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Habitats Regulation Assessment Screening of the Local Flood Risk Management Strategy

HRA Screening Report | May 2013

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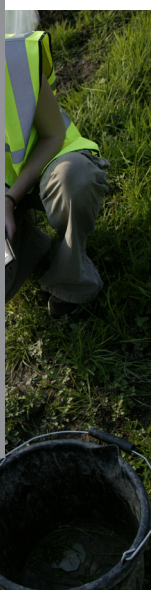

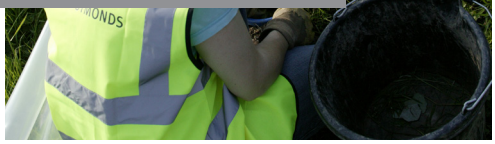

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FIGURES

NON-TECHNICAL SUMMARY

Habitats Regulations Assessment (HRA) of a plan or project is a requirement of the Habitats Directive (92/43/EEC) as set out in the amended Habitats Regulations (2007), later superseded by consolidated "Conservation of Habitats and Species Regulations 2010" and, the Birds Directive: Directive 2009/147/EC.

A Local Flood Risk Management Strategy (LFRMS) sets out objectives and measures to be implemented at a lower level and provides the strategic framework to guide individual flood risk management works, which could potentially have significant effects upon European sites. It is therefore appropriate that Bridgend County Borough Council's Local Flood Risk Management Strategy be considered a plan as defined by the Habitats Regulations.

The LFRMS therefore requires a Habitats Regulations Assessment (HRA).

This report details the HRA screening of the Bridgend County Borough Council Local Flood Risk Management Strategy.

The HRA screening undertaken concluded that one (1) measure from Bridgend County Borough Council's LFRMS (refer to the LFRMS measure below) is recommended for Stage 2 – Appropriate Assessment of the HRA process:

- Inspect coastal defense infrastructure: Minor defects noted are repaired as soon as possible; any major works required are subject to holding repairs whilst long-term solutions are implemented.

The Screening Report also identified the potential for Bridgend County Borough Council's Local Flood Risk Management Strategy to have significant adverse effects on two (2) of the European sites identified namely, the Cefn Cribwr SAC and Kenfig SAC.

The "statutory" or "appropriate nature conservation body," Countryside Council for Wales (CCW) was consulted under Regulation 102(2) during the HRA screening assessment and Capita Symonds has paid regard to their comments.

In summary, CCW accepted the proposal for Bridgend County Borough Council to follow, where necessary, the HRA methodology developed by the consultants – Enfusion Environmental Planning and Management for the screening assessment and appropriate assessment stages of the LFRMS.

Based on the information gathered for the screening process and considering the Habitats Regulations requirements for a precautionary approach, it is determined that further Appropriate Assessment work is required for:

- Cefn Cribwr SAC;
- Kenfig SAC

The AA will require more detailed information gathering to assess, and where possible quantify, the potential impacts identified and determine the most effective mechanism for avoiding or mitigating those effects.

1 INTRODUCTION

Bridgend County Borough Council (BCBC) is currently developing its Local Flood Risk Management Strategy (LFRMS) and is undertaking Habitats Regulations Assessment in line with Habitats Regulations 102–105 and the requirements set out by the Conservation of Habitats and Species Regulations 2010 No.490 and the Conservation of Habitats and Species Regulations 2010 No.490 Part 6 Chapter 8.

The LFRMS is also being developed in compliance with the Conservation of Habitats and Species (Amendment) Regulations 2011 and the Conservation of Habitats and Species (Amendment) Regulations 2012 – CCW's current Guidance on HRA

Capita Symonds has been commissioned by the BCBC to undertake the Habitats Regulation Assessment of the Local Flood Risk Management Strategy (LFRMS) on their behalf.

Habitats Regulations Assessment is also commonly referred to as Appropriate Assessment (AA) although the requirement for AA is first determined by an initial 'screening' stage undertaken as part of the full HRA. The HRA screening report addresses the likely significant effects on designated European Sites of implementing the objectives and measures of the LFRMS.

This report addresses Habitats Regulations Assessment (Stage 1): the Screening Phase of the HRA; it outlines the screening tasks and the key findings from the assessment.

