exception of some for walking and cycling were identified through the Regional Transport Plan, although this was not subject to Habitats Regulations Assessment. The main impacts of transport improvements on the Natura 2000 sites can arise from: <ul style="list-style-type: none">air quality: from increasing car, HGV etc. movements	Walking and Cycling: Positive impacts likely as part of reducing car dependence and therefore air quality impacts. The potential for	For the two Kenfig sites management plans need to be implemented. Both areas have paths adjacent or across them, which are identified on the proposals map. To avoid adverse visitor impacts access will need to be managed to avoid adverse impacts, including from trampling, cycling or illegal use.	Kenfig: F Merthyr Mawr: F Cefn Cribwr: F Blackmill: F

Policy	Possible impact pathways	Potential impacts	Potential for mitigation	Risk
	<ul style="list-style-type: none"> • direct disturbance: from new routes requiring land take • indirect disturbance: including the severing of natural wildlife movement routes • increased visitor pressure: there is the potential for some routes make protected site more accessible. <p>PLA7(1) to PLA7(14): Walking and Cycling Improvements:</p> <p>Much of the length of these improved routes may be predominantly used for leisure. However, these routes could also help in replacing short and medium length car trips, reducing congestion and air pollution on urban roads especially. This will have positive impacts on sites.</p> <p>Walking and cycling routes already cross Merthyr Mawr Warren (Kenfig SAC) and a small part of Kenfig SAC. There this raises the risk of improved access to the area increasing visitor numbers.</p> <p>PLA7(15),(16) and (17): Rail and bus proposals</p> <p>PLA7 (18),(19): Public transport interchange proposals</p> <p>These proposals are for improving rail and bus services on existing routes (3&4) and improved interchanges (5&6). These proposals have the potential to have positive impacts on sites related to reducing car use and maintenance or improvement in air quality.</p> <p>PLA7 (20),(21),(22),(23): Park and ride proposals</p> <p>All these Park and Ride facilities are associated with existing rail stations. Although these facilities are for car use they should help cut down overall car trip length. These proposals have the potential to have positive impacts on sites related to reducing car use for longer trips. This will help maintain or improve air quality and may help reduce motorway traffic and therefore impacts on Natura 2000 sites near the motorway, in particular Kenfig and Cefn Cribwr grasslands.</p> <p>PLA7 (24): Park and share facilities</p> <p>This proposal is to provide for car sharing. The policy could help reduce traffic on the M4 as well as in the urban areas served by junctions 35 and 36. This proposal has the</p>	<p>continuation of adverse impacts from visitors to the Kenfig SAC areas, in particular Merthyr Mawr warren.</p> <p>Public transport, transport interchanges and park and ride</p> <p>These proposals all seek to reduce reliance on cars for all or part of trips. The benefits of this should be on air quality. None of the proposals are in or adjacent to Natura 2000 sites therefore there will be no direct disturbance. As with all new hardstanding areas there may be risks of water pollution from surface runoff, although this can be managed through good design and drainage systems.</p> <p>Highway proposals:</p> <p>All the three schemes have the</p>	<p>Surface water run-off from all new areas of hardstanding, including roads, interchanges and park & ride facilities will need to be designed to avoid risks to surface and ground water.</p> <p>Reducing car use is essential to reduce adverse air quality impacts on sensitive sites.</p> <p>Additional wording or policy criteria may be suitable in the LDP to reflect the importance of protecting the integrity of the SAC, and undertaking Habitats Regulation Assessment where necessary.*</p>	

Policy	Possible impact pathways	Potential impacts	Potential for mitigation	Risk
	<p>potential to have positive impacts on sites related to reducing car use for longer trips.</p> <p>PLA7 (25), (26), (27): Highway proposals These proposals are for highway improvements. All of the proposal have the potential to increase road capacity which will support the continued growth of car use. Proposal 27 deals with the upgrading of an existing stretch of road and 25 a junction improvement. Although these two schemes may encourage car use and have adverse air quality impacts neither are in close proximity to SAC sites. Therefore, for these two sites the risk of direct deposition on sites is lower.</p> <p>However, the review of sites reveals proposal 26, the dualling of the A48/A473 between Waterton and Laleston, Bridgend. This is within 2km of the Kenfig SAC (Merthyr Mawr Warren). The allocation will increase traffic in this location, with possible adverse impacts relating to air quality on the SAC.</p> <p>Vulnerabilities of this part of the SAC are:</p> <p>Water quality – Surface water run-off from roads may have an adverse impact on water quality. Poor water quality could have a negative effect on the Kenfig SAC due to nutrient enrichment of water bodies. Enrichment can influence species composition, impacting on the continued integrity of the site.</p> <p>Air quality - Merthyr Mawr is shown in to be at particular risk of in-combination impacts of air and water pollution causing nutrient enrichment. This adversely impacts on the dune slacks, where the petalwort and fen orchid are normally located, and could cause accelerated rates of vegetation change. As a result, traffic impacts of the new dual carriageway may therefore have an effect on the site. Air quality, as shown in Appendix 6, is currently not at levels that would adversely impact on the SAC, although trends need to be continuously monitored.</p>	<p>potential to increase car use and therefore have negative air quality impacts. Direct deposition of air pollutants may be most likely from proposal 26 due to proximity to the Merthyr Mawr Warren. However, as air pollution is not always geographically constrained it is unlikely that this proposal alone will be wholly responsible for any potential negative impacts. Surface water management will be necessary to avoid adverse impacts on water bodies.</p>		
Policy PLA8: Development Led Improvements to the Transport Network	<p>These proposals are all road related. Their inclusion in the plan is predominantly to achieve or improve access to allocated development sites.</p>	<p>No significant impacts are likely as these developments</p>	<p>Surface water run-off from all new areas of hardstanding, including roads, interchanges and park & ride facilities, will need to be designed to</p>	<p>Kenfig: B Merthyr Mawr: B</p>

Policy	Possible impact pathways	Potential impacts	Potential for mitigation	Risk
	<p>Air quality: The proposals are not strategic road allocations. As a result, although they are not directly likely to encourage car use they will not discourage it either.</p> <p>Water quality: As with all new hardstanding development there is the potential for harm to the ground and surface waters necessary for Natura2000 site integrity.</p> <p>Direct disturbance: None of the sites are in close proximity to the SAC sites therefore there will be no direct disturbance.</p> <p>Indirect disturbance: Site PLA8(3) is within 2km of the Cefn Cribwr Grasslands, however, no direct impact is likely.</p>	alone are unlikely to have impacts on air quality or cause direct or indirect disturbance.	avoid risks to surface and ground water.	Cefn Cribwr: B Blackmill: B
Policy PLA9: Development affecting public rights of way	No relationship with site protection.	None	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Policy PLA10: Safeguarding of disused railway infrastructure	Protecting these routes that may have a future public transport, walking or cycling function, may help as part of initiatives to reduce car travel, with possible positive impacts for air quality.	Possible positive impact	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Policy PLA11: Parking standards	Setting parking standards may help as part of initiatives to reduce car travel, with possible positive impacts for air quality.	Possible positive impact	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A

Policy	Possible impact pathways	Potential impacts	Potential for mitigation	Risk
Strategic Policy SP4: Conservation and enhancement of the natural environment	This policy relates positively to protecting the Natura 2000 sites.	Positive impact	The policy could include wording to ensure the indirect impacts of proposed development on the SAC are taken into account. NB Council state that this will be included in the policy as suggested. Need to check this prior to finalising HRA.	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Policy ENV1: Development in the countryside	This policy sets out the type of development that would be permitted outside urban boundaries. The policy will help protect undeveloped land, including SAC sites, from development. Development that is permitted will need to conform with the protection policies of the LDP.	Positive	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Policy ENV2: Development in Green Wedges	This policy identifies specific green spaces to be protected for their 'openness'. These sites are not designated for their wildlife value but may have a role in protecting existing habitats in their respective areas. Green Wedges within 2km of protected sites include: Cefn Cribwr Grasslands SAC: Site ENV2(6) is adjacent to part of the SAC site and could help to contribute to its protection. Other nearby sites include ENV2(2, 4 and 10) although these are further away and make any direct positive impacts less likely. Kenfig SAC – Merthyr Mawr Warren: Part of site ENV2(4) is within 2km of the site, although this is unlikely to have any direct relationship with SAC protection. Kenfig SAC – Kenfig Burrows: no sites within 2km	Positive	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Policy ENV3: Special Landscape Areas	This policy identifies Special Landscape Areas (SLA) to be protected from harmful development. The designations are primarily related to visual quality, however, features of the landscape are important to biodiversity. The protected sites include (6) Kenfig Burrows and (9) Merthyr Mawr Warren, which are useful in the continued protection of these SLAs for their biodiversity function. The wider Porthcawl Coast is also protected. SLAs also cover the entire of Blackmill Woodlands	Positive	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A

Policy	Possible impact pathways	Potential impacts	Potential for mitigation	Risk
	SAC and part of the Cefn Cribwr SAC.			
Policy ENV4: Local/Regional Nature Conservation Sites	This site sets out the protection measures on sites of local or regional importance for wildlife and geology. Protection of these sites could have benefits for the internationally protected SAC areas.	Positive	Implementation of policy on protecting avoiding harm to internationally designated nature conservation sites, to include cumulative impacts.	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Policy ENV5: Green Infrastructure	This policy relates to the protection and enhancement of multi-functional areas of green space. This policy is likely to be positive for the protection of open space. Not all open space will be compatible with biodiversity protection, however, this policy is unlikely to have an adverse impact on sites.	No significant adverse impacts are likely.	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Policy ENV6: Nature Conservation	This policy relates to nature conservation in the County Borough. This does not relate to biodiversity on the international sites, which are protected under national policy and legislation.	Positive	Supporting text could refer to the need to protect habitat links near internationally designated sites, Cefn Cribwr in particular that reliance on four linked habitat patches.	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Policy ENV7: Natural resource protection and public health	This policy is generally positive in aiming to reduce pollution impacts of new development. Avoiding water, air, light, and invasive species can all be positive for protecting the nature conservation value of the internationally designated sites.	Positive	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Strategic Policy SP5: Conservation of the built and historic environment	The policy will not lead to development and therefore will have no impact on the SACs.	None	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
ENV8: Heritage assets and regeneration	The policy seeks to protect sites for local distinctiveness, there will be no impacts on the Natura 2000 sites.	None	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A

Policy	Possible impact pathways	Potential impacts	Potential for mitigation	Risk
Strategic Policy SP6: Minerals	<p>The safeguarded sites for minerals could eventually be used for mineral extraction. The impacts of this on the SACs could come from: impacts on the water availability, effects on groundwater levels, impacts from dust and air quality, and direct loss of habitats that are part of SACs or essential to the protection of site integrity. The SACs that may be most at risk are the Cefn Cribwr Grasslands, in terms of air quality, water supply and protection of nearby areas to protect SAC integrity. There is the possibility of impacts to the water supply in the Kenfig SAC.</p> <p>The site does not include criteria for the control of marine dredging and there is the possibility that this could adversely affect coastal SACs reliant on sand recharge, this includes the Kenfig SAC sites.</p>	Chance of impact is dependant on specific schemes.	<p>Minerals policies of the LDP will need to recognise that open-cast coal mining and quarrying and dredging has the potential to have an adverse impact on the SACs. This will need to include the possible direct impacts land take, in addition to less direct impacts, for instance air quality, water supply and the impacts of loss of habitats that support the integrity of the SAC sites. Some of these controls will be through planning decisions; others may be through authorisation and licensing by other bodies, such as the Environment Agency.</p> <p>Additional wording or policy criteria specifically relating to minerals development may be suitable in the LDP to reflect the importance of protecting the integrity of the SAC. The importance of undertaking Habitats Regulation Assessment where necessary for individual project proposals should also be stated for minerals development. This is covered to some extent in ENV11 – but could be highlighted as being of strategic importance.</p>	<p>Kenfig: F</p> <p>Merthyr Mawr: E</p> <p>Cefn Cribwr: F</p> <p>Blackmill: F</p>
Policy ENV9: Development in minerals safeguarding areas	This policy specifically relates to protecting Minerals Safeguarding Areas from sterilisation through inappropriately located development. It has no relationship to the protection of Natura 2000 sites.	No relationship.	NA	<p>Kenfig: A</p> <p>Merthyr Mawr: A</p> <p>Cefn Cribwr: A</p> <p>Blackmill: A</p>
Policy ENV10: Development within buffer zones	This policy specifically relates to protecting Minerals Safeguarding Areas from sterilisation through inappropriately located development. It has no relationship to the protection	No relationship	NA	<p>Kenfig: A</p> <p>Merthyr Mawr: A</p>

Policy	Possible impact pathways	Potential impacts	Potential for mitigation	Risk
	of Natura 2000 sites.			Cefn Cribwr: A Blackmill: A
Policy ENV11: Mineral Development	<p>This policy sets the criteria, although not specific sites, for mineral extraction. The policy criteria include the need to avoid pollution impacts and protect SAC sites. The policy is therefore positive in aiming to reduce impacts, despite the chance that some developments of this type have the potential to have significant adverse impacts on the SAC sites through direct disturbance, indirect disturbance, changes to the water table and air pollution including dust deposition.</p> <p>Mitigation of the potential impacts will need to be through the careful control of this type of development. Minerals workings have the potential to have significant adverse impacts on Natura 2000 sites.</p>	The impact of the policy is positive.	<p>Mitigation of the potential impacts will need to be through the careful control of this type of development. Minerals workings have the potential to have significant adverse impacts on Natura 2000 sites. Minerals proposals could require 'appropriate assessment' under the Habitat Regulations, this need should be referred to in the supporting text of the policy.</p> <p>The policy should also make clear that avoiding impacts on SAC sites will be essential, not simply reducing them.</p>	Kenfig: B Merthyr Mawr: B Cefn Cribwr: B Blackmill: B
Policy ENV12: Coal extraction operations	<p>The policy sets the criteria for coal extraction operations and this includes specific reference to the protection of Blackmill Woodlands SAC that falls in an area of coal resource.</p> <p>The supporting text identifies safeguarding sites are identified within SAC site, stating they would normally be precluded from development, unless they do not harm the site. This is very unlikely.</p>	The impact of the policy is positive.	<p>Mitigation of the potential impacts will need to be through the careful control of this type of development. Minerals workings have the potential to have significant adverse impacts on Natura 2000 sites.</p> <p>The policy requires should also state that sites in proximity to the Natura 2000 sites could also have an impact.</p>	Kenfig: B Merthyr Mawr: B Cefn Cribwr: B Blackmill: B
Policy ENV13: Unstable land	The policy only relates to protection from land instability, it will have no impact on Natura 2000 sites.	No relationship	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Strategic Policy SP7: Waste	The proposed sites for the waste treatment facilities include those that are in close proximity to SAC sites. The actual	Moderate likelihood of impact	The implementation of waste treatment sites will need to have	Kenfig: F

Policy	Possible impact pathways	Potential impacts	Potential for mitigation	Risk
management	<p>impact will depend on the type of facility developed, for example, some types may have more potential for adverse air quality impacts, or risk of water quality impacts. However, some type of facility may have little possibility of adversely affecting the sites. There will also be the associated impact of increased traffic movements, with possible air quality effects.</p> <p>The proposed sites in proximity of SAC sites are:</p> <ul style="list-style-type: none"> • SP7(3) Village Farm Industrial Estate, Pyle is immediately adjacent to the Cefn Cribwr Grassland SAC. • SP7(2) Brynmenyn Industrial Estate is in 2km of Blackmill Woodlands that is sensitive to air quality impacts • SP7(1) Heol-y-Splott, South Cornelly is within 5km of the Kenfig SAC and the 2km of the Cefn Cribwr Grassland SAC <p>Cefn Cribwr SAC</p> <p>Water quality - The amount of increased development close to the SAC could dry out the site by precipitating a fall in the groundwater or springs. This would cause a loss of marshy grassland and therefore changes in species composition. These impacts could be caused by water abstraction and the , which would cause a loss of the marshy grassland and changes in species composition. There is also the potential for poor water quality to adversely impact on the site. Surface water management and waste water treatment capacity needs to be in place as part of new development to avoid impacts.</p> <p>Air quality – Habitats are at risk of harm through deposition of nitrogen compounds from fossil fuel burning. This can cause acidification of the soil and adverse impact on site flora. Air quality at Cefn Cribwr SAC (Appendix 6) is currently not exceeding threshold levels where harm is likely, although trends need to be monitored. Depending on the type of waste management facilities there may be additional air quality impacts. The allocation may also result in an increase in traffic past the site and possibly a deteriorate in air quality.</p>		<p>regard to the potential impact on SAC sites, looking at direct and indirect impacts. It may be suitable to consider including additional controls in the policy to limit which types of water treatment facility may be suitable in each location.</p> <p>Additional wording or policy criteria may be suitable in the LDP to reflect the importance of protecting the integrity of the SAC, and undertaking Habitats Regulation Assessment where necessary.</p>	<p>Merthyr Mawr: A</p> <p>Cefn Cribwr: F</p> <p>Blackmill: F</p>

Policy	Possible impact pathways	Potential impacts	Potential for mitigation	Risk
	<p>Indirect impacts: Supporting a suitable size population of butterfly for its long-term survival could be effected by habitat size shrinking, the loss of peripheral or nearby sites, barriers created by new development or the loss of joining routes and hedgerows and the risks of isolation. This means impacts from development at this allocation site wider than the SAC itself may have an impact on the integrity of the site.</p> <p>Blackmill Woodlands SAC:</p> <p>Air quality: Blackmill Woodlands already has poor air quality exceeding thresholds where there may be an impact. The type of development at Brynmenyn will therefore need to ensure significant additional air quality impacts will not be created..</p>			
Policy ENV14: Inert Waste	The policy sets the criteria for choosing inert waste disposal sites in the countryside. The policy refers to the need to ensure biodiversity is not harmed. The policy is also specific that this type of development should ensure that it does not cause ground or surface water pollution.	Positive	NA	Kenfig: E Merthyr Mawr: E Cefn Cribwr: E Blackmill: E
Policy ENV15: Waste management in new development	The policy simply sets out principles of waste management in new development schemes. The policy has no relationship with the need to protect Natura 2000 sites.	No relationship.	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Policy ENV16: Commercial and industrial waste	The policy sets criteria for certain types of new waste management facility. Some types of facility have the potential to have adverse impacts, such as relating to air quality impacts and water pollution. However, the policy is clear that that permission will not be granted if there would be adverse water quality impacts.	Potential for impacts although this could be managed through policy wording.	The policy could be improved by include biodiversity protection as a control criteria. Mitigation will be through implementing policy on controlling air quality impacts.	Kenfig: E Merthyr Mawr: E Cefn Cribwr: E Blackmill: E
Strategic Policy SP8: Renewable energy	The policy does not directly relate to the SAC sites. There is the possibility of impacts from some types of renewable energy technology could affect sites, although impacts may be controlled through other policies.	Low likelihood of negative impact, positive impacts.	Protection of SAC sites from this type of development should be controlled through other policy.	Kenfig: E Merthyr Mawr: E Cefn Cribwr: E

Policy	Possible impact pathways	Potential impacts	Potential for mitigation	Risk
	The policy would also help reduce pollution from fossil fuel energy generation by lowering the overall demand from these sources. This will have benefits for air quality and NO _x /SO _x levels that can adversely impact on some Natura 2000 sites, including the Blackmill Woodlands.			Blackmill: E
Policy ENV17: Renewable energy and low/zero carbon technology	<p>The policy does not directly relate to the SAC sites. There is the possibility of impacts from some types of renewable energy technology could affect sites, although impacts may be controlled through other policies.</p> <p>The policy would also help reduce pollution from fossil fuel energy generation by lowering the overall demand from these sources. This will have benefits for air quality and NO_x/SO_x levels that can adversely impact on some Natura 2000 sites, including the Blackmill Woodlands.</p> <p>Reducing methane emissions (in addition to carbon dioxide) is positive in helping reduce climate change impacts as this is a more detrimental greenhouse gas per unit.</p>	Low likelihood of negative impact, positive impacts	Protection of SAC sites from this type of development should be controlled through other policy.	Kenfig: E Merthyr Mawr: E Cefn Cribwr: E Blackmill: E
Policy ENV18: Renewable energy developments	The policy sets criteria for developing renewable energy schemes. The way the policy is implemented could vary, depending on the location and the type of scheme.	Low likelihood of impact.	This, and other policies of the plan, will have to be used to ensure planning permission is not granted where it would have an adverse impact on the integrity of a Natura 2000 site. In some instances there may need to be further appropriate assessment under the Habitats Directive.	Kenfig: E Merthyr Mawr: E Cefn Cribwr: E Blackmill: E
Strategic Policy SP9: Employment and the economy	<p>There is the potential for the development of new employment sites to have an impact on the SAC sites. This is unlikely to be from direct land take, but there may be impacts related to air quality and water use from new employment development; and air quality from possible increases in traffic movement, from new businesses.</p> <p>The maps in Appendix 2 show buffers around sites. These indicate that:</p> <ul style="list-style-type: none"> Island Farm, Bridgend is within 5km of Kenfig SAC Ty Draw Farm, North Cornelly is within 2km of the Kenfig 	Moderate to high likelihood of impact	<p>There is the potential for impacts of new economic development at Ty Draw Farm, North Cornelly on two of the SAC sites. Policy controls will need to be in place to ensure the exact form and type of development does not harm the protected sites.</p> <p>Additional wording or policy criteria may be suitable in the LDP to reflect the importance of protecting the</p>	Kenfig: E Merthyr Mawr: E Cefn Cribwr: E Blackmill: A

Policy	Possible impact pathways	Potential impacts	Potential for mitigation	Risk
	SAC and the Cefn Cribwr Grasslands, development in this location could have adverse impacts on the SAC through water use and impacts on water supply		integrity of the SAC, and undertaking Habitats Regulation Assessment where necessary. Additional abstraction licensing is unlikely to be permitted in the area, and this may need to be taken into account in decisions on the type of industry permitted in any area.	
Policy REG2: Protection of identified employment sites	The policy aims to protect existing employment sites. Some such sites are in close proximity to Natura 2000 sites. Therefore, in making decisions on new planning applications on these sites consideration should be given to their compatibility with nature conservation objectives. For example, consideration would need to be given to the air quality or water use impacts of certain types of industrial development.	Potential for adverse impact through specific development types.	Site by site decisions will have to be made on the compatibility of industrial uses with Natura 2000 sites.	Kenfig: E Merthyr Mawr: E Cefn Cribwr: E Blackmill: A
Policy REG3 D2 Class Uses on Employment sites	This policy relates to protection of employment function. The policy has no relationship with Natura 2000 protection.	No relationship.	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Policy REG4 – Former Stormy Down Airfield	This site is in the countryside near the Cornelly Quarry. The location of the site and proposed uses mean it is unlikely to have any impact on the Natural 2000 sites. Although the site is within 2km of the Cefn Cribwr grasslands it is on the opposite side of the M4 making any air quality impacts more likely to be from this source.	No relationship	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Strategic Policy SP10: Retailing and commercial centres	These development sites are mainly within existing settlements and are unlikely to have a direct impact on the SAC sites. Strengthening local retail may also reduce the distance people travel, contributing to objectives of reducing car trips. The Retail Parks are within 5km of the Kenfig SAC.	Low likelihood of impact	The impacts are low and appropriate policy control to protect the SACs should help avoid adverse impacts.	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Policy REG5: Local retailing	The site relates to new local shops, it has no relationship with the protection of Natura 2000 sites. However, it can help in	Minor positive.	NA	Kenfig: A

Policy	Possible impact pathways	Potential impacts	Potential for mitigation	Risk
	preventing car travel and therefore reducing some air pollution impacts. For example new local shops to the north east of Bridgend may reduce some car travel near the Blackmill Woods SAC.			Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Policy REG6: Primary shopping areas	This policy relates to the protection of the existing shopping function of the main centres. Strengthening local retail may also reduce the distance people travel, contributing to objectives of reducing car trips. The Retail Parks are within 5km of the Kenfig SAC.	No relationship	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Policy REG7: Non A1, A2 and A3 uses outside primary shopping areas	This policy relates to the protection of the existing shopping function of the main centres by limiting shopping development elsewhere. Strengthening local retail may also reduce the distance people travel, contributing to objectives of reducing car trips. The Retail Parks are within 5km of the Kenfig SAC.	No relationship	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Policy REG8: Control and exclusion of uses in retailing and commercial centres	This policy relates to the protection of the existing shopping function of the main centres by limiting some types of use. Strengthening local retail may also reduce the distance people travel, contributing to objectives of reducing car trips. The Retail Parks are within 5km of the Kenfig SAC.	No relationship	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Policy REG10: Existing out of centre retail developments	This policy gives the location of existing permitted out of centre retail development. These sites are already in use and by limiting out of town retail to these sites the LDP may help in achieving objectives to reduce car travel. However, the impact of this policy on Natura 2000 is minimal.	No relationship.	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Policy REG11: New bulky comparison goods out of centre retail development sites	All three of these allocation are beyond 2km from any of the protected sites. There is the possibility that the sites could result in an increase in traffic movements, but are part of mixed use development areas and therefore their relative impacts may be minimal.	Minor or no impacts.	NA	Kenfig: B Merthyr Mawr: B Cefn Cribwr: B Blackmill: B
Strategic Policy SP11:	This policy includes improving the role Porthcawl for tourism. There is the risk that this may have an adverse impact on the	Minor likelihood of impact.	To avoid the impacts of increased visitor pressure, it will be necessary	Kenfig: F

Policy	Possible impact pathways	Potential impacts	Potential for mitigation	Risk
Tourism	Kenfig SAC, which is one of the key attractions to visitors to this area. Increased visitor pressure has the potential to harm the dune characteristics, and therefore site integrity. However, the policy itself does not set out how tourism will be managed or the quantity of new tourism anticipated.		for policies to be in place to guide new development away from the SAC. This could be part of the regeneration proposals for Porthcawl as well as through site specific management plans, for instance visitor management to the Merthyr Mawr Warren and Kenfig Burrows.	Merthyr Mawr: F Cefn Cribwr: A Blackmill: A
Policy REG13 – Protection of existing tourist accommodation.	The policy relates only to protection of existing tourism accommodation, it has no relationship with Natura 2000 sites.	No relationship	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Policy REG12 – New or extended tourist accommodation and facilities	<p>This policy identifies sites for the new or extended tourist facilities in the County Borough.</p> <p>The site at REG12(1) Fun Farm, Cefn Cribwr is to the north of the SAC grasslands, although physically separated by the rail line and quarry site. There is the potential that the loss of land to tourist uses will have an impact on the SAC. However, given the physical separation that already exists impacts may be minimal.</p> <p>The site at REG12(3) mountain bike hub and REG12(2) are both in close proximity to the Blackmill Woods SAC. There is the potential for increased use of the woodland by cyclists and other visitors to have an impact on the quality of the site as trails lead through the site. Management plans to ensure important species are protected and people remain on designated routes may be necessary. Development should also be at a suitable scale for this sensitive location.</p> <p>The events areas REG12(5) is within 2km of the Blackmill Woodlands. However, the use of the site should not have any direct impact on the SAC, and temporary use of the events site should mean any impacts will be minimal.</p>	There may be impacts on Cefn Cribwr SAC and Blackmill Woodlands. These impacts should be managed to avoid significant adverse impacts.	<p>Proposals for development will need to demonstrate how they have taken into account impacts on SAC sites. However, site by site mitigation is likely to be possible. Mitigation could include protection of defined habitat features, management of visitor access (such as at Blackmill Woodlands).</p> <p>The policy could specifically refer to the need for this development to be compatible with nature conservation protection.</p>	Kenfig: A Merthyr Mawr: A Cefn Cribwr: F Blackmill: F
Strategic Policy SP12:	This policy sets out the overall housing provision expected, at 9000 homes, and the strategic allocations for housing. The	Moderate to high likelihood of impact	Development on the proposed scale has the potential to adversely impact	Kenfig: F

Policy	Possible impact pathways	Potential impacts	Potential for mitigation	Risk
Housing	<p>large amount of development expected through this policy may have impacts on the SACs.</p> <p>This could be from the possible increase in car travel, with air quality impacts having the potential to adversely impact on some of the SACs. There may also be impacts on water, with increased demand for housing having possible impacts relating to water abstraction and therefore groundwater levels important to several SACs, particularly Kenfig and Merthyr Mawr Warren. Water treatment infrastructure will also need to be in place to help avoid water quality related impacts.</p>		<p>the SACs. These impacts may depend on the exact location of new development, and possible changes in air quality, water availability and water quality. The specific development at Parc Derwen and particularly Porthcawl Waterfront will need to be taken into account in the design and form of new development. This may include the need to prevent visitor pressure impacts, aims to reduce car travel (air quality), ensuring development is making more efficient use of water and designing sea defence works to consider impacts on the Kenfig SAC.</p> <p>The choice of allocations, other LDP policies, and implementation of other plans and strategies by the Council and other providers all have the potential to mitigate negative impacts.</p>	<p>Merthyr Mawr: F</p> <p>Cefn Cribwr: F</p> <p>Blackmill: F</p>
Policy COM3: Residential re-use of buildings or land	This policy allows for buildings or land to be used for residential purposes. The location of the building may mean there is the potential for impacts, although this can only be determined on a site-by-site basis.	No relationship	The potential for impacts will need to be determined on a site by site basis. Site specific assessment could be required in some situations.	<p>Kenfig: E</p> <p>Merthyr Mawr: E</p> <p>Cefn Cribwr: E</p> <p>Blackmill: E</p>
Policy COM4: Residential Density	This policy sets minimum standards for residential density. It should help make the best use of available land, protecting greenfield sites. However, impacts on Natura 2000 sites are unlikely.	No relationship	NA	<p>Kenfig: A</p> <p>Merthyr Mawr: A</p> <p>Cefn Cribwr: A</p> <p>Blackmill: A</p>
Policy COM5: Affordable housing	This policy does not have any relationship with the location of development and will have no impact on Natura 2000 sites.	No relationship	NA	<p>Kenfig: A</p> <p>Merthyr Mawr: A</p>

Policy	Possible impact pathways	Potential impacts	Potential for mitigation	Risk
				Cefn Cribwr: A Blackmill: A
Policy COM6: Gypsy and traveller sites	The policy does not give allocations for these sites and the type of development is unlikely to have any impact.	The scale of this type of devt means significant impacts are very unlikely.	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Policy SP13: Community uses	This policy sets out a policy approach to protect community facilities and provide new ones. It is unlikely that this policy will have any impact on SACs as the majority of community sites are found within settlements away from SAC sites.	Impacts are unlikely.	The potential for new community spaces to contribute to nature conservation and support of the wider natural environment should be considered in policy. The potential for impacts will need to be determined on a site by site basis	Kenfig: F Merthyr Mawr: F Cefn Cribwr: F Blackmill: F
Policy COM7: Protection of social and community facilities	The policy aims to protect social and community facilities from change of use unless defined criteria are met. There are no sites identified and this policy alone is unlikely to have any impacts on Natura 2000 sites.	No relationship	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A
Policy COM11: Provision of outdoor sports, formal and informal	This policy relates to the need to provide open space to support the needs of future residents. Where existing unused sites are developed into formal open sports space it will be necessary to ensure their nature conservation value is not lost.	Some potential for adverse impacts.	In creating formal sports areas the potential for impacts will need to be determined on a site by site basis. These could arise from the loss of habitat patches supporting SAC sites into artificial or heavily managed grass sports pitches. Cefn Cribwr grasslands may be most at risk.	Kenfig: A Merthyr Mawr: A Cefn Cribwr: F Blackmill: F
Policy SP14: Infrastructure The policy sets out matters for agreements on new infrastructure	The policy may have positive implications for the SACs by including the possibility of agreements biodiversity enhancement.	No relationship	NA	Kenfig: A Merthyr Mawr: A Cefn Cribwr: A Blackmill: A

Appendix 6
Screening of Deposit LDP Proposals

Blackmill Woodlands SAC		
Description	Two distinct areas of old oak woods.	
Primary reasons for SAC designation (and condition)	Annex I habitats that are a primary reason for selection of this site: - old sessile oak woods (unfavourable – recovering November 2002)	
Vulnerabilities		
<p>Air Quality: Nitrogen and acidification from air pollution have the potential to harm the site, and evidence indicates that levels of these pollutants are already exceeding thresholds. These atmospheric pollutants are primarily from traffic and other fossil fuel burning. Therefore, development that would increase some types of industrial development and car travel are likely to have the greatest impacts. Air pollutants can travel long distances and may not necessarily be related to car travel in the immediate area. Nevertheless, it may be suitable to help limit car travel on the A4061 that separates the two parts of this SAC.</p> <p>Disturbance. Most notably disturbance has recently come from fly-tipping on site. Fly tipping may not be by people who live locally to the site. However, new development in the vicinity may increase the risk of fly tipping, although evidence is not available on the relationship of population density and tipping.</p>		
Development in proximity to the Blackmill Woodlands SAC (all allocations 2km*)		
Mixed use and housing	Potential for impacts	Are significant impacts likely?
<p>On A4061:</p> <p>PLA3(17) Blackmill – 43 homes (committed); employment, community building</p> <p>COM2(15), Lewistown – 19 homes (committed)</p> <p>PLA3(16) Bryncethin – 150 homes and employment</p> <p>PLA3(17) Glanyrafon, Tondy</p>	<p>Deteriorating air quality could have an adverse effect on the Blackmill Woodlands. Road travel throughout the County Borough and beyond could increase the risk. However, there may be particular adverse effects of more cars and HGVs on the A4061 that separates the two parts of the SAC. Increase in road travel on the main route could be attributed to development in the Valleys Gateway and northern fringes of Bridgend, as well as development in the Ogmore Valley.</p> <p><i>Mitigation:</i> Impacts will predominantly be mitigated through implementation of strategies and other policies of the LDP that aim to reduce car dependence. This includes the LDP and the Regional Transport Plan. Monitoring of air quality at the site and traffic on the A4061 may trigger the need for a review of LDP policy to avoid harmful effects.</p>	No
<p>Not on A4061:</p> <p>COM2(16), Llangeinor – 10 Homes</p>	<p>There is the potential that new housing development may increase the risk of illegal fly tipping. However, there is no evidence on the relationship of population density and tipping. Risks are low.</p>	

(committed) COM1(36) , Brynmenyn – 50 homes PLA3(12) Bryncethin – 130 homes, education/ training facilities PLA3(11) , Brynmenyn – 75 homes (committed) Part COM1(31) and COM13(6) , Bryncethin, 323 homes (committed) and provision of public open space	<i>Mitigation:</i> On-site waste management.	
Employment allocations	Potential for impacts	Are significant impacts likely?
<i>On A4061:</i> REG1(32) , Blackmill – B1, B2 and B8 REG1(34) Penllwyngwent Industrial Estate, Ogmore Vale (not in 2km but on the A4061)	Deteriorating air quality could have an adverse effect on the Blackmill Woodlands. Road travel throughout the County Borough and beyond could increase the risk. However, there may be particular adverse effects of more cars and HGVs on the A4061 that separates the two parts of the SAC. Increased road travel will be from development in the Valleys Gateway and northern fringes of Bridgend, as well as development in the Ogmore Valley.	No
<i>Not on A4061:</i> REG1(31) , Llangeinor REG1(18) , Abergawr SP7(2) REG1(18) , Brynmenyn Industrial Estate – employment and strategic waste management	<i>Mitigation:</i> Impacts will predominantly be mitigated through implementation of strategies and other policies of the LDP that aim to reduce car dependence. This includes the LDP and the Regional Transport Plan. Some types of new industrial development have the potential to cause adverse air quality impacts through emissions to air. Monitoring of air quality at the site and traffic on the A4061 may trigger the need for a review of LDP policy to avoid harmful effects. <i>Mitigation:</i> Impacts can be mitigated through control over the type of industry and waste management facility permitted on new and existing employment sites, taking into account potential impacts on the SAC. Potential polluting industry will need to follow Environment Agency controls. There is the potential that new housing development may increase the risk of illegal fly tipping. However, there is no evidence on the relationship of population density and tipping. Risks are low. <i>Mitigation:</i> On site waste management.	