1.1 Requirement for Habitats Regulations Assessment

EC Directive (92/43/EEC) on the Conservation of natural habitats and of wild flora and fauna ('Habitats Directive') is implemented, along with certain elements of the Birds Directive: Directive 2009/147/EC in the UK by *The Conservation of Habitats and Species Regulations 2010 (as amended) (SI 490, 2010)*. This legislation provides the legal framework for the protection of habitats and species of European importance in Wales.

Habitats Regulations 102–105 require AA to be undertaken on proposed plans or projects which are not necessary for the management of the site but which are likely to have a significant effect on one or more European sites either individually, or 'in combination' with other plans and projects.

The assessment is underpinned by the precautionary principle, especially in the assessment of potential impacts and their resolution. If it is not possible to rule out the risk of harm on the evidence available then it is assumed that a risk may exist and it needs to be dealt with in the assessment process.

The LFRMS will set out objectives and measures to be implemented at a lower level that sets a strategic framework to guide individual flood risk management works, which could potentially have significant effects upon European sites. It is therefore concluded that Bridgend County Borough Council Local Flood Risk Management Strategy is a plan as defined by the Habitats Regulations.

The LFRMS therefore requires a Habitats Regulations Assessment (HRA).

1.2 Guidance for Habitats Regulations Assessment/Appropriate Assessment

The methods and approach used for this screening are based on the formal Welsh guidance currently available. The key guidance used is 'Guidance for Plan Making Authorities in Wales – The Appraisal of Plans under the Habitats Directive', produced for Countryside Council for Wales (CCW) by David Tyldesley and Associates, November 2009. Countryside Council for Wales (CCW) HRA Guidance for plans was updated in 2010 and 2011.

The same consultants also prepared other guidance for CCW which are used in this assessment of the LFRMS namely: 'Assessing Projects under the Habitats Directive Guidance for Competent Authorities (Revised September 2011)' and 'Guidance Note – Methodological Approaches to the Habitats Regulations Assessment of Plans and Projects Requiring Multiple Consents (May 2011).'

The guidance recommends that HRA is approached in three main stages – outlined in Table 1. This report outlines the method and findings for stage 1 of the HRA process.

Table 1

Habitats Regulations Assessment: Key Stages

Stage 1	
Screening for likely significant effect	• Identify international sites in and around the plan/ strategy search area agreed with the Statutory Body the Countryside Council for Wales • Examine conservation objectives of the interest feature(s) (where available) • Review plan (strategy) policies and proposals and consider potential effects on European sites (magnitude, duration, location, extent) • Examine other plans and programmes that could contribute to 'in combination' effects
Stage 2	
Appropriate Assessment (AA)	• Complete additional scoping work including the collation of further information on sites as necessary to evaluate potential effects and assess them for their likely significance (to European sites) in light of Conservation Objectives. • Agree scope and method of AA with CCW • Consider 'in combination effects'. The LFRMS should be considered alone or in combination with other plans and projects. • Consider how effect on integrity of site could be avoided by changes to plan and the consideration of alternatives

Table 1 **Habitats Regulations Assessment: Key Stages**	
	• Develop mitigation measures (including timescale and mechanisms). • Report outcomes of AA including mitigation measures, consult with CCW and wider [public] stakeholders as necessary • If it can be shown that the plan (alone or in combination) will not affect the integrity of the European (or Ramsar) site then further assessment is not required. However, the 2011 amendment Regulations to the habitats Regulations are relevant if a decision to vary or modify a plan or project takes place during its life cycle.
Stage 3	
Procedures where significant effect on integrity of international site remains	• Consider alternative solutions, delete from plan or modify • Consider if priority species/ habitats affected • Identify 'imperative reasons of overriding public interest' (IROPI) economic, social, environmental, human health, public safety • Notify Assembly Government • Develop and secure compensatory measures

1.3 Consultation

The Habitats Regulations require the plan making/competent authority to consult the appropriate nature conservation statutory body [Countryside Council for Wales (CCW)]. Consultation on the approach to this HRA screening, including advice on which European sites should be considered within the area of search, has been undertaken with CCW as required.

The Habitats Regulations leave consultation with other bodies and the public to the discretion of the plan making authority. It is good practice to make information on HRA available to the public at each formal development plan consultation stage.

2 METHOD

2.1 Screening

In accordance with the official Welsh guidance and current practice, the screening stage of the HRA for the LFRMS employed the method outlined below.