Community allocations	Potential for impacts	Are significant impacts likely?
COM9(10), Llangeinor – community building	This is a small community building – impacts are very unlikely.	No
Other allocations	Potential for impacts	Are significant impacts likely?
<p>REG12(1) – Lakeside Farm Park, Glynogwr</p> <p>REG12(3) – Tourism development, Mountain bike hub, Blackmill</p> <p>REG12(5) – Tourism development, Events area, Bryncethin Clay Pits</p> <p>COM13(6) and COM13(11) – Public open space for sport (formal and informal)</p>	<p>The mountain bike hub is directly adjacent to the SAC and Lakeside Farm Park in close proximity. These schemes have the potential to increase visitors to the woodlands.</p> <p><i>Mitigation:</i> Increased use of bikes and visitors in the area will need to be in conjunction with visitor management plans to the area to avoid visitor impacts.</p> <p>The events area is unlikely to have any impacts on the SAC due to the distance from the site and the temporary nature of uses on the sites.</p> <p><i>Mitigation:</i> None</p> <p>New public open space will need to be managed to avoid adverse impacts of the change of semi-natural space to highly managed open space.</p> <p><i>Mitigation:</i> Open space should be managed to support protected species and habitats.</p>	No
Mining/Quarrying		
The LDP recognises the importance of protecting the Blackmill Woodlands from coal extraction operations. The woodlands are in an area containing coal assets and it will be important that all possible impacts of coal extraction are taken into account in making decisions on new mines. This will need to include potential impacts relating to air quality and vehicle movements.		
Summary and cumulative impacts		
<p>Risks to the site may come from worsening air quality. To avoid adverse effects national, regional and County Borough strategies and plans need to be implemented that can help reduce reliance on car travel. In addition, potential for air pollution from new industrial and waste management development needs to be a consideration of planning consents in the Blackmill Wood area. Monitoring of air quality at the site and traffic on the A4061 may trigger the need for a review of LDP policy to avoid harmful effects.</p> <p>New employment and housing along the A4061 has the potential to bring more cars to the area. Around 160 new homes are planned along the A4061 and a further 600 within 2km of the site. There is also employment land allocated in Bridgend, Blackmill and up into the Ogmore Valley. The long-term increase of travel on this road may need specific management to avoid adverse impacts on the SAC.</p> <p>Access to the site will also need to be managed to avoid adverse impacts from visitors. This will include helping prevent incidents of fly-tipping and ensuring an increase in visitors to the area to use the new bike hub at Blackmill does not cause harm to the site.</p>		

The LDP protects the woodlands from direct disturbance.

Likelihood of significant impacts on the SAC

The LDP will not have any significant impacts on the Blackmill Woods. Mitigation will be through national plans to reduce air pollution and access management of the woodland site. Monitoring road use and air quality at the site should trigger the need for policy review if trigger points are reached.

Where suitable larger new development proposals will need to be subject to site specific appropriate assessment under the Habitats Regulations, to include consideration of in-combination impacts.

Particular consideration will have to be given to the protection of the SAC if permission for coal mining is sought in the area.

Kenfig SAC	
Description	Two large dune systems either side of the Afon Ogwr. Includes steep mobile sand dunes, salt meadows, fixed dunes and slacks and rich flora including rare fen orchid and petalwort.
Primary reasons for SAC designation (and condition)	<p>Annex I habitats that are a primary reason for selection of this site:</p> <ul style="list-style-type: none"> • fixed dunes with herbaceous vegetation ('grey dunes') (*Priority feature) (Unfavourable declining 08/2006) • dunes with <i>Salix ripens</i> ssp. <i>Argentea</i> (<i>Salicion arenariae</i>) (Unfavourable declining 08/2006) • humid dune slacks (unfavourable declining 08/2006) • hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. (unfavourable recovering 09/2005) <p>Annex II species that are a primary reason for selection of this site:</p> <ul style="list-style-type: none"> • Petalwort <i>Petalhyllum ralfsii</i> (unfavourable 10/2001) • Fen orchid <i>Liparis loeselii</i> (unfavourable declining 10/2001)
<p>Vulnerabilities</p> <p>Erosion most likely due to insufficient sand supply and dune stabilisation issues</p> <p>Falling water tables from water abstraction and drainage of adjacent land for agriculture or housing</p> <p>Grazing/scrub suitable levels need to maintained to retain habitat characteristics and avoid scrub encroachment</p> <p>Recreation and access people and vehicle access can adverse affect the dune slack SAC features and need to be managed</p> <p>Air quality eutrophication, photochemical oxidants, particulate matter impacts on habitats character on lands and water</p> <p>Water quality the major water quality concerns are related to elevated nutrient levels. Elevated levels of nitrogen have been found at Burrows Well on Merthyr Mawr 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 adverse impact on the SAC</p> <p>Non-native species including coarse fish can have an impact on the pond and slack species</p> <p>Petalwort and fen orchid are particularly vulnerable to dune stabilisation and drainage and recreation impacts.</p> <p>There may also be indirect effects on the dunes that include atmospheric nutrient deposition and coastal squeeze due to rising sea levels and increased storminess. The potential for dredging and marine aggregate extraction, through disruption of coastal processes could have cumulative long-term effects on the sand dunes of the area.</p>	
Development in proximity to the Kenfig SAC	

Mixed use and housing (in 2km*)	Potential for impacts	Are significant impacts likely?
<p><i>Merthyr Mawr Warren</i></p> <p>PLA3(9) Porthcawl – 40 homes, employment and open space.</p> <p>PLA3(8) – 1350 homes (committed), Porthcawl Regeneration Area includes large foodstore, retail, health facility, community building and tourism and leisure. The site is on the seafront in Porthcawl</p> <p>COM1(28) – Porthcawl, 11 homes (committed)</p> <p>COM1(29) – Porthcawl, 10 homes (committed)</p>	<p>Water quality – The water bodies of the Kenfig SAC are reliant on groundwater supply. Changes in the quality of groundwater could have an adverse impact on the species composition of the water bodies, adversely impacting on the continued integrity of the site. Adverse quality impacts could happen some distance away and still have impacts on the site. Concerns over the condition of the water body relate to elevated nutrient levels in the pool as well as in the water bodies at Merthyr Mawr. Nutrient enrichment has an impact on the types and abundance of species out of keeping with site designation.</p> <p><i>Mitigation:</i> All new development that shares a catchment with the Kenfig SAC will need to avoid adverse impacts to ground and surface water. This will include the need to avoid mobilisation of pollutants in the construction and operation of development. Specific mitigation of site impacts could include sustainable drainage systems. It will also be essential to ensure that there is capacity at waste water treatment works to serve all new development, prior to new homes / businesses being occupied.</p>	No – subject to mitigation
<p><i>Kenfig Burrows</i></p> <p>COM2(23) North Cornelly – 14 homes (committed)</p> <p>COM2(22) North Cornelly – 22 homes (committed)</p> <p>COM2(20) North Cornelly – 48 homes (committed)</p> <p>COM2(28) Land at Ty Draw Close, Pyle - 30</p> <p>PLA3(18) North Cornelly – 45 homes (committed) a health centre and employment.</p>	<p>Water quantity – Due to potential over abstraction of groundwater in the catchment additional water requirements to serve development could adversely effecting site integrity. If less water is available it could affect species diversity and threaten the existence of petalwort and fen orchid features. Individually developments may not have an adverse impact on the site but there could be cumulative impacts. Very low water tables could also lead to the sites becoming very saline as salt water intrudes the site.</p> <p><i>Mitigation:</i> The Environment Agency is responsible for granting consents licensing for abstraction and discharge. The summary from a review of consents that could potentially impact on Kenfig SAC is: “<i>We are confident that the proposed modifications to the discharge consents and waste management licences, along with changes to the way operators practise, will prevent further impact to the plants, animals and habitat which make Kenfig SAC so unique.</i>” Therefore, all planning decisions may need to be made with the agreement of the Environment Agency advice. Site by site mitigation could include incorporating water efficiency technologies into all new residential and industrial development. Monitoring for adverse change may also be necessary, triggering review of LDP policy (such as growth or distribution of development) or consent licensing as necessary.</p> <p>Air quality – The Kenfig SAC is shown in to be at particular risk of in-combination</p>	

	<p>impacts of air and water pollution causing nutrient enrichment that adversely impact on the dune slacks, where the petalwort and fen orchid are normally located, and this could cause accelerated rates of vegetation change. Traffic impacts of new residential and mixed use development may have an adverse impact on the SAC. Air quality, as shown in Appendix 7, is currently not at levels that would adversely impact on the SAC, although trends need to be monitored.</p> <p><i>Mitigation:</i> Impacts will predominantly be mitigated through implementation of strategies and other policies of the LDP that aim to reduce car dependence. New industrial development needs to be compatible with location and avoid water and air quality impacts.</p> <p>Human impact - The allocations provide for increased number of homes and people within close proximity to the SAC. This means there may be more recreational use of Merthyr Mawr Warren and Kenfig Burrows. Merthyr Mawr is crossed by several walking and cycling paths identified in the LDP, further increasing public access to the site. Recreational impacts come from litter, fires and coarse fishing, and have the potential to cause habitat degradation. Recent evidence shows that the sites may be damaged by recreational use of vehicles.</p> <p><i>Mitigation:</i> Implementation of access management plans for the two areas will help in avoiding impacts to the sites. Alternative recreation sites will also help reduce some use on the site, for instance informal recreation space for dog walking.</p> <p>Coastal change – The mixed use development area in Porthcawl is on the waterfront. The dune system is dynamic, needing to accrete and erode in order to maintain the existing form and species diversity. Changes in coastal processes stopping sand accumulating, cause the dunes to stop growing and become eroded and stops growth of species that favour more bare sand. This cessation of new sediment could be caused by development impacts west along the coast and potentially by development in this location.</p> <p><i>Mitigation:</i> Coastal development needs to be managed in keeping with a shoreline management strategy to avoid adversely impacting on coastal processes that are essential for maintaining the dunes. The natural roll of the dune systems needs to be maintained avoiding hard infrastructure that prevents accretion on the seaward site and inland migration on the landward side.</p>	
Employment allocations	Potential for impacts	Are significant impacts likely?
<i>Merthyr Mawr Warren</i>	The large employment site allocated in North Cornelly is an industrial location that is	No – subject to

Only as part of mixed use	identified as of strategic importance to the economy of the County Borough. There is also a proposed new waste management facility site in South Cornelly.	mitigation
<p><i>Kenfig Burrows</i></p> <p>SP9(4) – North Cornelly – Ty Draw, Strategic Employment Site</p> <p>SP7(1) Heol-y-Splott, South Cornelly – strategic waste management site</p>	<p>Water quality – The water bodies of the Kenfig SAC are reliant on groundwater supply. Changes in the quality of groundwater could have an adverse impact on the species composition of the water bodies, adversely impacting on the continued integrity of the site. Adverse quality impacts could happen some distance away and still have impacts on the site. Concerns over the condition of the water body relate to elevated nutrient levels in the pool as well as in the water bodies at Merthyr Mawr. Nutrient enrichment has an impact on the types and abundance of species out of keeping with site designation.</p> <p><i>Mitigation:</i> All new development that shares a catchment with the Kenfig SAC will need to avoid adverse impacts to ground and surface water. This will include the need to avoid mobilisation of pollutants in the construction and operation of development. Specific mitigation of site impacts could include sustainable drainage systems. In addition, new industrial development and waste facilities will have to ensure there is no impact to water quality, this may require specific licensing from the Environment Agency Wales. It will also be essential to ensure that there is capacity at waste water treatment works to serve all new development, prior to new homes / businesses being occupied.</p> <p>Water quantity – Due to potential over abstraction of groundwater in the catchment additional water requirements to serve development could adversely effecting site integrity. If less water is available it could affect species diversity and threaten the existence of petalwort and fen orchid features. Individually developments may not have an adverse impact on the site but there could be cumulative impacts. Very low water tables could also lead to the sites becoming very saline as salt water intrudes the site.</p> <p><i>Mitigation:</i> The Environment Agency is responsible for granting consents licensing for abstraction and discharge. The summary from a review of consents that could potentially impact on Kenfig SAC is: “<i>We are confident that the proposed modifications to the discharge consents and waste management licences, along with changes to the way operators practise, will prevent further impact to the plants, animals and habitat which make Kenfig SAC so unique.</i>” Therefore, all planning decisions may need to be made with the agreement of the Environment Agency advice. Site by site mitigation could include incorporating water efficiency technologies into all new residential and industrial development. Monitoring for adverse change may also be necessary, triggering review of LDP policy (such as</p>	

	<p>growth or distribution of development) or consent licensing as necessary.</p> <p>Air quality– The Kenfig SAC is shown in to be at particular risk of in-combination impacts of air and water pollution causing nutrient enrichment that adversely impact on the dune slacks, where the petalwort and fen orchid are normally located, and this could cause accelerated rates of vegetation change. Traffic impacts of new employment development may have an adverse impact on the SAC. Some types of industrial use also have the potential to have negative effects. Air quality, as shown in Appendix 7, is currently not at levels that would adversely impact on the SAC, although trends need to be monitored.</p> <p><i>Mitigation:</i> Impacts will predominantly be mitigated through implementation of strategies and other policies of the LDP that aim to reduce car dependence. New industrial development needs to be compatible with location and avoid water and air quality impacts.</p>	
Community	Potential for impacts	Are significant impacts likely?
<i>Kenfig Burrows</i> COM12 , Porthcawl – Playing fields	New open space may help avoid some recreational impacts on the Kenfig Burrows. Impacts of this allocation should be positive.	No
Other	Potential for impacts	Are significant impacts likely?
<i>Merthyr Mawr Warren</i> ENV2(4) – green wedge	Protection of open space may help avoid some recreational impacts on the Kenfig Burrows. Impacts of this allocation should be positive.	No
ENV17(2) Tythegston Landfill Landfill Gas ENV17(3) Penybont WTW	Any large new utilities infrastructure in proximity to the SAC site, during construction and operation. Policy controls should be sufficient in managing potential adverse impacts, and the Penybont Waste Water Treatment may have benefits for water quality in the area. The allocations will also help provide more efficient energy through the burning of carbon waste products, this may help improve air quality by reducing some of the energy generated from less efficient and clean fossil fuel sources.	No
<i>Kenfig Burrows</i> None	-	-
Mining/Quarrying		
These two sites are in close proximity to areas of high quality limestone resources. Therefore, there is the possibility that over the plan period there may		

be planning applications for abstraction of the limestone. New quarrying will not be permitted to cause the direct land take of the SAC, but may have impacts on water quality and quantity, water table and air pollution. Any new applications will require site specific appropriate assessment under the Habitats Regulations to demonstrate they would have no significant adverse impact. Similarly, any extensions for the existing quarry at South Cornelly will need to be subject to controls.

Summary and Cumulative development impacts

The Merthyr Mawr Warren part of the Kenfig SAC is in close proximity to the Porthcawl regeneration growth area, resulting in a concentration of development near this part of the SAC. Kenfig Burrows is on the County Borough boundary and there are fewer allocations in the direct vicinity. However, there may be the potential for cross boundary impacts from Neath Port Talbot.

Environment Agency research as shown that Kenfig pool on the site is predominantly rainwater and groundwater fed. Therefore, activities affecting the aquifer even some considerable distance away could have an impact on the site. Elevated nutrient levels from water pollution can cause nutrient enrichment of the SAC water bodies. Enrichment can have negative impacts of the continued integrity of the SAC species.

The Water Resources Plan for Welsh Water included a detailed Habitat Regulations Assessment. The assessment identified that the features of interest on the Kenfig SAC could be at risk from increased groundwater abstraction. Concluding that the site is possibly affected by changes in water levels of the Schwyll Springs. CCW suggested as part of the assessment process that groundwater abstractions some distance from the site may affect the features. The Catchment Abstraction Management Strategy prepared by the Environment Agency identifies that some parts of the County Borough have 'no water available', possibly impacting on new development being delivered due to control on abstraction licenses.

Adverse water availability and quality impacts will need to be avoided and therefore should be recognised in the LDP. The plan could make clear that advice from the Environment Agency will need to be following in making decisions on planning applications to avoid adverse impact on Kenfig. Site specific mitigation could be through sustainable drainage systems, management of construction and the efficient use of water in all new development.

Monitoring for adverse change in water availability may also be necessary. Thresholds or trigger points for action could be identified where policy and/or consent licensing would need to be reviewed. This may require change to LDP policy and the growth permitted in this location.

The allocations provide for increased number of homes and people within close proximity to the SAC. This means there may be more recreational use of Merthyr Mawr Warren and Kenfig Burrows. Merthyr Mawr is crossed by several walking and cycling paths identified in the LDP, further increasing public access to the site. Recreational impacts come from litter, fires and coarse fishing, and have the potential to cause habitat degradation. Recent evidence shows that the sites may be damaged by recreational use of vehicles. Mitigation will need to be through implementation of access management plans for the two areas will help in avoiding impacts to the sites. Alternative recreation sites will also help reduce some use on the site, for instance informal recreation space for dog walking.

There is the potential for employment uses and the travel to work by car to contribute to air pollution. Several features in Kenfig are potentially sensitive to air quality impacts, either through direct impacts to sensitive plant species from high levels of ethylene/ethane; or indirect through changes in water chemistry. Acidification is unlikely to be an impact due to underlying geology. Air quality, as shown in Appendix 7, is currently not at levels that would adversely impact on the SAC, although trends need to be monitored. Impacts will predominantly be mitigated through implementation of strategies and other policies of the LDP that aim to reduce car dependence. New industrial and waste management development needs to be compatible with location and avoid water and air quality impacts. However, proximity to the M4 and the Port Talbot industrial area over the County Borough boundary may have the SAC site at Kenfig Burrows, beyond the control of the LDP.

The mixed use development area in Porthcawl is on the water front. The dune system is dynamic, needing to accrete and erode in order to maintain the existing form and species diversity. Changes in coastal processes stopping sand accumulating cause the dunes to stop growing and become eroded and stops growth of species that favour more bare sand. This cessation of new sediment could be caused by development impacts west along the coast and potentially by development in this location. Coastal development needs to be managed in keeping with a shoreline management strategy to avoid adversely impacting on coastal processes that are essential for maintaining the dunes. The natural roll of the dune systems needs to be maintained avoiding hard infrastructure that prevents accretion on the seaward side and inland migration on the landward side.

Likelihood of significant impacts on the SAC

Individually, no allocation that does not already have planning permission would have an adverse impact on the SAC. However, the cumulative quantity of development anticipated through the LDP has the potential for adverse impacts on the Kenfig SAC if not properly managed and sensitively implemented. The main impacts may be from water quality and water quantity adversely impacting features that are reliant on water of the dunes. To avoid these impacts development in the County Borough needs to be implemented in line with the advice from the Environment Agency.

Where suitable new development proposals will need to be subject to site specific appropriate assessment under the Habitats Regulations, to include consideration of in-combination impacts.

Other mitigation should be through the control of air quality impacts from strategies to reduce car reliance and through managing visitor access to the two sites.

Cefn Cribwr SAC		
Description	Four distinct grassland sites to the west of Bridgend. Special interest includes marshy and species rich neutral grassland with wet heath and scrub, supporting a population of the nationally scarce marsh fritillary butterfly plus other nationally scarce and declining plan species.	
Primary reasons for SAC designation (and condition)	Annex I habitats that are a primary reason for selection of this site: <ul style="list-style-type: none">Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) (unfavourable – declining October 2002) Annex II species that are present as a qualifying feature but not the primary reason for site selection: <ul style="list-style-type: none">Marsh Fritillary Butterfly <i>Euphydryas</i> (<i>Eurodryas hypodryas</i>) <i>aurinia</i> (unfavourable September 2003)	
Vulnerabilities <ul style="list-style-type: none">need for the right level of grazingneed to maintain shelter belt, including hedges, woods and mature trees around the sitehydrological regime, requiring springs and watercourse to feed the site, with more information needed on the role of these and impacts from nearby open-cast minerals workingsoff-site pollution, two of the component SSSI lie close to open-cast coal workings and other mineral workings. Release of dust from these sites may impact on SSSI but effects are not known, these releases are subject to authorisation from the Environment Agency Walesimpacts of owners/occupiers of the site, including agricultural improvementother impacts including weather and parasites.		
Development in proximity to the Cefn Cribwr SAC (all allocations 2km*)		
Mixed use and housing	Potential for impacts	Are significant impacts likely?
PLA3(10), land at Tondu. 436 homes (committed), employment use, education and training facilities, supermarket and other retail PLA3(18), North Cornelly – 45 homes (committed) and a health centre. COM2(23) – North Cornelly 14 homes (committed)	The majority of allocated land in the area is committed for development. Therefore, the LDP can have little influence over its location or design. However, there may be impacts from overall growth levels in the County Borough and from the way development is used. Water availability – Increased water abstraction in the area, or certain types of development, could adversely impact on water availability on the grassland site. A reduction in groundwater availability could cause the loss of the marshy grassland and a change in species composition on site, adversely effecting site integrity.	No

<p>COM2(22) – North Cornelly, 22 homes (committed)</p> <p>COM2(14) – Kenfig Hill, 39 homes (committed)</p> <p>COM2(13) – Kenfig Hill, 29 homes (committed)</p>	<p>Water quality Poor water quality from new development may have an adverse impact on the SAC site.</p> <p><i>Mitigation:</i> Water quality and quantity have the potential to adversely impact on the SAC. The extent of impacts is not easy to predict. However, water availability issues could be recognised in the LDP and the plan could make clear that advice from the Environment Agency will need to be following in making decisions on planning applications in this area. This will include consideration of additional abstraction licensing and on the capacity at waste water treatment works. Avoiding impacts on individual allocations will also require site specific measures, such as sustainable drainage systems and the more efficient use of water in all development.</p> <p>Air quality - Habitats are at risk of harm through deposition of nitrogen compounds, from fossil fuel burning, causing soil acidification adversely effecting flora. Air quality at Cefn Cribwr SAC (Appendix7) is currently not exceeding threshold levels where harm is likely, although trends need to be monitored. These allocations provide for a substantial quantity of development and therefore potentially increasing traffic past the site and therefore possibly causing deterioration in air quality.</p> <p><i>Mitigation:</i> Impacts could be mitigated through implementation of strategies and other policies of the LDP that aim to reduce car dependence. New industrial and waste management development as part of mixed use schemes needs to be compatible with location and avoid water and air quality impacts. Monitoring of air quality at the site and nearby traffic levels may trigger the need for a review of LDP policy to avoid harmful effects.</p>	
Employment allocations	Potential for impacts	Are significant impacts likely?
<p>REG1(20), Tondy – Employment</p> <p>SP7(3), REG1(37) Village Farm Industrial Estate, Pyle – Strategic waste management site and employment</p> <p>REG4 – Stormy Down Airfield</p> <p>SP9(4) – Ty Draw, North Cornelly</p> <p>REG1(27) Pyle</p>	<p>Water quality – There is the risk that large industrial sites, including waste treatment facilities, could dry out the site by causing a fall in the groundwater or spring flows. A reduction in groundwater availability could cause the loss of the marshy grassland and a change in species composition on site, adversely effecting site integrity.</p> <p><i>Mitigation:</i> Water quality and quantity have the potential to adversely impact on the SAC. The extent of impacts is not easy to predict. However, water availability issues could be recognised in the LDP and the plan could make clear that advice from the Environment Agency will need to be following in making decisions on</p>	No

	<p>planning applications in this area.</p> <p>Air quality - Habitats are at risk of harm through deposition of nitrogen compounds, from fossil fuel burning, causing soil acidification adversely affecting flora. Air quality at Cefn Cribwr SAC (Appendix 7) is currently not exceeding threshold levels where harm is likely, although trends need to be monitored. These allocations provide for a substantial quantity of development and therefore potentially increasing traffic past the site and therefore possibly causing deterioration in air quality. Depending on the use of the site there could also be air quality impacts from industry or waste management.</p> <p><i>Mitigation:</i> Impacts could be mitigated through implementation of strategies and other policies of the LDP that aim to reduce car dependence. New industrial and waste management development needs to be compatible with location and avoid water and air quality impacts. Monitoring of air quality at the site and nearby traffic levels may trigger the need for a review of LDP policy to avoid harmful effects.</p> <p>Indirect impacts: The long-term survival of marsh fritillary populations will be depending on the availability of sufficiently large habitat patches and the links between them. Development that causes the loss of the links between the four SAC patches, or create barriers between them, could harm the integrity of the site and have adverse impacts on the conservation objectives of the SAC. There may also be adverse impacts if supporting habitat patches outside the SAC are lost. However, the LDP does not proposed any built development between the component parts of the SAC, therefore reducing risks. NB an existing quarry is found between the habitat patches.</p> <p><i>Mitigation:</i> Ensure that new development near the SAC sites maintains supporting habitats and habitat links. In particular the habitat patches that support the Annex II species. The need to maintain these links and supporting habitats could be referred to in LDP or supporting text. The LDP could identify an area around the grasslands where links must be maintained and all suitable patches of marshy grassland habitat protected (even if these are not designated).</p>	
Community allocations	Potential for impacts	Are significant impacts likely?
<p>COM8(2) – Aberkenfig, Provision of health / social services facilities</p> <p>COM12(7) – Playing fields</p>	<p>Small land allocation unlikely to have any impact on the SAC.</p> <p>Playing fields are unlikely to have any significant impact on the SAC.</p>	No

Other allocations	Potential for impacts	Are significant impacts likely?
PLA7(27) – Road improvement between Sarn and Maesteg	<p>Air quality – The allocation is for improvements to the A4063 between Sarn and Maesteg. The SAC is risk of harm caused by nitrogen deposition from fossil fuel burning. The deposition causes acidification of the site and therefore changing species composition and impacting on site integrity. Air quality, as shown in Appendix 7, is currently not at levels that would adversely impact on the SAC, although trends need to be monitored. The allocation improves the A4063, therefore potentially increasing traffic along this road and would increase impacts of road traffic on the SAC site.</p> <p><i>Mitigation:</i> Impacts could be mitigated through implementation of strategies and other policies of the LDP that aim to reduce car dependence. Monitoring of air quality at the site and nearby traffic levels may trigger the need for a review of LDP policy to avoid harmful effects.</p>	No
ENV2(2) – Green Wedges ENV2(6) – Green Wedges ENV2(9) – Green Wedges ENV2(10) – Green Wedges	Protecting areas of open space near the SAC may be useful in protecting Annex II species on-site.	No
REG12(1) – Fun Land, Cefn Cribwr	This policy identifies a site north of the grasslands suitable for expansion as a leisure facility. There is the possibility that this may put recreational pressure on the area or create air quality impacts from additional cars in the area. However, the site is physically separated from the grassland sites meaning the risk of impacts is low.	No
Mining/Quarrying		
The Cefn Grasslands are near several opencast minerals sites. The grasslands are in a secondary coal resource area, identified on the LDP Proposals Maps, meaning there may be the potential for more mines in this in the area in the future. Further encroachment of these minerals workings on the grasslands and supporting habitats must be avoided to ensure the SAC is not directly harmed by development. Increased mining in the area has the potential to have a significant adverse impact, either through the direct loss of part of a site, or by isolating the sites from one another putting the continued viability and integrity of the SAC at risk.		
Summary and cumulative impacts		
This SAC is close to the area covered by the Valley Gateway Strategic Growth Regeneration Area. The designation of this strategic area means that growth in this location may be substantial over the plan period, giving a greater risk of impacts to the SAC. Impacts may come from changes in the water availability for the site or the water quality. To avoid adverse water impacts individual developments will need to ensure they make efficient use of		

water and that any development complies with any relevant standards set by the Environment Agency.

There is also the risk of adverse air quality impacts from increased car travel in the area of the grasslands. However, the M4 is within 2km of the site, the LDP can only have a limited role in managing this air quality. However, air quality at the site should be monitored trigger review of policy if necessary. Some types of industrial development may also have adverse impacts on air quality. Impacts will predominantly be mitigated through implementation of strategies and other policies of the LDP that aim to reduce car dependence. New industrial and waste management development needs to be compatible with the location and avoid water and air quality impacts.

Some of the greatest risks come from mining in the area. The LDP does not propose any new mining or quarrying development although the land is a safeguarded coal resource area. Mining policies should specify the importance of protecting this SAC, as is the case with the Blackmill Woodlands.

Indirect impacts are possible and the LDP could identify an area around the grasslands where links must be maintained and all suitable patches of marshy grassland habitat protected (even if these are not designated).

Likelihood of significant impacts on the SAC

The greatest risk to the SAC is from the quantity of development proposed in the area having impacts on water availability. There may also be risks of further habitat fragmentation from development. Mining and quarrying near the site also raises the risk of harm in the area.

Policies to ensure that no further fragmentation takes place, and the Environment Agency advice is followed will help protect against these impacts.

The LDP will not have any significant adverse impacts on the SAC. However, this does not mean that individual site specific appropriate assessments may not be necessary to avoid impacts.

Explanatory text:

* 2km is taken as an indicative boundary to show development in close proximity to the site. However, the assessment of the potential impacts of development is not limited to this area. For instance, air quality impacts may be exacerbated by any new development along a road, and water quality impacts related to ground and surface water bodies.

Committed – the site already has planning permission or is very close to receiving planning permission subject to agreement on conditions. Therefore, these sites will come forward for development regardless of allocation in the LDP.

Appendix 7

Background Environmental Conditions & Trends – Air Quality

extract from the information database of the *Habitat Regulations Assessment (HRA): a toolkit to support HRA screening and appropriate assessment* (South East Wales Strategic Planning Group, 2008)

Glossary¹

- **Acid deposition²** - Atmospheric input to ecosystems of pollutants which may acidify soils and freshwaters; this includes species derived from SO₂, NO_x and NH₃ emissions, as well as a number of other minor pollutants. Acid deposition is more general than acid rain, since it includes both wet deposition and dry deposition.
- **Ammonia (NH₃)** - in the atmosphere results primarily from the decomposition and volatilisation of animal wastes. As such it is in principle a natural trace gas. Emissions of ammonia lead to the deposition of nitrogen to vegetative surfaces through processes of wet and dry deposition.
- **Critical load** - a quantitative estimate of exposure to deposition of one or more pollutants, below which significant harmful effects on sensitive elements of the environment do not occur, according to present knowledge. The exceedance of a critical load is defined as the atmospheric deposition of the pollutant above the critical load.
- **Exceedance** - violation of environmental protection standards by exceeding allowable limits or concentration levels.
- **Fine Particles (PM₁₀, PM_{2.5} and PM₁)** - Particulate Matter less than 10 microns, tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. Fine Particles are composed of a wide range of materials arising from a variety of sources including:
 - combustion sources (mainly road traffic);
 - secondary particles, mainly sulphate and nitrate formed by chemical reactions in the atmosphere, and often transported from far across Europe;
 - coarse particles, suspended soils and dusts (e.g. from the Sahara), seasalt, biological particles and particles from construction work.
- **Nitric Oxide (NO)** - precursor of ozone, nitrogen dioxide (NO₂), and nitrate; usually emitted from combustion processes. Converted to NO₂ in the atmosphere, it then becomes involved in the photochemical process and/or particulate formation. Nitric oxide (NO) is mainly derived from road transport emissions and other combustion processes such as the electricity supply industry. NO is not considered to be harmful to health. However, once released to the atmosphere, NO is usually very rapidly

¹ APIS (Accessed on 04/09/08) Glossary. Available online: <http://www.apis.ac.uk/glossary.htm>

² APIS (Accessed on 04/09/08) Overview - Acid Deposition. Available online: http://www.apis.ac.uk/overview/pollutants/overview_Acid_deposition.htm

oxidised to nitrogen dioxide (NO₂), which is harmful to health. NO₂ and NO are both oxides of nitrogen and together are referred to as nitrogen oxides (NO_x).