The HRA methodology developed by the consultants – Enfusion Environmental Planning and Management for the screening assessment and appropriate assessment stages was used in this report to carry out the HRA for the LFRMS; this methodology was widely adopted by Local Authorities in Wales to carry out HRA of their Local Development Plans (LDP).

The approach in this study combines both a plan focus and a site focus.

- The plan focus first screens out those elements of the LFRMS unlikely to affect European site integrity and then considers the impacts of the remaining elements on European sites, including the potential for 'in-combination' impacts.

- The site focus considers the environmental conditions of the site and the factors required to maintain site integrity, and looks at the potential impacts the plan may have.

HRA experience to date has indicated that maintaining a site based approach as core to the HRA method more closely reflects the intent of the Habitats Directive.

Subsequent mitigation measures developed as required during the stage 2 (AA) seek to focus on the conditions necessary to maintain site integrity (e.g. avoiding specific types of development/ activity at or near sensitive areas). Countryside Council for Wales (CCW) considers that mitigation by 'deferring down' assessment and decisions on HRA to lower tier plans and projects is often and even desirable when specific details of timing/location of activities are not in a strategic parent/higher tier plan. This approach does recognize that some decisions on avoidance and mitigation can only be made when site level detail becomes available.

The key tasks employed for the HRA Screening are set out in Table 2.

Table 2

HRA Screening Stage 1: Key Tasks

Task 1 Identification of Natura 2000 sites & characterisation	• Identification of European sites both within the plan/proposal boundaries and in an area of search [as recommended by extant guidance]. This includes considering hydrological connectivities and the catchment of watercourses relating to identified designations • Information was obtained for each European site, based on publicly available information and consultation with Countryside Council for Wales where appropriate. • This included information relating to the sites'

Table 2 **HRA Screening Stage 1: Key Tasks**	
	qualifying features; conservation objectives; vulnerabilities/ sensitivities, current conditions, trends & geographical boundaries.
Task 2 Plan review and identification of likely impacts	• Screening of the plan/strategy and the identification of likely impacts (including a review of the plan/strategy's aims, objectives, including spatial implications where identified to determine likely impacts).
Task 3 Consideration of 'in combination effects) of the LFRMS with other plans and projects	• Consideration, where appropriate of other plans and projects that may have in-combination effects with the LFRMS.
Task 4 Screening Assessment	• Assessment of the potential of identified impacts to affect the designated interest features of European sites • Summary of screening outcomes and recommendations.

3 SCREENING

3.1 Task 1: Identification of European Sites

Bridgend Local Planning Area covers an area of 285 square kilometers and stretches 20 km from east to west and occupies the Llynfi, Garw and Ogmore valleys. The largest town is Bridgend followed by Maesteg and seaside resort of Porthcawl.
It is based around the Ogmore River and its tributaries, although the Ewenny and Ogwr Fach rivers are considered the border with the Vale of Glamorgan for much of their length.

Three internationally designated sites are located within the planning boundary of Bridgend County Borough Council (BCBC): Cefn Cribwr Grasslands, Blackmill Woodlands and Kenfig.

Plans and projects can have spatial implications that extend beyond the intended plan boundaries. In particular, it **is recognised that distance in itself is not a definitive guide to the likelihood or severity of an impact** as factors such as the prevailing wind direction, river drainage paths, and ground water flow direction will all have a bearing on the relative distance at which an impact can occur. This means that a plan/strategy directing or influencing activities some distance away from a European Site could still have effects on the site and therefore, needs to be considered as part of the screening process.

Other internationally designated site located within the area likely to be influenced by the LFRMS is:

- Dunraven Bay is a SAC

Taking into account the potential for trans-boundary impacts the screening has identified 4 European Sites that lie within the agreed area of influence of the proposed Bridgend Council Borough Council (BCBC) Local Flood Risk Management Strategy.

These sites are outlined in **Table 3** below and detailed information for each designated site including its conservation objectives is provided in **Appendix 1**; maps showing the location and spatial extent of these sites are in **Appendix 5**.