- **Nitrogen deposition**³ - is the term used to describe the input of reactive nitrogen species from the atmosphere to the biosphere. Most concern has addressed the impacts of nitrogen deposition to terrestrial ecosystems, but impacts may also occur in the marine environment. The pollutants that contribute to nitrogen deposition derive mainly from nitrogen oxides (NO_x) and ammonia (NH₃) emissions.
- **Nitrogen oxide (NO_x)** - product of combustion of fossil fuels (transport, electricity supply industry); a major contributor to the formation of ozone in the troposphere and acid deposition.
- **Ozone (O₃)** - is not emitted directly from any man-made source in any significant quantities. In the lower atmosphere, O₃ is primarily formed by a complicated series of chemical reactions initiated by sunlight. Close to the earth's surface ("tropospheric ozone") it is produced photochemically from hydrocarbons, NO_x and sunlight, and is a major component of smog. The chemical reactions do not take place instantaneously, but can take hours or days, therefore ozone measured at a particular location may have arisen from emissions many hundreds or even thousands of miles away. Maximum concentrations, therefore, generally occur downwind of the source areas of the precursor pollutant emissions.
- **Sulphur dioxide (SO₂)** - is produced when a material, or fuel, containing sulphur is burned. Globally, much of the sulphur dioxide in the atmosphere comes from natural sources, but in the UK the predominant source is power stations burning fossil fuels, principally coal and heavy oils. Widespread domestic use of coal can also lead to high local concentrations of SO₂.

³ APIS (Accessed on 04/09/08) Overview – Nitrogen Deposition. Available online: http://www.apis.ac.uk/overview/pollutants/overview_N_deposition.htm

Air Pollution Deposition against Critical Loads at Natura 2000 sites in South East Wales

The primary focus of table 1 is on pollutants which have a direct impact on habitats and species, or impact through their deposition in the UK. These include regional tropospheric pollutants such as sulphur dioxide (SO₂), nitrogen oxides (NO_x), ammonia (NH₃), ozone (O₃), acid deposition and nitrogen deposition.

The results shown in the table 1 should be used in conjunction with the detailed Natura 2000 Site Information, as although a site may be considered at risk from air pollution in the table below, the detailed information within the characterisations may show that the site is in actual fact not vulnerable to the affects of air pollution.

Key:

Site within acceptable limits	
Site exceeds critical load	
n/a	Not available

Table 1: Air Pollution Deposition against Critical Loads at Natura 2000 sites

Deposition/ Critical Load	Acid deposition keq/ha/yr	Ammonia µg/m3	Nitrogen deposition kg N/ha/year	Nitrogen oxides µg NOx (as NO2) m-3	Ozone ppb hours	Sulphur dioxide µg/m3	At Risk?
Blackmill Woodlands (Location Grid Ref: SS929859)							
Deposition	2.76	1.1	33.7	14.6	5369	1.4	Yes
Critical Load	0.81	3	10-15	30	5000	20	
Exceedance	1.95	-1.9	23.7 to 18.7	-15.4	369	-18.6	
Cefn Cribwr Grasslands (Location Grid Ref: SS870830)							
Deposition	n/a	1.1	14.8	15.6	2969	2.7	No
Critical Load	n/a	3	15-25	30	3000	20	
Exceedance	n/a	-1.9	-0.2 to -10.2	-14.4	-31	-17.3	

Deposition/ Critical Load	Acid deposition keq/ha/yr	Ammonia µg/m3	Nitrogen deposition kg N/ha/year	Nitrogen oxides µg NOx (as NO2) m-3	Ozone ppb hours	Sulphur dioxide µg/m3	At Risk?
Dunraven Bay (Location Grid Ref: SS886727)							
Deposition	n/a	0.5	10.6	n/a	n/a	1.7	No
Critical Load	n/a	3	10-15	n/a	n/a	20	
Exceedance	n/a	-2.5	0.6 to -4.4	n/a	n/a	-18.3	
Kenfig (Location Grid Ref: SS790813)							
Deposition	0.91	0.3	9.4	12.4	2800	1.9	No
Critical Load	4	3	10-20	30	3000	20	
Exceedance	-3.09	-2.7	-0.6 to -10.6	-17.6	-200	-18.1	

Limitations:

- Table is based on data that was collected at different timescales. Acid deposition information is taken from a 3 year average (2003-2005) whereas data relating to ammonia represents a single year (2005).
- The table does not consider the critical loads for individual species. Where a site is designated primarily for a particular species (e.g. Dunraven Bay), data is based on the habitat on which the species is reliant or the habitat that covers the majority of the site.
- The data is specific to a particular grid reference (available from the JNCC), which focuses on the centre of that European site. It does not therefore take account of the varying air quality levels across sites, for example, the Wye Valley and Forest of Dean Bat Sites SAC is composed of a number of different units spread out over a large area.
- The table does not take account of current or future trends in air quality.

Appendix 8

In-combination effects

Plan title	Purpose of plan and relevance to screened in Natura 2000 sites	Type of impact	Potential for significant in-combination impacts?	Commentary on impacts
NATIONAL PLANS				
People, Places, Futures: The Wales Spatial Plan (update) 2008	Bridgend falls in the transitional zone between South East Wales, 'the Capital Network' and the Swansea Bay area. For most planning purposes (waste issues excepted) Bridgend relates to the South East Wales area. Bridgend is identified as a 'Cross-Boundary Settlement' with links to the Cardiff area as well as towards the west to the Swansea Bay City region, where it is also identified as a 'hub' settlement. Maesteg, Pyle and Porthcawl are Primary Key Settlements of the Swansea Bay region, with the latter two identified as a 'hub', critical to the success of the region.	Positive and negative	No	This plan sets the framework for development in Bridgend County Borough. However, it is implemented through the local authority LDPs.
Achieving our Potential 2006-2013: Tourism Strategy for Wales	Sets out a strategic vision for tourism in Wales, which is a "customer responsive, innovate,, sustainable and profitable industry that makes an increasing contribution to the economic, social, cultural and environmental wellbeing of Wales".	Potential for positive and negative effects.	No	Lower tiered plans that implement this policy need to be identified for possible in-combination impacts. The LDP is one of these plans.
Coastal Tourism Strategy (Welsh Assembly Government, 2008).	The aim is for more tourism on the Wales coast. This includes improving access to the coast and extending the tourist season. The plan does identify the need to maintain wildlife and habitats. Porthcawl is specifically identified as a 'coastal resort' with a focus on more watersports, including a possible new marina.	Possible negative impact. However, the plan does not set policy.	No	Lower tiered plans that implement this policy need to be identified for possible in-combination impacts. The LDP is one of these plans.

Environment Agency – Catchment Flood Management Plans	<p>Developed with the aims of:</p> <ul style="list-style-type: none"> • Understanding the factors that contribute to the flood risk within the catchment, such as land use • Recommending the best ways to manage the flood risk within the catchment over the next 50-100 years. 	Neutral	No	These plans will be subject to HRA and will need to take into account relationship with the LDP.
One Wales: Connective the Nation, The Wales Transport Strategy	The goal is to promote sustainable transport networks in Wales. The strategy looks at ways that connectivity can be improved in Wales, moving away from a focus on car travel. However, the programme does include some reliance on road improvements as well as air travel.	Minor positive	No	The strategy informs the regional transport strategy and objectives of reducing car travel and therefore helping to protect air quality.
Trunk Road Programme (rolling)	This programmes sets out the new road and improvement schemes for Wales of strategic importance. There are several schemes in south Wales, although none in Bridgend County Borough.	Negative	No	These schemes are likely to contribute to poor air quality in the area. However, none of these schemes will directly result in an increase in traffic close to the three SAC sites.
REGIONAL				
South West Wales Regional Waste Plan (1st Review), August 2008	The plan aims to provide a policy framework for delivering waste management facilities to help ensure the more sustainable use of waste. It sets the framework for delivering waste management sites for each local authority in the area, providing areas of search for open air and in-building facilities.	Neutral	No	The plan will be implemented through the LDP. Taking a regional view on the location of this type of site will help reduce inequitable impacts on any one area. The plan is clear on the need for HRA where required for individual sites.
South East Wales Transport Alliance Regional Transport Plan, November 2009	The strategic transport plan for south east Wales is prepared jointly by the ten local authorities of the region. The Sewta Regional Transport Plan considers the strategic transport framework, and implementation programme and actions for a five year programme of transport improvements and a monitoring and review	Positive and negative	Yes	There is the opportunity for the new transport schemes set out in the Sewta plan to encourage car travel. This may have an adverse impact on the SAC sites that are vulnerable to poor air quality, primarily Blackmill Woodlands. However, the strategy also seeks to reduce car travel and

	<p>mechanism. The transport objectives for the Sewta are:</p> <ul style="list-style-type: none"> • To improve access for all to services, facilities and employment, particularly by walking, cycling and public transport. • To increase the proportions of trips undertaken by walking, cycling and public transport. • To minimise demand on the transport system. • To develop an efficient, safe and reliable transport system, with improved transport links between the 14 key settlements in South East Wales, and between South East Wales and to the rest of Wales, the UK and Europe. • To provide a transport system that encourages healthy and active lifestyles. • To reduce significantly the emission of greenhouse gases and the impact of the transport system on local communities. • To ensure developments are accessible by sustainable transport and to make sustainable transport and travel planning an integral component of regeneration schemes. • To make better use of the existing transport system. 			encourage more sustainable transport, this objective has the potential to reduce adverse impacts.
Lavernock Point to St Ann's Head Shoreline Management Plan (SMP2) (draft 2010)	<p>The plan sets out the planned approach to flood/sea defences along the south Wales coast from Lavernock Point to St Ann's Head. This includes nine stretches in and adjacent to Bridgend County Borough coast.</p> <p>The Plan sets out the management policy for the immediate, medium and long-term. This is either:</p>	None	No	An HRA has been prepared for the Plan. This identified that the policy to initially HTL at Newton may disrupt sediment flow affecting the eastward sediment transport to Merthyr Mawr, with possible significant effects. However, movement to NAI in the longer periods would allow natural coastal evolution to return.

	<ul style="list-style-type: none"> • 'NAI' (no active intervention), meaning no investment in coastal defences or operations; • 'MR' (managed realignment) allows the shoreline to move backwards with management to control or limit movement (such as reducing erosion or building new defences on the landward side of the original defences) • 'HTL' (hold the line) This policy means that existing defences are maintained and replaced (if required) along their current alignment. Typically this will result in an increased risk of coastal flooding due to future sea level rise. • 'ATL' (advance the line) New defences are built seaward of the original defences, in order to create new land. This policy is restricted to places where significant land reclamation is considered. 			<p>MR from Sker Point to Afon Cynfig (Kenfig and Margam Burrows) would encourage roll back of dunes and allow stabilisation of the system to create grey dunes. Management would encourage humid dune slacks to form. The HTL management at Port Talbot steelworks would result in increased inundation in the northern area of Kenfig, with a beneficial impact.</p> <p>The stretch at Port Talbot Steel Works Due to the beach narrowing HTL at this unit would encourage some flooding of the dune system. Through the management provided within the Sker Point to Afon Cynfig unit would result in the creation of humid dune slacks.</p> <p>Any development directly through the LDP that would be contrary of change the planned shoreline policy options may have an in-combination impact. Compatibility between this plan and the LDP is essential.</p>
Draft Water Resources Management Plan – Main Report (Dŵr Cymru Welsh Water March 2008)	<p>This plan details Welsh Water's strategy for managing water resources across Wales over the next 25 years. The purpose is to ensure that there is Security of Supply to customers and how this will be achieved through managing the resource and making investments (5-year timeframe).</p> <p>The resource map for Tywi Conjunctive Use System (covering Bridgend County Borough)</p>	?	?	<p>NB This plan was prepared in advance of the Environment Agency Wales issues sustainability reductions under the Habitats Directive. This may impact on the findings of the Management Plan HRA that identifies 'no significant effects'.</p>

	shows that 'Water Available for Use' (WAFU) is in excess of demand projected for the next 25 years. WAFU is about 35-40MI/day above demand.			
National Environment Programme for PR09 (Environment Agency)	<p>A key component of a periodic review is the National Environment Programme (NEP). The NEP is a list of environmental improvement schemes that ensure that water companies meet European and national targets related to water.</p> <p>Environment Agency produce the NEP after consultation with the water industry and a number of other organisations. Companies incorporate these requirements into their proposed business plans, which inform Ofwat's decision on prices.</p> <p>The plan follows on from a review of Environment Agency consents and water companies water resource plans.</p> <p>For the Welsh Water areas the Environment Agency identifies 7 improvement actions relating to 'non supply demand' under the Habitats Directive. However, these do not relate to supply in Bridgend County Borough.</p>	Positive	No	For Welsh Water the HRA review of consents only looked at Kenfig SAC, identifying that no significant harm was occurring. However, the Environment Agency do put forward several measures for Welsh Water to take to protect the environment. None of these will impact on the three SAC sites for this study.
Final Business Plan 2010-2015 Part A The Company Strategy (Welsh Water 20??)	<p>This sets out the goals for Welsh Water over the next five years. This take into account maintaining their services whilst ensuring they remain affordable and protecting the environment. The plan includes a £1,356m investment programme. The plan covers water supply and well as sewage and waste water treatment.</p> <p>In the Bridgend County Borough plans to</p>	Positive	No	The impacts of this plan are likely to be positive as they take into account the Environment Agency recommendations for environmental protection, including of habitats.

	improve the environment include one of the pilot areas for improved surface water management. This will include rainwater harvesting, bio-vegetative treatment, flow monitoring and use of permeable paving.			
Turning Heads – A strategy for the Heads of the Valleys 2020 (June 2006)	<p>The strategy sets the shared vision for the area by 2020 and actions for achieving this. The strategy aims for a 'balanced community' approach to provide a mix of housing, retail, tourism and leisure, high quality public services and opportunities for work. It does not allocate sites or set policy.</p> <p>The strategy does not cover Bridgend and focuses on the valley communities to the east of the County Borough.</p>	Negative	No	<p>The strategy encourages growth in the Heads of the Valleys. There is the potential that this is likely increase car travel, due to relative difficulties of access, and therefore potential for adverse air quality impacts on protected sites. However, the valley communities targeted are not on direct road links to the Bridgend County Borough area.</p> <p>More development may also mean greater water use with impact on European sites dependent on a constant water supply.</p>
Valleys Regional Park Action Plan 2008-2013 / Valleys Regional Park Business Plan (Feb 2009)	<p>This is a bid to provide a publically funded Regional Park to raise the profile of the area as a visitor destination and a prime location to live and work because the quality of the environment. IT will include investment in visitor centres and heritage facilities, new walking and cycling links, investment in visitor guides, events, removing blight.</p> <p>The park will cover a wide area of south Wales, from north of Cardiff to Swansea, including Bridgend.</p>	Positive and Negative	No	<p>The strategy is specifically to improve the natural environment as well as help people appreciate their local countryside and heritage.</p> <p>The majority of schemes should have a benefit to protected sites. However, implementation will need to ensure it does not encourage overuse of sensitive areas by visitors, particularly those that are sensitive to recreation pressure. There will need to be some commitment to integrated management of the tourism resources with neighbouring authorities to help ensure potential</p>

				adverse impacts are all mitigated.
DEVELOPMENT PLANS OF NEIGHBOURING LOCAL AUTHORITIES				
Neath Port Talbot Unitary Development Plan (UDP), (adopted 2008)	<p>Development proposals in this area that have the potential for in-combination impacts include:</p> <ul style="list-style-type: none"> • The intensification of use at the Port Talbot Docks, aided by the construction of the Port Talbot Peripheral Distributor road. • Intensification of employment use at Kenfig Industrial Estate and M4 Junction 38 in Margam, in close proximity to Kenfig SAC (Kenfig Burrows) <p>New development in Neath Port Talbot may also have an impact on water availability and water quality.</p> <p>In addition, the continuing operation of the steel works has the potential for cumulative air quality impacts.</p> <p>Monitoring of air quality at SAC sites will be necessary to identify impacts.</p>	Negative	Yes	<p>These proposals may create more traffic on the M4 passing through Bridgend County Borough. Intensification of industrial use may also have an impact on air quality. This is likely to have adverse impacts on air quality. Therefore, there is the potential for air quality effects on the nearby Kenfig SAC (Kenfig Burrows) and other SAC in the area.</p> <p>Wales-wide and local strategies to reduce car use are ensure more freight is moved by rail and water may help reduce the impacts. The forthcoming LDP should include provisions for managing car use in the County Borough to help maintain or improve air quality. In addition, the LDP will need to ensure consents for new industrial activities would not result a harmful increase in air pollution, either individually or cumulatively.</p> <p>The potential for water quality and availability impacts will need to be controlled in a similar way as in Bridgend County Borough. Controls will need to include: ensuing all new development makes efficient use of water consent licensing and review by the Environment Agency Wales avoiding potentially polluting surface</p>

				water run-off from directly from new areas of hardstanding, including new roads.
Rhondda Cynon Taff County Borough LDP (currently post examination stage January 2011)	<p>The policies and proposals of this plan that have the greatest potential to have in-combination impacts are:</p> <ul style="list-style-type: none"> • The major development site to the east of Pencoed almost on the Bridgend County Borough boundary. This the former Llanilid Open Cast Coal site. Much of this site already has planning permission for a mix of uses, focusing on a film studio. However, there is an additional allocation of 1700 homes, retail, school, community facilities and public open space. • The large development site at Tonyrefail / Brynfolan for housing. The route from this village to central Bridgend is along the A4093 and A4061, the road that passes through the Blackmill Woodlands SAC. 	Negative	Yes	<p>The land allocations in Rhondda Cynon Taff are suitability distant from the SAC sites under review in this screening exercise so as not to have water quality or availability impacts, nor is direct disturbance likely. The most likely type of impact is a continued deterioration in air quality from increased travel. It is hoped that the mix of uses on these schemes will help reduce the overall travel demand they would otherwise create.</p> <p>Monitoring of air quality at SAC sites will be necessary to identify impacts. This may be particularly important at the Blackmill Woodland SAC site where air quality thresholds are already being breached.</p>
Vale of Glamorgan Local Development Plan (Preferred Strategy, 2007) Unitary Development Plan (Adopted, 2005)	<p>The LDP in for this Local Authority has only reached Draft Preferred Strategy due a delay in the plan preparation process. This version only pinpoints the settlements for development, none of these are close to the SAC sites being screened in this policy.</p> <p>The UDP for the area only runs to 2011 and therefore is rapidly becoming obsolete. However, it remains the development plan for the area.</p> <p>These two plans contains a number of strategic and other proposals that may have potential for in-combination impacts.</p>	Neutral	No	<p>The emerging LDP should be monitored for the potential for additional impacts arising that may have in-combination impacts.</p>