Table 3 **European Sites within Search Area**		
European Sites within search area: area likely to be influenced by the Strategy (BCBC LFRMS)	Designation	Distance from BCBC Planning Authority boundary (approx)
Cefn Crwbwr Grasslands	SAC	Adjacent
Dunraven Bay	SAC	3.7 km
Kenfig	SAC	Adjacent
Black mill woodlands	SAC	Adjacent

3.2 Task 2: LFRMS Review, Policies/Objectives and Measures Screening, and Identification of Likely Impacts

Overview of Vale of Bridgend Local Flood Risk Management Strategy

The Flood and Water Management Act 2010 places a responsibility upon Local Authorities, as Lead Local Flood Authorities (LLFAs), to develop, maintain, apply and monitor a strategy for local flood risk management (Local Strategy).

Bridgend County Borough Council, as a Lead Local Flood Authority (LLFA) is required to prepare a Local Flood Risk Management Strategy.

The purpose of the Local Flood Risk Management Strategy (LFRMS) is to set out the Council‟s position with regard to management of local flood risks. An important part of the Strategy will be public engagement ensuring that communities are aware of what risks exist, what the Council and other risk management partners do and have responsibilities for and what communities can do to involve themselves.

The Local Flood Risk Management Strategy must specify:

a. The risk management authorities in the authority's area;
b. The flood and coastal erosion risk management functions that may be exercised by those authorities in relation to the area;
c. The objectives for managing local flood risk (including any objectives included in any Flood Risk Management Plan prepared in accordance with the Flood Risk Regulations 2009);
d. The measures proposed to achieve those objectives;
e. How and when those measures are expected to be implemented;
f. The costs and benefits of those measures and how they are to be paid for;
g. The assessment of local flood risk for the purposes of this Strategy;
h. How and when the Strategy is to be reviewed;
i. How the Strategy contributes to the achievement of wider environmental objectives.

The Strategy will look at how the Council‟s current approach to the following factors meet the Objectives set by Welsh Government:

- Flood Forecasting Warning and Response
- Asset Management and Maintenance
- Development Planning and Adaptation High Level Awareness and Engagement
- Land Cultural and Environmental Management

One of the statutory requirements of a LFRMS is that it is consistent with the National Strategy for Flood and Coastal Risk Management. The National Strategy has four overarching objectives which are:

- Reducing the consequences for individuals, communities, businesses and the environment from flooding and coastal erosion
- Raising awareness of and engaging people in the response to flood and coastal erosion risk
- Providing an effective and sustained response to flood and coastal erosion events
- Prioritising investment in the most at risk communities

The Local Strategy pulls together the existing policies and actions the Council undertakes which have implications with regard to flood risk management, any new actions or policies introduced as a result of the Flood and Water Management Act 2010 and Flood Risk Regulations 2009 also any proposed actions or policies to be introduced to further manage flood risk.

Category of Measures for Achieving LFRMS

The strategy identifies the measures that BCBC will adopt to achieve the overarching objectives of the National Strategy for Flood Risk Management. Measures are activities that will be undertaken to manage risk and achieve the stated objectives.

Both structural and non-structural measures have been considered. Structural measures include physical options to manage flood risk. Non-structural measures include activities such as spatial planning, emergency planning and improved flood awareness.

Table 4 below summarises the specific measures that will be used to achieve the four national objectives.

Table 4

Measures of Bridgend County Borough Council LFRMS

No.	Measures
1	Prepare a BCBC-specific SuDS policy and co-ordinate work of SuDS Approving and Adopting Body. BCBC (development planning role) will ensure that this policy safeguards natural conservation and protect the receiving environment by allowing lower tier plans and projects deriving from this Measure to be subject to SEA/HRA/EIA assessments as applicable
2	Prepare local supplementary planning guidance on Green Infrastructure. Supplementary Planning Guidance Development Plans are normally subject to high level SEA and HRA assessment; however, any resulting projects from the Measure (depending on their specific activities) may also be subject to HRA or SEA.
3	Work with DCWW to encourage retrospective SuDS and cost effective solutions to remove surface water from combined sewers. These solutions will ensure that biodiversity interests are protected in accordance with Habitats and Environmental Impact Regulations.

Table 4

Measures of Bridgend County Borough Council LFRMS

No.	Measures
4	Continue with the culvert location/investigation/condition survey work
5	Designate third party surface water assets, which in the opinion of the LLFA have a beneficial role in flood risk management so that the flood risk is not adversely affected.
6	Record highway drainage on map-info: In order to provide better management of the system it has been considered appropriate to commence a programme of identifying and recording the highway drainage network onto a database and map-info layer.
7	Prepare a rolling programme of asset maintenance: it is proposed to prepare an ongoing inspection regime, define action points for intervention works and a programme for refurbishment work. BCBC (development planning role) will ensure that this Measure safeguards natural conservation and protect the receiving environment by allowing lower tier plans and projects deriving from action points for intervention works and a programme for refurbishment work to be subject to SEA/HRA/EIA assessments as applicable.
8	Review pre-feasibility studies from previous flooding. It is likely that previous conclusions may, on reflection, be reinterpreted and more effective ways of managing the flood risk be apparent. Any new management proposal will be environmentally friendly and sustainable. Pre-feasibility studies are normally subject to SEA and HRA assessment; however, any resulting projects or modifications from the Measure (depending on their specific activities) may also be subject to HRA or SEA.
9	Prepare a policy on culverting: This is likely to be a presumption against culverting, in order to preserve the ecological benefits of open watercourses and accessibility for maintenance. The culverting policy will accord with Habitats and Environmental Impact Regulations.
10	Raise public awareness of riparian duties and responsibilities and of risk management measures that they can do themselves. Where the risk management measures are likely to include practical measures/activities that the public could undertake themselves, BCBC will ensure that such activities safeguard natural conservation and protect the receiving environment by allowing these plans and projects to be subject to SEA/HRA/EIA assessments as applicable
11	Encourage public to monitor grids/watercourses and report issues
12	Use permissive powers to carry out enforcement/maintenance works on watercourses and culverts. This could include serving appropriate notices and if required carrying out necessary works. BCBC will ensure that these works will not cause any harm to features of the natural environment – including protected or priority species, habitats and wildlife corridors by allowing lower tier plans and projects deriving from this Measure to be subject to SEA/HRA/EIA assessments as applicable.
13	Implement and regularly review the Bridgend County Borough Council Flood Plan: The Plan contains details to identify areas with a greater level of local flood risk, key infrastructure and vulnerable people and how the reactive plan will be activated, the roles and responsibilities of key personnel. The measure appears to fit into category A1 or perhaps A5 as defined in Section 5.13 and Table 3 of CCW's Guidance document: Guidance for Plan Making Authorities in Wales – the Appraisal of Plans Under The Habitats Directive.

Table 4

Measures of Bridgend County Borough Council LFRMS

No.	Measures
14	Implement and regularly review the Wildmill Community Flood Plan: The Plan aims to raise awareness of risk, to assist vulnerable people in the Community and to implement preventative measures in Community buildings. These measures will safeguard natural conservation and protect the receiving environment. The measure appears to fit into category A1 or perhaps A5 as defined in Section 5.13 and Table 3 of CCW's Guidance document: Guidance for Plan Making Authorities in Wales – the Appraisal of Plans Under The Habitats Directive.
15	Ensure the principles of Bridgend County Borough Council SFCA are incorporated into planning decisions. The SFCA was prepared to support the production of the Local Development Plan and its main objective is to enable a strategic and proactive approach to Flood Risk Management in Development Planning.
16	Investigation of Flooding Incidents, recording results and offering advice: Advice and assistance, where possible, will be offered to the relevant parties to mitigate and resolve any issues in an environmentally sustainable manner. The measure appears to fit into category A1 or perhaps A5 as defined in Section 5.13 and Table 3 of CCW's Guidance document: Guidance for Plan Making Authorities in Wales – the Appraisal of Plans Under The Habitats Directive.
17	Maintain a register of surface water assets: In accordance with S21 of the FWMA 2010 BCBC has prepared an asset register of Structures and features, which in the opinion of the authority are likely to have a significant effect on flood risk.
18	Undertake regular inspections of "hot-spot surface water assets" including highway drainage network: to ensure that inlet grids are clear in locations where blockages may lead to flooding to properties.
19	Provide flood risk observations and advice on Development Applications including promotion of SuDS. (Developers are required to show that the most sustainable drainage system for the site has been chosen). BCBC will ensure that these activities safeguard natural conservation and protect the receiving environment by allowing lower tier plans and projects deriving from this Measure to be subject to SEA/HRA/EIA assessments as applicable
20	Inspect coastal defense infrastructure: Minor defects noted are repaired as soon as possible; any major works required are subject to holding repairs whilst long-term solutions are implemented.
21	Implement and regularly review the provisions of the Shoreline Management Plan: BCBC is a member of the Swansea and Carmarthen Bay Coastal Group tasked with the responsibility for preparing and updating the Shoreline Management Plan.
22	Implement the provisions of the Catchment Flood Management Plan: The plan considers the management of flooding over the next 50 to 100 years. It considers the increased risks due to climate change, effects of flooding on communities, infrastructure and the environment and potential management