	However, the part of the Vale of Glamorgan that borders on Bridgend County Borough is very rural in character, meaning little development is likely to be take place in this area. The only proposal from the UDP that is identified in the area is a quarry extension to the north west of Lithalun Quarry is allocated for the further exaction of limestone. However, this is likely to have little impact on the SAC sites within Bridgend County Borough identified through screening.			
Bridgend County Borough Community Strategy 2005-2016	<p>The main vision in the community strategy is to:</p> <ul style="list-style-type: none"> • improve quality of life for all • protect and enhance the environment • increase prosperity • have safer communities • achieve a healthier County Borough • have a more inclusive County Borough 	Neutral	No	The Community Strategy does not set policy and must be delivered through other plans and strategies. There is the risk that ‘increasing prosperity’ and other parts of the vision to promote development that could have an impact on nature conservation sites. However, the desire also to protect and enhance the environment should avoid significant impacts.
Bridgend Sustainable Economic Regeneration Strategy (2003)	The approved strategy sets out the long term aims and objectives for the economic development of the County Borough in the form of a 10 – 15 year agenda. It is accompanied by a three year Action Plan. It focuses on an ‘ambitious and innovative’ vision for the County Borough providing fresh direction for inward investment within the context of the Wales Spatial Plan. It incorporates a ‘Sustainability Index’ against which projects and proposals are evaluated.	Neutral	No	The strategy contains no specific development schemes, although assumes the need for continued economic growth (implying additional land requirements). The aims of the strategy are translated into the LDP policies and allocations. Therefore, the economic regeneration strategy would have no additional in-combination impacts.
PROJECT OR SITE SPECIFIC PROJECTS				

Seven Bays Project Supplementary Planning Guidance (2007)	<p>Guidance for the mixed use redevelopment of The 7 Bays Project – Porthcawl Waterfront area. This is for a mainly derelict area of around 40 hectares to bring social, economic and environmental benefits to the wider area.</p> <p>The development plans are around a number of development areas, this includes:</p> <ul style="list-style-type: none"> • a revitalised harbour, new leisure and commercial uses including refurbishment of the Jennings Building and a new all weather leisure destination. • There will be a regeneration of the waterfront with new promenades, to include improved cycling and walking routes. • A new commercial core is planned to include a new food store and retail units. • New public open space and new green 'lung' • New defence works to protect new and existing homes and development • Improved traffic routes • New residential development at quite high densities (1350 units) • High quality design and urban layout. • Secured through section 106 contributions. <p>(NB Kenfig Burrows (Kenfig SAC) is part of the 'Seven Bays' but not part of the SPG)</p>			<p>The scale of development in the SPG is included in the LDP. Therefore, these impacts would not be additional. However, the SPG does set out provisions for better leisure offer in Porthcawl. This could encourage more visitors to the area, potentially putting more pressure on Merthyr Mawr Warrant (Kenfig SAC). However, the proposals may have the effect of making Porthcawl more attractive to visitors so more people stay within the town, reducing pressure on the SAC.</p> <p>The new sea defences are addressed in the <i>Lavernock Point to St Ann's Head Shoreline Management Plan (SMP2)</i> (draft 2010). The 'hold the line' strategy is identified in the Plan's HRA as having no impact on the Kenfig SAC.</p>
Mining projects	<p>Various proposals may come forward during the lifetime of the LDP for minerals exploitation eg possible new Margam deep mine.</p>	<p>Negative</p>	<p>Yes</p>	<p>New mining projects have the potential to have in-combination impacts with the LDP. National and LDP policies will seek to protect Natura 2000 sites from harm. However, it will be necessary to review proposals on a site-by-site basis for indirect impacts, including impacts through cumulative harm.</p>

				Risks may come from changes in the water table, water quality change and a deterioration in air quality.
Kenfig SAC (2008), Cefn Cribwr (2008) and Blackmill Woodlands (2008) Core Management Plan	These plans set out the management actions to be implemented to help bring the sites into favourable condition, meeting conservation objectives. The plans include indicators and targets to demonstrate change. Management measures vary for each site, but range from site specific issues such as grazing, to the possible need for further study to avoid impact relating to water availability, water quality etc.	Positive	Yes	Potential for in-combination significant positive impacts on the SAC sites.

Appendix 9

Screening of Natura 2000 Sites

Review of SAC and SPA sites to assess if the Bridgend LDP has the potential to adversely impact on designated sites.

Inside the County Borough:

- Blackmill Woodlands (SAC)
- Cefn Cribwr Grasslands (SAC)
- Kenfig (SAC)

Outside the County Borough boundaries

- Dunraven Bay – SAC (3.52km)
- Blaen Cynon – SAC (10.4km)
- Crymlyn Bog / Cors Crymlyn – SAC/Ramsar (11.6km)
- Coedydd Nedd a Mellte – SAC (11.6km)
- Cardiff Beech Woods – SAC (12.32km)
- Cwm Cadlan – SAC (13.7km)
- River Wye – SAC (~30km) (Need to consider raised by CCW comment)
- River Usk – SAC (~55km) (Need to consider raised by CCW comment)

Conservation objectives	Vulnerabilities	Relationship with development in Bridgend County directed by the LDP
Blackmill Woodlands (SAC) Conservation Objective for Feature 1: Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles		
At least 90% of the site will be covered by semi-natural broadleaved woodland and be in favourable status	<ul style="list-style-type: none"> • Grazing and air pollution • Direct disturbance 	<ul style="list-style-type: none"> • Increased road travel as a result of new development in Bridgend County may adversely impact on the site. • The site is within Bridgend County therefore the LDP will directly control development in this area. <p>Further screening necessary.</p>
Cefn Cribwr Grasslands (SAC) Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinia caerulea</i>) Marsh fritillary butterfly <i>Euphydryas</i> (<i>Eurodryas</i> , <i>Hypodryas</i>) <i>aurinia</i>		
The site should be in favourable condition. Including 50%-55% as characteristic Molinia marshy grassland. There will also be appropriate assessment sustainable population of Marsh fritillary.	<ul style="list-style-type: none"> • Grazing • Burning • Ecological regime • Off-site pollution • Owner/occupier objectives • Weather conditions 	<ul style="list-style-type: none"> • The site is within Bridgend County therefore the LDP will directly control development in this area. • Direct and indirect disturbance from quarrying. <p>Further screening necessary.</p>

	<ul style="list-style-type: none"> • Parasites • Direct disturbance 	
Kenfig (SAC) Fixed dunes with herbaceous vegetation (`grey dunes`)* Priority feature <i>Dunes with Salix repens ssp. argentea (Salicion arenariae)</i> Humid dune slacks		
Favourable condition status. Including Salix throughout the dune slacks and natural succession. Vegetated and stabilised dunes at later successional stages. Favourable condition slacks and ponds and saltmeadows. Populations of fen orchid and petalwort.	<ul style="list-style-type: none"> • Changes to the hydrological regime. • Poor water quality • Possible air quality impacts • Impacts from recreation. • Changing grazing levels and scrub development. • Fishery. 	<ul style="list-style-type: none"> • Water use in Bridgend could impact on the water regime on-site. • Water quality impacts from development. • Recreational pressure causing disturbance. • Air quality from road transport. Further screening necessary.
Dunraven Bay (SAC) – 3.2km outside boundary Cliff face supporting Shore dock <i>Rumex rupestris</i>		
Favourable condition supporting 10 or more mature plants that are viable in the long-term.	<ul style="list-style-type: none"> • Scrub management • Hydrological regime. 	<ul style="list-style-type: none"> • No direct disturbance impacts of development on site as it is outside the LDP area. • There is the slight chance water availability on the site may be impact by water use in Bridgend County, although unlikely. Further screening necessary.
Blaen Cynon – SAC (10.4km) Marsh fritillary butterfly <i>Euphydryas (Eurodryas, Hypodryas) aurinia</i>		
Favourable conservation status. The site should help support a metapopulation of the butterfly, requiring a total of 50ha of habitat (not necessary all on-site)	<ul style="list-style-type: none"> • Scrub encroachment • Grazing • Inappropriate tree planting • Eutrophication • Reduced air quality • Parasites • Weather conditions • Management of surrounding habitats • Owner/occupier objectives • Direct disturbance 	<ul style="list-style-type: none"> • No direct disturbance impacts of development on site as it is outside the LDP area. Distance from County boundary also means development within the County is unlikely to impact on habitat to support metapopulation. • Air quality impacts from traffic on A465 are possible. However, the change in air quality attributable to new development in Bridgend County will be small as it not near the County's population centres. Therefore, impacts cannot be identified. • Water quality impacts from new development in Bridgend County unlikely as the site is

		upstream from the County. Screened out for further investigation.
Crymlyn Bog / Cors Crymlyn – SAC/Ramsar (11.6km) Transition mires and quaking bogs Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> * Priority feature Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)		
Favourable conditions status. Including 15ha of calcareous fen. 12ha of transition mire. 8ha Alluvial forest. Little scrub invasion.	<ul style="list-style-type: none"> • Water quality and water quantity changes • Management/grazing levels • Alien plant species • Atmospheric pollution 	<ul style="list-style-type: none"> • No direct disturbance impacts of development on site as it is outside the LDP area. • Air quality impacts are possible. However, the change in air quality attributable to new development in Bridgend County will be limited, with most impact from being located on the urban edge of Swansea. • Water quality impacts from new development in Bridgend County unlikely as the site is upstream from the County. Screened out for further investigation.
Coedydd Nedd a Mellte – SAC (11.6km) Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles Tilio-Acerion forests of slopes, screes and ravines		
Favourable conservation status. At least 18ha of upland ash woodland. 175ha of sessile oak woodland	<ul style="list-style-type: none"> • Grazing • Invasion by non-native species • Woodland management • Maintenance of surrounding woodlands (outside designated area) • Public access management • Air pollution • Fire risk 	<ul style="list-style-type: none"> • No direct disturbance impacts of development on site as it is outside the LDP area. • Air quality impacts from traffic on A465 are possible. However, the change in air quality attributable to new development in Bridgend County will be small as it not near the County's population centres. Therefore, impacts cannot be identified. • Recreation pressures caused by new development in Bridgend County. However, impact of Bridgend County's residents will not be identifiable, with people travelling to the area from a wide area. Recreational pressure and access policies will be needed to manage this impact.

		Screened out for further investigation.
Cardiff Beech Woods – SAC (12.32km) <i>Asperulo-Fagetum</i> beech forests <i>Tilio-Acerion</i> forests of slopes, screes and ravines		
Favourable conservation status. 85% will continue to be covered by semi-natural broadleaved woodland, 95% of which should be locally native species.	<ul style="list-style-type: none"> • Maintenance of surround woodlands (non-designated areas) • Manage public access • Atmospheric pollution • Recreational pressure • Mineral extraction and related activities • Direct impact from development • Commercial forestry • Invasion by non-native species 	<ul style="list-style-type: none"> • No direct disturbance impacts of development on site as it is outside the LDP area. • Air quality impacts from traffic are possible. However, the change in air quality attributable to new development in Bridgend County will be small as it not near the County's population centres, and much near major sources of pollution such as M4 and Cardiff. Therefore, impacts cannot be identified. • Recreation pressures caused by new development in Bridgend County. However, impact of Bridgend County's residents will not be identifiable, with people travelling to the area from a wide area. Recreational pressure and access policies will be needed to manage this impact. Screened out for further investigation.
Cwm Cadlan – SAC (13.7km) Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) Alkaline fens		
Favourable conservation status. This will have 26ha of fen meadow in 42ha of marshy grassland. Alkaline fen will have 11ha or more.	<ul style="list-style-type: none"> • Inappropriate grazing • Scrub encroachment • Changes to hydrological control • Air quality • Eutrophication 	<ul style="list-style-type: none"> • Air quality impacts caused by proximity to Penderyn Quarry. Air quality impacts related to development in Bridgend County are likely to be minimal in comparison. • Water quality impacts from new development in Bridgend County unlikely as the site is upstream from the County. Screened out for further investigation.
River Usk – SAC (~30km) River containing SAC features: Sea lamprey River lamprey Brook lamprey Twaite shad		

Allis shad Atlantic salmon Bullhead European otter Rivers with floating vegetation often dominated by water-crowfoot		
<p>There are multiple conservation objectives. These include:</p> <ul style="list-style-type: none"> • Habitats support near-natural population levels for each feature • Stable and increasing populations for each feature • Flow regime, water quality and habitat maintained or restored to near-natural state • Breeding, spawning and nursery sites of protected species maintained • Flows, water quality, substrate quality at fish spawning and nursery areas will not be depleted by abstraction, discharges, engineering, gravel extraction • River profile unmodified • SSSI features in favourable features • Artificial factors eg weirs, bridges, modified to allow passage of each species • Natural features should not be modified that control location of protected species • Flows maintained for migration • Flow objectives for assessment points in the Usk Catchment Abstraction Management Strategy will be agreed with EAW/CCW • Nutrient levels, water quality parameters agreed between EA and CCW for WRD water bodies. • Vision for all features to 	<ul style="list-style-type: none"> • Changes to the water environment • Water quality • Water availability – large abstractions at Brecon canals and Prioress Mill public water supply of particular concern • Physical structure of the water body • Changes to natural features in the water body • Existing or new artificial features along the water body – notable Crickhowell Bridge • Possibility of acoustic (ie noise/vibration) and sediment/chemical barriers for construction. 	<ul style="list-style-type: none"> • No part of the river flows through Bridgend County Borough. • Water abstraction from the river to supply Bridgend County Borough has the potential to have an impact. However, the County Borough is a different Water Resource Zone than the Usk (Tywi CU Area and SEWCUS respectively). Both zones are shown to be in surplus. • There are currently no surface water abstraction sites in Bridgend County Borough, but two groundwater abstractions south east of Bridgend (HRA of the WRM November 2008) • Ongoing work by EAW and Welsh Water will be needed to determine the impacts on water abstraction on the River Usk. This includes flow targets arising from the Review of Consents. • Regional work on the impact on new demand on the River Wey and Usk may be needed. However, development at Bridgend will only make a small component of demand. At this stage water use in Bridgend County Borough cannot be shown to have impacts. However, this may need to be kept under review through monitoring and future regional working. <p>Screened out for further investigation. However, if future work by EAW or Welsh Water reveals likelihood of impacts the situation may need to be reviewed.</p>

have a favourable conservation status.		
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<p>River Wye – SAC (~54km) River containing SAC features: Sea lamprey River lamprey Brook lamprey Twaite shad Allis shad Atlantic salmon Bullhead European otter White-clawed crayfish Transition mires and quaking bogs Water course of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation.</p>		
<p>There are multiple conservation objectives. These include:</p> <ul style="list-style-type: none"> • Habitats support near-natural population levels for each feature • Stable and increasing populations for each feature • Flow regime, water quality and habitat maintained or restored to near-natural state • Breeding, spawning and nursery sites of protected species maintained • Flows, water quality, substrate quality at fish spawning and nursery areas will not be depleted by abstraction, discharges, engineering, gravel extraction • River profile unmodified • SSSI features in favourable features • Artificial factors eg weirs, bridges, modified to allow passage of each species • Natural features should not be modified that control location of protected species • Flows maintained for migration 	<ul style="list-style-type: none"> • Changes to the water environment • Water quality • Water availability – affected by abstraction and regulation releases from the Elan Valley reservoirs. • Physical structure of the water body • Changes to natural features in the water body • Existing or new artificial features along the water body. 	<ul style="list-style-type: none"> • No part of the river flows through Bridgend County Borough. • Water abstraction from the river to supply Bridgend County Borough has the potential to have an impact. However, the County Borough is a different Water Resource Zone than the Wye (Tywi CU Area and SEWCUS respectively). Both zones are shown to be in surplus. • There are currently no surface water abstraction sites in Bridgend County Borough, but two groundwater abstractions south east of Bridgend (HRA of the WRM November 2008) • Ongoing work by EAW and Welsh Water will be needed to determine the impacts on water abstraction on the River Usk. This includes flow targets arising from the Review of Consents. • Regional work on the impact on new demand on the River Wye and Usk may be needed. However, development at Bridgend will only make a small component of demand. At this stage water use in Bridgend County Borough

<ul style="list-style-type: none"> • Flow objectives for assessment points in the Wye Catchment Abstraction Management Strategy will be agreed with EAW/CCW • Nutrient levels, water quality parameters agreed between EA and CCW for WRD water bodies • Aim is for a favourable conservation status for all features, 		<p>cannot be shown to have impacts. However, this may need to be kept under review through monitoring and future regional working.</p> <p>Screened out for further investigation. However, if future work by EAW or Welsh Water reveals likelihood of impacts the situation may need to be reviewed.</p>
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Appendix 10
CCW Response to draft of the Habitats Regulations Assessment of
the Bridgend Local Development Plan - Deposit Proposals



Cyngor Cefn Gwlad Cymru Countryside Council for Wales

CADEIRYDD/CHAIRMAN: MORGAN PARRY

Anfonwch eich ateb at/Please reply to:

Kerry Rogers

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PRIF WEITHREDWR/CHIEF EXECUTIVE: ROGER THOMAS

Cyngor Cefn Gwlad Cymru / Countryside Council for Wales

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Cicely Postan
Associate - Sustainability
Bakers Associates
The Crescent Centre
Temple Back
Bristol
BS1 6EZ

Our Ref: 09/98041

28th March 2011

Dear Ms Postan

BRIDGEND COUNTY BOROUGH COUNCIL DEPOSIT LOCAL DEVELOPMENT PLAN (LDP) DRAFT HABITATS REGULATIONS APPRAISAL (HRA)

Thank you for giving the Countryside Council for Wales (CCW) the opportunity to comment on the DRAFT Habitats Regulations Assessment (HRA) of the Bridgend County Borough Council Deposit Local Development Plan. Our comments are made in the context of our responsibilities under the Conservation of Habitats and Species Regulations 2010 and as advisers to the Welsh Assembly Government on the natural heritage of Wales and its coastal waters. Our detailed comments are included in Annex 1 and our general comments follow below.

CCW welcomes this comprehensive assessment of the likely significant effects of the Deposit LDP and our detailed comments should not be taken as criticism, but mainly as points of clarification and minor improvement. We feel the assessment process has been suitably precautionary, has identified the potentially significant impacts that could result from the Bridgend LDP, alone and in combination with other plans and projects, and that the recommended avoidance, cancellation and reduction measures (subject to our detailed comments), should adequately mitigate for the possible likely significant effects when they are incorporated into the Plan itself. We also welcome the efforts made to incorporate our previous comments into the assessment.



Gofalu am natur Cymru - ar y tir ac yn y môr • Caring for our natural heritage - on land and in the sea

Prif Swyddfa/Headquarters

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If you have any queries in relation to this response or wish to discuss any of the comments in further detail, then please do not hesitate to contact Kerry Rogers or Scott Hand in the first instance.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Sue Mabberley', written in a cursive style.

Sue Mabberley
Regional Partnerships Manager
South and East Region

cc Nick Lloyd, Bridgend CBC

Annex 1. Comments on Bridgend CBC LDP draft HRA January 2011

Introduction

1.1 Please note that 'The Conservation (Natural Habitats, &c) Regulations' came into force in 1994, but were reissued in 2010 taking account of a number of significant changes since then, including the 2007 amendments. The current regulations are the "Conservation of Habitats and Species Regulations 2010" though, for convenience, they are still referred to as 'The Habitats Regulations'.

2 The HRA Process

2.1 Note that TAN 5 Nature Conservation and Planning is now published and this section should refer to Annex 6 "The appraisal of development plans in Wales under the provisions of the Habitats Regulations".

Table 2.1 We welcome the clarification of the HRA process as it will be applied to the Bridgend LDP but it is worth remembering, as set out in the "Draft guidance for plan making authorities in Wales", that it is also acceptable for avoidance, cancellation and reduction measures to be applied as part of the screening process to remove likely significant effects thereby potentially avoiding the need to progress to more detailed appropriate assessment.

2.9 CCW welcomes the engagement of Environment Agency Wales in the HRA process, particularly as there is the potential for several water related impacts on a number of the European and international sites identified, however, it should be noted that CCW is the appropriate nature conservation body in Wales in relation to meeting the requirements of Regulation 102(2).

2.13 CCW welcomes the intention to consider other plans and projects but we refer you to our previous response on the draft HRA Screening (March 2009) and suggestions for other potential plans that you should consider.

3 Identification of Natura 2000 sites.

While we appreciate that Bridgend is 'downstream' of many of the European and international sites listed, we feel that potential impacts from the development proposed in this Plan on water resources should have been considered further as part of this screening process. It is not clear in this report where Bridgend obtains its water resources from, therefore, we would urge you to engage in early consultation with EAW and water companies concerning site allocations to ensure development is located in Water Resource Zones where there is surplus water after any sustainability reductions required by the Review of Consents process have been implemented. Where there is the potential for likely significant effects on international and European sites, such as the River Usk or River Wye, then this should be assessed.

Where there is any doubt, the HRA should ensure that the LDP contains suitable caveats and conditions to ensure that any development must be conditional on assured water supplies from sources that would not have an adverse effect on the international or European sites.

Finally, detailed assessment should be carried out at scheme implementation level and you should consider including a policy allowing for lower housing allocations where it is the only effective mitigation to ensure no adverse effect on the integrity of the European and international sites.

3.3 We welcome the additional detail given in appendix 9 on why the six sites have been screened out of the assessment and we largely agree with the conclusions. A minor point is that several of the sites identified are susceptible to air quality impacts and, although we accept there are unlikely to be any direct impacts from development within Bridgend on these sites, there is the potential for the development proposed in the LDP to increase atmospheric loadings of certain atmospheric pollutants, particularly oxides of nitrogen (NO_x), and therefore contribute to diffuse atmospheric inputs on these sites. While it is difficult, if not impossible, to show a direct causal relationship between the Plan and critical load exceedences at these sites, it should be possible to show that by including suitable policies to control and minimise negative air quality impacts within the Plan (for example, those relating to promoting sustainable transport, air quality management etc.), Bridgend will be effectively mitigating for these potential impacts.

3.5 We note the 4 sites taken forward for further assessment.

4 Natura 2000 site information.

4.1 We note the reference to the 'Habitat Regulations Assessment (HRA): a toolkit to support HRA screening and appropriate assessment' (South East Wales Strategic Planning Group, 2008). We have recently commented on an updated version of this guidance but emphasise that the conservation objectives within the relevant site Core Management Plans should be the first point of reference when determining likely significant effects.

4.2 Kenfig SAC – It is correct to note that the Fixed dunes with herbaceous vegetation ('grey dunes') feature is a priority feature on the Kenfig SAC as defined by the Habitats Directive, however, it is not "the" priority feature of the site as all the qualifying features are regarded equally in this respect.

4.6 We welcome the acknowledgement of the role of the Core Management Plans in setting out conservation objectives and performance indicators.

5 Bridgend LDP.

5.3 We welcome the intention to screen both policies and allocations for potential impacts.

5.5 We note the uncertainty in relation to groundwater sources identified in appendices 4 and 5 but emphasise that in such instances the precautionary principle should be applied if this uncertainty leads to the possibility for likely significant effects to result due to proposals within the Plan. However, we welcome the acknowledgement of both habitat fragmentation and coastal management as potential issues for the LDP HRA

6 Screening of the Deposit LDP impacts

Dunraven Bay SAC.

6.6 – 6.9; In our previous comments on the Preferred Strategy HRA screening, we expressed concern that insufficient evidence had been given for why Dunraven Bay SAC had been screened out of the assessment. We, welcome therefore, the additional information contained in this version and largely agree with the screening conclusions that The Bridgend LDP is unlikely to lead to increased direct impacts (such as from recreation) and that although there is uncertainty over the source of groundwater flows on the site, it is unlikely that these will be affected by proposals within the Bridgend LDP and that, even if this was the case, water protection measures within the Plan should ensure that any effects would not be significant. It should be noted however that monitoring on the site, as set out in 6.9, should not be considered as a mitigation measure as by the time an adverse effect was identified it may be too late to take effective action. You should, therefore, consider amending this section to indicate that water flows, abstractions, and the implementation of any policies relating to the security of groundwater resources will be monitored to ensure the Plan is performing as expected and, if it is not, there will be opportunities to amend the Plan before any adverse effects manifest themselves at the site.

Blackmill Woodlands SAC.

6.11 - 6.14 We note the identification of potential air quality impacts on the features of this site, particularly those that may result from an increase in traffic movements along the main A4061. We also note that there are a number of policies within the plan with the aim of promoting more sustainable travel and should, therefore, help to mitigate for these potential effects. The assessment should clearly identify and reference these policies and, ideally, include some reference to monitoring (for example, traffic usage to ensure that the increased development in this area does not lead to increased levels of road use which could in turn lead to a deterioration in air quality on the site). Reference should also be made to the criteria used in the Department for Transport Design Manual for Roads and Bridges and the South East Wales Regional Transport Plan (SEWTA) particularly in relation to potential ‘in combination’ effects.

6.15 While we appreciate that it not possible to determine at a Plan level the exact nature of the industrial/economic development proposed at the sites identified, and, therefore, the potential air quality impacts, we fully support a precautionary approach being taken with both the general economic development policies (SP1, PLA2, SP3, SP7, etc.) and specific site allocations. This should make it clear that development will be subject to further HRA if required and that developments which can not be shown to have no adverse effects would not be supported by this Plan.

6.16 While we largely accept that the risk from access and development policies (relating to the proposed mountain bike hub) leading to increased visitor pressure is not great, we welcome the inclusion of the precautionary caveats requiring the development of Visitor Management Plans (as described in appendix 6) as a precautionary measure.

6.20 While we appreciate that outstanding consented development will either have already been assessed under the Habitats Regulations or will be subject to the Local Authority’s Review of Consents (RoC) process, it will still be necessary to assess any ‘in combination’ effects of these allocations if they are not yet fully implemented.

6.21 – 6.24 We note the allocations identified within the area of search. While we strongly recommend that assessments are based on impact/receiver/causal pathway analysis rather than fixed areas of search or ‘buffer zones’ around sites, given the nature of this Blackmill Woodlands SAC, we accept that a 2km zone is likely to be sufficiently precautionary (other than for potential air quality impacts from large process industry allocations).

6.26 – Air Quality; see comments on section 3.3, While we largely agree that there are several policies within the Plan that should help to ameliorate air quality impacts on the site these need to be clearly identified in this assessment as mitigation. In addition, it should also be made clear in this report and in the Plan itself that economic/industrial developments will need to undergo project level HRA if there are potential air quality implications for the sites and this should include both a consideration of cumulative impacts and ‘in combination’ effects. If such assessments can not ascertain that there will be no adverse effects, it should be made clear that progressing the development would not be in keeping with the LDP and such allocations will be reviewed at the appropriate time. This section should also consider appropriate monitoring to ensure that the Plan’s policies are performing as expected. This should not require any additional monitoring to that already proposed within the Plan to meet defined air quality objectives but it should be linked to the HRA so that any negative trends or failures can trigger further investigations or policy review if required.

6.27 – Recreational Disturbance; see comments on 6.16

6.28 – 6.31 conclusions; Subject to the comments above we largely agree with the assessment conclusions for Blackmill Woodlands SAC providing the mitigation measures identified are implemented within the Plan. It would be beneficial if these measures were clearly linked to policy/allocation changes within the Plan itself, though we accept that it should be possible to refine certain policies (such as SP4, EN5 or EN7) to deliver this function. It should be noted that this is not the same as repeating national policy, but ensures that the likely significant effects identified in this assessment are fully and clearly addressed by the Plan.

Kenfig SAC

6.32 - 6.42 We welcome this succinct summary of the main issues affecting the Kenfig SAC.
6.45 & 6.46 We note the policies identified as having the potential for adverse impacts on the Kenfig SAC.

6.47 While we appreciate that outstanding consented development will either have already been assessed under the Habitats Regulations or will be subject to the Local Authority’s Review of Consents (RoC) process, it will still be necessary to assess any ‘in combination’ effects of these allocations if they are not yet fully implemented.

6.48 – 6.55 This section and the corresponding element of appendix 6 provide a comprehensive assessment of the main potential impacts on the Kenfig site.

6.57 – 6.62 Water Quantity; While we do not disagree with the assessment conclusions in relation to water quantity, and we welcome the mitigation measures proposed to address the issues identified, particularly the water conservation proposals and additional monitoring proposed, however, we would strongly recommend additional caveats are included to ensure that future development does not impact on the site. While the latest draft of the Welsh Water/Dwr Cymru Water Resources Management Plan (WRMP) and the conclusions of the Environment Agency’s Review of Consents (RoC) indicate that this should not be an issue providing appropriate measures are taken, the Authority must still satisfy itself that any

amendments to consents, or likely future consenting regimes, are adequately taken into account by the LDP process, particularly in relation to proposed levels of growth. Where there is any doubt, this HRA should ensure that the LDP contains suitable policies, caveats and conditions to ensure that any development is conditional on assured and sustainable water supplies from sources that **would not** have an adverse effect on European sites. This may require consideration of alternative distributions and phasing of development to ensure that the Plan will not be proposing development of such a scale or in a location that will result in adverse effects on the Kenfig SAC. However, if adverse effects cannot be prevented through avoidance, then Bridgend would need to show how it might mitigate any potential impacts so that no adverse effect on the integrity of Kenfig SAC will occur (alone or in combination with other plans and projects). This may require policy wording similar to that set out in the EIP Report on the West Midlands RSS Phase 2, where the Inspector suggested that; in exceptional circumstances, actual housing allocations may need to be adjusted to fit the available resources. Finally, we note the potential impacts of nearby quarry dewatering operations on the site. This is a significant issue which has been under assessment for a considerable period of time as part of the Review of Mineral Permissions (RoMP) and Review of mineral conditions. Both these should be considered when assessing any minerals policies in the Borough particularly those that may relate to the group of quarries around Cornelly.

6.63 – 6.66 Water Quality; We welcome the mitigation measures identified to address any potential adverse effects identified in the assessment, particularly the recommendation that development should depend on sufficient water treatment capacity being available and the need for more detailed project level assessment.

6.67 – 6.71 Air Quality; (See also comments on 6.26). We particularly welcome the recommendation that any new industrial proposals in the vicinity of the site will need further project level HRA.

6.72 – 6.75 Recreational pressure and disturbance; We welcome and largely accept the mitigation measures identified, but suggest that Bridgend consider including a specific caveat to address the potential impacts of new leisure developments. Such a caveat may not be necessary providing that any nature conservation policies are sufficiently robust in terms of assessing the impacts of development on European and internationally protected sites.

6.76 Changes in coastal processes; We welcome the identification of any new developments which would involve the creation of new coastal defence works and the cross reference to the developing Shoreline Management Plan (SMP2). This plan also includes specific mitigation measures to address these potential impacts and it would be useful to cross reference these measures (if available) within this assessment and for the Plan itself to make the relationship with the SMP2 clear.

6.77 – 6.79 conclusions; Subject to the comments above we largely agree with the assessment conclusions for Kenfig SAC providing the mitigation measures identified are implemented within the Plan. It would be beneficial if these measures were clearly linked to policy/allocation changes within the Plan itself, though we accept that it should be possible to refine certain policies (such as SP4, EN5 or EN7 or policies relating to building infrastructure/sustainability) to deliver this function. It should be noted that this is not the same as repeating national policy, but ensures that the likely significant effects identified in this assessment are fully and clearly addressed by the Plan.

Cefn Cribwr Grasslands SAC

6.80 – 6.86 We welcome this succinct summary of the main issues affecting the Cefn Cribwr Grasslands SAC, particularly the recognition of the importance of the wider ‘meta-population’ area.

6.85 – 6.93 We note the policies identified as having the potential for adverse impacts on the Cefn Cribwr Grasslands SAC.

6.94 – Air quality; See comments on section 6.26.

6.95 – Direct land take. While we do not necessarily have any issues with minerals safeguarding as such, any policies or allocation within the Plan that could be interpreted as directing mining operations towards the SAC, or within the identified meta-population area (approximately 2km around the site) should be individually appraised.

6.96 – Supporting meta-populations; We strongly support this approach to assessing the site as the population of marsh fritillary butterflies which form the feature of the site are part of, and to an extent depend on, the larger meta-population. Therefore, as identified, it is important that the Plan does not propose development or activity within approximately 2km of the site which may impact on the site features. This could either be from development which could result in direct loss of suitable marshy grassland habitats or which undermines the connectivity between the core elements of the SAC and the wider mosaic of marshy grassland habitat. This needs to be acknowledged in some way in the Plan so that development that takes place in the 2km area is adequately assessed before it proceeds.