Table 4

Measures of Bridgend County Borough Council LFRMS

No.	Measures
	options for the future.
23	Implement the policies and provisions of the Local Development Plan. The Plan sets out the land-use planning policies of the County Borough which are used in the determination of planning applications.
24	Provide advice on management of flood risk: this includes explanations and guidance regarding responsibilities and maintenance, also practical advice on flood protection/mitigation measures. These will accord with Habitats and Environmental Impact Regulations.
25	Collaborative work between departments on investigations, maintenance and improvements to surface water assets and management regimes. These will accord with Habitats and Environmental Impact Regulations.
26	Liaison with other risk management authorities and owners regarding maintenance of assets: BCBC has a good working relationship with most major owners of surface water assets (such as DCWW, Network Rail and Forestry Commission Wales) and works in collaboration to resolve issues
27	Liaison with Welsh Government and other LLFAs on flood risk management: Receives guidance and partakes in workshops and regularly discusses best practice
28	Undertake ad hoc maintenance of assets: This involves raising community awareness to the presence of surface water systems, riparian duties and the consequences of blockages is a priority and assist in monitoring conditions and planning maintenance works. These will accord with Habitats and Environmental Impact Regulations.
29	Electronic flood warning sensors at strategic culverts: The system sends text alerts, to duty officers and the Bryncethin CSU, should water levels rise above certain levels, which allows time for the location to be checked for blockages, or, to warn residents and deploy assistance (sandbags, etc.) if required
30	Consenting Works on Ordinary Watercourses: BCBC will review applications and consult internally and externally on any proposals to ensure that proposals do not have a detrimental effect on flood risk or the natural environment including biodiversity. BCBC will ensure that this policy safeguards natural conservation and protect the receiving environment by allowing lower tier plans and projects deriving from this Measure to be subject to SEA/HRA/EIA assessments as applicable

Reasons why a policy might be considered *not to have an effect* on a European Site

- The policy/objective concentrates development in existing urban areas, steering development away from European sites and sensitive areas.

- The policy/objective will steer development away from European sites and associated sensitive areas.

- The policy/objective is intended to protect the natural environment, including biodiversity.

- The policy/objective is intended to conserve or enhance the natural, built or historic environment, and such enhancements are unlikely to affect a European site.

- Where there is not a pathway between the plan/proposal/strategy or, a component of the plan/proposal/strategy – the impact source, and the European site's interest features – the receiver; the impact may be by means of a direct, indirect or induced pathway.

Reasons why a policy could be considered *to have an effect* on a European Site

- The plan/policy/strategy steers a type of development towards or encourages development in an area that includes a European site or an area where development may indirectly affect a European site.

- Where there is a pathway between the plan/policy/strategy (the impact source) and the European site's interest features (the receiver).

The full Objective Screening Tables, including the rationale for the objective/measure screening decision based on the above criteria are provided in **Appendix 2**.

Of the 30 measures screened, one of the objectives was considered to be proposing development that may have significant effects at the European sites identified at Task 1.

Table 5 **LFRMS Measure Recommended for Appropriate Assessment**
1. Inspect coastal defense infrastructure: Minor defects noted are repaired as soon as possible; any major works required are subject to holding repairs whilst long-term solutions are implemented.

Some of the potential impacts that could arise from this objective are:

- deterioration of air composition and quality;

- disturbance of features by factors such as noise, light etc;

- loss of habitat area, quality and connectivity;

- changes to the flow regime and sediment characteristics;

- changes in drainage characteristics;

- deterioration of water quality and changes in the nutrient loads of receiving waters;

- introduction of physical and hydrological barriers etc. in watercourses

As part of the HRA requirement, it was noted in relation to regulation 85B(1) that the Bridgend County Borough Council's Local Flood Risk Management Strategy (LFRMS) and its individual components are not directly connected to or necessary to the management of any European Site and therefore the Local Flood Risk Management Strategy (LFRMS) could not be screened out of HRA on this basis.

3.3 Task 3: Consideration of Other Plans, Programs and Projects

It is a requirement of Article 6(3) of the Habitats Directive that HRA examines the potential for the Bridgend County Borough Council's Local Flood Risk Management Strategy (LFRMS) to have a significant effect either individually or 'in combination' with other plans & projects.

Undertaking an assessment of the 'in combination' effect of other projects and plans required a pragmatic approach given the extensive range of projects and plans within the area of influence of the LFRMS. The approach taken was cognizant of the emphasis in Welsh Government guidance that considering the potential for in-combination effects is core to delivering robust/ precautionary HRA.

In deciding on the relevant plans and projects for assessment, consideration was given to those whose impact areas coincide with the designated sites relevant to the LFRMS– either in terms of their likely pathways or effects.

Some of the other qualifying criteria used for considering plans for "in-combination impact" assessment are:

- Geographical proximity;
- Developments requiring land-take;
- Developments of a suitably large size and scale;
- Plans or projects that are characterised by or involve infrastructure-type development;
- Plans or projects that are characterised by or result in changes in land use;
- Plans or projects that involve or have the potential for producing emissions or disposal to land, water, air (atmospheric emission and discharge to watercourses);
- Plans or projects that involve development on lands near to watercourses (main rivers, critical ordinary watercourses and ordinary watercourses);
- Plan or projects that involve development of Greenfield lands or lands designated as greenbelts;
- Developments with natural resources requirements;
- Developments with excavation requirement;
- Plans or projects with suitably long duration of construction, operation and decommissioning.

When considering other projects and plans, attention was focused on those aimed at delivering planned spatial growth with the most significant being those that seek to provide, housing, employment and infrastructure. The review considered the most relevant plans including:

- National Spatial, Transport and Minerals Plans, Strategies and Planning Policies;
- Local Development Plans in South East Wales neighboring authorities;
- Waste Strategies for South East Wales and neighboring authorities;
- Regional Transport Plans – where relevant and/or major development schemes.

The potential effects of these plans are reviewed in detail at Appendix 3 and the potential for these effects to act 'in-combination' with effects identified from LFRMS objectives and measures are considered in the screening assessment in Appendix 4.

The range of in-combination impacts considered was focused on the key issues outlined below:

- Airborne pollution;
- Water quality changes;
- Hydrological changes;
- Recreational pressure
- Habitats loss, fragmentation and severance

3.4 Task 4: Screening Assessment

In line with the screening requirement of the Habitats Regulations, an assessment was undertaken to determine the potential significant effects of the Bridgend County Borough Council's LFRMS on the integrity of the 4 European sites that lie in the agreed area of influence of the LFRMS (refer to details in Appendix 4). The screening decision was informed by:

- The information gathered on the European sites – Appendix 1;
- The review of Bridgend County Borough Council LFRMS objectives and measures and their likely impacts (Appendix 2); which included an analysis of the potential environmental impacts generated by the development activities directed by the LFRMS and;
- The review of other relevant plans and programmes – Appendix 3
- Welsh Government guidance which indicates that HRA for plans is typically broader and more strategic than project level HRA and that it is proportionate to the available detail of the plan.

Table 6

HRA Screening Table Summary

European Sites with agreed are of influence of the LFRMS	**Designation**	**AA required alone?** **x No** **✓Yes** **? Uncertain**	**AA required in combination?** **x No** **✓Yes** **? Uncertain**
Dunraven Bay	SAC	**x**	**x**
Kenfig	SAC	**?**	✓
Cefn Crwbwr Grasslands	SAC	**?**	✓
Black Mill Woodlands	SAC	**x**	**x**

4 CONCLUSIONS, FUTURE WORK

This report outlines the methods used and the findings arising from the screening stage of the Habitats Regulations Assessment undertaken for Bridgend County Borough Council's Local Flood Risk Management Strategy.

The HRA considered 4 European sites that lie within the agreed area of influence of the LFRMS.

The findings of the screening process suggested, based on the precautionary principle, the potential for significant effects at 2 of the European Sites assessed.