6.97 – 6.99 While we accept the levels of development (other than possible expansion of coal/mineral operations) are unlikely to impact on the conservation objectives for the site we welcome the precautionary approach taken and the recommendations that future applications will need to undergo more detailed HRA.

6.100 Water Quality; We welcome the mitigation measures identified to address any potential adverse effects identified in the assessment, particularly the recommendation that development should depend on sufficient water treatment capacity being available and the need for more detailed project level assessment.

6.101 – 6.103 conclusions; Subject to the comments above we largely agree with the assessment conclusions for Cefn Cribwr Grasslands SAC providing the mitigation measures identified are implemented within the Plan. It would be beneficial if these measures were clearly linked to policy/allocation changes within the Plan itself, though we accept that it should be possible to refine certain policies (such as SP4, EN5 or EN7 or policies relating to building infrastructure/sustainability) to deliver this function. It should be noted that this is not the same as repeating national policy, but ensures that the likely significant effects identified in this assessment are fully and clearly addressed by the Plan.

7 ‘In combination’ effects.

7.1 – 7.5 We note the methodology for assessing the potential ‘in combination’ effects of the Plan and the selection of Plans identified in appendix 8. We particularly welcome the assessment in relation to the relevant Shoreline Management Plan and Regional Transport Plan but would have expected some consideration of the Heads of the Valleys Strategy and at least some discussion of any proposed major development projects.

7.8 Tourism Plans; we welcome the acknowledgement of potential ‘in combination’ effects of the Bridgend LDP with various tourism plans and proposals. In this instance it would have been useful to have also considered plans relating to the Valleys Regional Park. Although the potential for impact of increased tourism on the three sites identified is slight, we would still expect some commitment to integrated management of the tourism resources with neighbouring authorities and national /regional groups (such as the police and off-road motor sport organisations or the British Horse Society etc.) to ensure that adverse effects are fully mitigated.

7.13 – 7.26 We note the analysis of potential ‘in combination’ effects with the neighbouring local plans. We largely agree with the conclusions that such effects are likely to be predominantly associated with water resources, air quality and recreational pressures and that, providing they are implemented within the LDP, the measures identified within this assessment (subject to the comments made above) should adequately mitigate for these potential ‘in combination’ effects.

8 Summary and conclusions

8.1 – 8.2 Providing the mitigation measures identified in the report, subject to the comments made above, are incorporated into the LDP we agree with the assessment conclusions. We particularly support the recommendation made in 8.6 and 8.7 to include specific reference to the requirements of the Habitats Regulations and the need for further project specific HRA where necessary..

Appendix 11
Policies of the LDP that may help in the protection of air and water quality

Air quality:

Implementing the following policies of the LDP will help in managing air quality impact in the County Borough, either by helping reduce car use or by controlling the type of development. This will help reduce the contribution development in the County Borough makes to air pollution impacts on Natura 2000 sites.

SP1: Regeneration-led development

This policy helps promote more self-contained urban areas, improving access to local jobs and services and reducing the need to travel.

PLA3: Regeneration and mixed use development schemes

(also part REG1: Employment sites; COM1: Residential allocations in the Strategic Regeneration Growth Areas)

The allocations under this policy are for new mixed use development. Development of these sites should help reduce car travel by providing multiple uses in a single location, as well as local services and jobs near where people live.

SP2: Design and Sustainable Place Making

The policy contains several criteria that relate to reducing car travel and improving air quality. These are that new development should:

- Provide a mix of uses
- Have good walking, cycling and public transport connections
- Avoid or minimise air pollution

PLA4: Climate change and peak oil

The policy includes reducing contribution of development to climate change. This includes more efficient use of energy, therefore helping to reduce reliance on polluting fossil fuels. The policy also requires development to have a location and layout which reflects sustainable transport and the overall need to travel.

SP3: Strategic Transport Planning Principles

The policy aims to improve walking and cycling provision and improved public transport. Policy criteria include:

- Improving public transport links between settlements
- Favouring development near public transport
- Reducing congestion and the need to travel and reliance on the private car.

PLA7: Transport proposals

These proposals include fourteen schemes for walking and cycling improvements, three for rail and bus improvements and two for better public transport interchanges.

PLA10: Safeguarding of disused railway infrastructure

This policy protects these routes from non-transport uses, preserving their future potential for walking or public transport.

ENV7: Natural resource protection and public health

The policy requires that development will not cause or exacerbate existing air pollution.

ENV11: Mineral development

New mineral development will be permitted where measure are taken to reduce the impact of traffic from the site.

SP7: Waste development**ENV16: Commercial and industrial waste**

The provision of local waste treatment facilities will reduce the distance waste is transported.

SP8: Renewable energy**ENV17: Renewable energy and low/zero carbon technology****ENV18: Renewable energy developments**

These policies promotes the more efficient use of energy in new development as well development of renewable and low carbon energy generation. This will help reduce the overall energy demand from new development and lower the quantity of energy generated from more polluting fossil fuel sources.

SP10: Retail and commercial hierarchy

The policy supports existing shopping areas, including local service centres. Out-of-town retailing will only be permitted subject to certain criteria being met. This may help retain local services and the concentration of shopping in accessible locations, helping to reduce car travel.

REG5: Local retailing and commercial development

This policy helps protect existing local retail as well as helping deliver new retail development in association with mixed use development. The policy should help provide accessible local shops helping to reduce car travel.

REG6: Primary shopping frontages**REG7: Non A1, A2 and A3 uses outside of Primary Shopping Areas****REG9: Retail and commercial development sites**

Helping to retain the quality of existing shopping areas may help reduce people's need to travel to out-of-town retail centres or out of the County Borough to meet their shopping needs. This may help reduce car travel.

REG12: New or extended tourist accommodation, facilities and attractions

The policy limits the development of these in the countryside, helping to avoid creating extra car travel.

SP14: Infrastructure

This policy sets out what matters may be required as part of planning agreements/obligations. The include improvements to walking and cycling routes and public transport.

Water resources – quality and supply:

Implementing the following policies of the LDP will help in managing impacts to water resources. This will help reduce the contribution development in the County Borough makes to water pollution and use of water resources.

SP2: Design and Sustainable Place Making

The policy contains criteria to make sure new development avoids or minimises water pollution. The policy also requires new development should incorporate appropriate arrangements for the disposal of foul sewerage and water.

PLA4: Climate change and peak oil

The policy requires development to use resources more efficiently and minimise water use and pollution. Policy criteria promote sustainable drainage systems where appropriate.

ENV7: Natural resource protection and public health

The policy requires that development will not cause or exacerbate existing water (including groundwater) pollution.

ENV11: Mineral development

New mineral development will not be permitted if it does not include measures to reduce and where possible avoid environmental damage or disturbance. Specific criteria include pollution or discharge to ground or surface water supply or drainage.

ENV14: Inert waste

The policy specifically states that disposals sites should show that arrangements have been made to prevent the pollution of surface or underground water.

Appendix 12
Responses to the Habitats Regulations Assessment Screening of the
Deposit LDP and schedule of changes for the March 2012 'revised version'

Countryside Council for Wales	
<p>Section 3 – Identification of Natura 2000 sites</p> <p>3.2 Welcome inclusion of River Usk SAC and River Wye SAC in relation to water quality. Kenfig and Cefn Cribwr full titles are Kenfig/Cynffig SAC and Glaswelltiroedd Cefn Cribwr/ Cefn Cribwr Grasslands SAC.</p> <p>3.4 Largely agree with the screening conclusions.</p> <p>3.5 There may be an ‘in combination’ effect from development in Bridgend on the River Wye and Usk SACs. Bridgend must satisfy itself, by confirming with Welsh Water Dwr Cymru or the Environment Agency that there sufficient resource available to supply the levels of growth proposed by the Plan. Alternatively Bridgend CBC should consider including suitably precautionary measures within the LDP to ensure that development does not lead to any adverse effects ‘in combination’ with other plans and projects. Such measures could include consideration of alternative distributions and phasing of development to ensure the Plan does not proposed development of such a scale or in a location that will result in adverse effects on the River Usk SAC or River Wye SAC (similar to that set out in section 6.5), or a clear recognition that development is conditional on sufficient environmental capacity being available. Policies EN7 (Natural Resource Protection and Public Health) or SP14 (Infrastructure) could both be used to this effect if appropriately worded or a caveat similar to that used in the relevant section of the assessment of Kenfig (6.65) could be used.</p> <p>3.6 Welcome consideration of diffuse air pollution on sites. The need to monitor air quality at these sites should be identified in the LDP monitoring strategy. This should be linked with monitoring for policies that hope to improve air quality by reducing travel.</p>	<p>Noted.</p> <p>Noted.</p> <p>Noted. The HRA will recommend a form of wording for the LDP to recognise the possible need to review the plan if water resources are shown not to be available in the SE Wales Conjunctive Use System (SEWCUS) and therefore may have an impact on the Wye and Usk Rivers SACs.</p> <p>Noted. The HRA will make recommendations for air quality indicator for vulnerable sites as part of LDP monitoring process.</p>

<p>Section 5 – Bridgend LDP</p> <p>5.6 Welcome the need to monitor groundwater due to uncertainty of sources. However, it must be emphasised that it is not appropriate to monitor whether adverse effects are occurring. The precautionary principle should be applied and monitoring should be used to ensure that measures in the Plan to address possible impacts on water quantity are performing as expected. If they are not, or new information comes to light which indicates that groundwater could be impacts by development proposed by the Plan, then the monitoring need to be able to identify what changes may be needed <u>before any adverse effects occur</u>. This can make use of data collected by CCW, the Environment Agency, Dwr Cymru Welsh Water etc. (as for Dunraven Bay) within the monitoring strategy. Any monitoring associated with policies such as EN7 (number of developments include water protection measures, grey water systems etc) should also be clearly linked to this element of the HRA.</p> <p>Welcome acknowledgement of both habitat fragmentation and coastal management as potential issues for the LDP HRA.</p>	<p>Noted. The HRA will recommend that monitoring of sites and water availability is used to prevent adverse impacts on the protected sites.</p> <p>Noted.</p>
<p>Section 6 – Screening of Deposit LDP Impacts</p> <p>6.10-6.15 <i>Dunraven Bay SAC</i>: Support the approach taken, particularly the need to monitor water use to take a precautionary approach to protecting the site.</p> <p>6.16 <i>Blackmill Woodlands SAC</i>: Support the approach, including reference to relevant documents, policies to improve air quality and monitoring. Also, support the need to be precautionary in future business uses on employment sites and the need for possible project specific HRA in the future.</p> <p>6.17 Largely access that risk from access and development policies of the mountain bike hub leading to increased visitor pressure is not great, we welcome the caveats in the HRA. Would suggest reference to appropriate bio-security measures to protect from spread of plant pathogens.</p>	<p>Noted.</p> <p>Noted.</p> <p>Noted. These elements of bio-security may need to be specifically part of site management plans, rather than as part of the LDP.</p>

6.19-6.20 The HRA notes policies where there could be effects. Wording should be included in the LDP or the policies that the LDP needs to be considered as a whole, with references to Planning Policy Wales and TAN5.	This is noted. However, as with all LDPs there is already the expectation that they must be considered as a whole and national policy takes precedence and must be complied with.
6.21 Committed development will need to be considered for 'in-combination' impacts when new applications are submitted.	Noted.
6.22-6.25 Accept the use of the buffer for the woodlands.	Noted.
6.26 Support the need for site specific HRA. This should be identified in site schedules for allocation.	For clarity it should be noted that site specific HRA may not be required and could be screened out, this will have to be determined on a site by site basis. The need to include this requirement in site schedules will be considered by the Bridgend CBC.
6.28 Support, see comments on 3.6.	Noted.
6.30 See comments on recreational disturbance on 6.17.	Noted see comments above.
6.33 Welcome these mitigation measures.	Noted.
6.34 Largely agree with the assessment for Blackmill Woodlands, subject to other comments. There is a need to refer to the mitigation measures within policies or in an overarching way.	Noted and the HRA recommends some revision of policy wording to ensure the findings of the HRA are taken into account.
<i>Kenfig SAC</i> 6.35-6.45 Welcome summary.	Noted.
6.46-6.49 Note policies with potential impact. This includes identification of potential water supply issues.	Noted.
6.50 & 6.59 Support use of existing permission in consideration of cumulative impacts.	Noted.
6.61-6.67 Water availability: Welcome the recognition that there may need to be additional measures to ensure that any increased water	It should be noted that the HRA contains suggestions for the LDP it is up to the local authority to take them forward. There is no guarantee

resource demands resulting from development proposed in the plan will not impact on any European site. Monitoring must take place to allow review before adverse impacts are identified. The need for on-going Review of Mineral Permissions (RoMP) and Review of Mineral Conditions relating to the Cornelly quarries should be recognised in relevant policies.	that growth levels will be amended if impacts are identified. Noted. Noted.
6.68-6.71 Water Quality: Welcome the mitigation measures identified. Particularly the need for sufficient water treatment capacity being available and detailed project level assessment.	Noted.
6.72-6.77 Air Quality: Welcome recommendation for further project HRA of industrial development near the site and policies to mitigate air quality impacts. Particular relevance to SP8(1) Heol-y-Splott in South Cornelly and SP8(3) – strategic waste sites, and also consider including ENV17(3) Penybont Treatment Works, as may be used for renewable energy. Monitoring should allow for impacts to be mitigated for adverse effects occur.	ENV17(3) should be included for consideration. Noted.
6.78-6.82 Recreational pressure and disturbance: Welcome and largely accept the mitigation measures identified, and welcome the recognition that policies within the LDP need to be sufficiently robust to ensure that they can manage and refuse where necessary, leisure development on European and internationally protected sites. This relates to the precautionary approach to assessing the impacts of development on these sites, it would be helpful to reference relevant policies or include an overarching statement that the Plan needs to be considered as whole with appropriate reference to Planning Policy Wales and TAN5.	This is noted. The HRA will recommend that it would be suitable for the LDP to refer to the need to protect European sites from the impacts of visitor pressure within sections on tourism. However, as with all LDPs there is already the expectation that they must be considered as a whole and national policy takes precedence and must be complied with.
6.83-6.84 Changes in coastal process: Welcome recognition of possible impacts.	Noted.
6.85-6.87 Conclusions: Largely agree with the assessment subject to	Noted.

<p>comments above and implementation of mitigation, such as project level assessments.</p> <p><i>Cefn Cribwr Grasslands SAC</i></p> <p>6.88-6.94 Welcome summary and recognition of 'meta-population' area.</p> <p>6.95-6.102 Note the policies and allocations that may have adverse impacts. Welcome recognition that project level HRA may be needed. This should be identified in any supporting information/ site schedules for specific allocations as appropriate.</p> <p>6.103-6.105 Air quality: Welcome recommendation for site specific HRA for minerals working in the area and reference to other policies of the plan that will help mitigation air quality impacts. Also welcome support to monitoring but this needs to allow adverse impacts to be avoided before they occur.</p> <p>6.106 Direct land take: Acknowledge that ENV12 includes protection of European sites so impacts are unlikely.</p> <p>6.107-6.108 Supporting meta-populations: Strongly support this approach. This includes support for development in approx 2km of the site which may impact on site features to be assessed to ensure that suitable marshy grassland habitat is retained and enhanced and inter-site connectivity maintained. The inclusion of such a requirement in the relevant policies/allocations should ensure that any likely significant effects resulting from development around the site are fully addressed, through the potential need to consider 'in combination' effects as a result of multiple developments should be noted. We understand, however, that such as provision is not currently drafted into the Plan.</p> <p>6.109-6.112 Water Quantity: Welcome the precautionary approach that taken and recommendations that future applications will need to undergo more detailed HRA.</p>	<p>Noted.</p> <p>The HRA will recommend that site schedules or development briefs should refer to the possible need for site specific HRA.</p> <p>Noted.</p> <p>Noted.</p> <p>The HRA supports additional wording the plan to avoid impacts on protected species populations in the wider area. The HRA would recommend the plan reflects these comments.</p> <p>Noted.</p>
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<p>with water resources, air quality and recreational pressures and that, providing they are implemented within the LDP, the measures identified within this assessment (subject to the comments made above) should adequately mitigate for these potential 'in combination' effects.</p>	
<p>8 – Summary and Conclusions</p> <p>8.1-8.9 Providing the mitigation measures identified in the report, subject to the comments made above (particularly those in relation to monitoring of impacts), are incorporated into the LDP we agree with the assessment conclusions.</p> <p>We particularly support the recommendation made in 8.6 to 8.9 to include specific reference to the requirements of the Habitats Regulations, the need for further project specific HRA where necessary and the requirement for review should monitoring indicate that the Plan is not performing as expected or that indicators are showing negative trends.</p> <p>The clear recommendation to include the statement that where assessments can not ascertain that there will be no adverse effects progressing the development would not be in keeping with LDP policy and will not be permitted set out in 8.9 is particularly welcomed.</p>	<p>Noted.</p>