By applying the precautionary principle, the HRA screening assessment also identified that 2 of the European sites could potentially be affected by the delivery of the LFRMS in combination with other projects and plans in SE Wales.

Based on the information gathered for the screening process and considering the Habitats Regulations requirements for a precautionary approach, it is determined that further Appropriate Assessment work is required for:

- Kenfig SAC;
- Cefn Cribwr Grasslands SAC

The AA will require more detailed information gathering to assess, and where possible quantify, the potential impacts identified and determine the most effective mechanism for avoiding or mitigating those effects. This work will need to take place in consultation with the Statutory Body, CCW and other key stakeholders (if required).

A full AA report will be presented alongside Bridgend County Borough Council's Local Flood Risk Management Strategy as part of the evidence base for examination where it serves to provide a record of how the strategy is consistent with the Welsh Government and wider UK government/EU policy on biodiversity protection. The assessment should be revisited in the light of any significant changes to the LFRMS

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Legislation

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DCLG (2006) Planning for the Protection of European Sites: Appropriate Assessment.
Guidance for Regional Spatial Strategies and Local Development Documents (August 2006, consultation draft).

ODPM (2005) Planning Policy Statement 9: Biodiversity and Geological Conservation.

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Other Relevant Reference & Guidance Sources

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David Tyldesley and Associates for the Countryside Council for Wales: Guidance Note – Methodological Approaches to the Habitats Regulations Assessment of Plans and Projects Requiring Multiple Consents

David Tyldesley and Associates for the Countryside Council for Wales (Revised September 2011) Assessing Projects under the Habitats Directive Guidance fFor Competent Authorities

Institute of Ecology and Environmental Management's (IEEM) Guidelines for Ecological Impact Assessment in the United Kingdom.
http://www.ieem.org.uk/ecia/index.html

Scott Wilson, Levett-Therivel, Treeweek, Land Use Consultants (2006) Appropriate Assessment of Plans.

Natura 2000 Site Specific Information

Joint Nature Conservation Committee (JNCC) - Protected Sites:
http://www.jncc.gov.uk/page-4

Browse SACs on map:
http://www.jncc.gov.uk/page-1515

Browse SPAs on map:
http://www.jncc.gov.uk/page-2598

APPENDIX 1

INFORMATION:

European Site Characterisations

Natura 2000 Site Information Proforma

To go to a specific Natura 2000 Site Information Proforma - Hold Ctrl and Left Click on site name.

Special Areas of Conservation

1. Blackmill Woodlands
2. Cardiff Beech Woods
3. Cefn Cribwr Grasslands
4. Dunraven Bay
5. Kenfig/ Cynffig

Candidate Special Areas of Conservation

1. Severn Estuary

All core site specific information unless otherwise stated has been referenced from the Countryside Council for Wales website (Natura 2000 Management Plans) and the Joint Nature Conservation Committee website (Protected Sites).

Special Areas of Conservation

Site Name: Blackmill Woodlands **Location Grid Ref: SS929859** **JNCC Site Code: UK0030090** **Size: 71.01** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
Site Description	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 *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.
Qualifying Features	Annex I Habitats primary reason for selection: ▪ Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles
Conservation Objectives	**Conservation Objective for Feature 1:** **Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles** 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

Site Name: Blackmill Woodlands Location Grid Ref: SS929859 JNCC Site Code: UK0030090 Size: 71.01 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	dynamic, shifting pattern of gaps. 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. Performance indicators for Feature 1 The performance indicators are part of the conservation objective, not a substitute for it. Assessment of plans and projects must be based on the entire conservation objective, not just the performance indicators. The performance indicators can be found within the Blackmill Woodlands Management Plan.
Component SSSIs	▪ 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	▪ **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	**Conservation Status of Feature 1:** **Old sessile oak woods with Ilex and Blechnum in the British Isles** 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

Site Name: Blackmill Woodlands Location Grid Ref: SS929859 JNCC Site Code: UK0030090 Size: 71.01 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	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**.
Vulnerabilities (includes existing pressures and trends)	▪ **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. ○ Acidification. ○ Eutrophication. ○ Photochemical oxidants.

* 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

Site Name: Blackmill Woodlands **Location Grid Ref: SS929859** **JNCC Site Code: UK0030090** **Size: 71.01** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
	○ Particulate matter.
Landowner/ Management Responsibility	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.
HRA/AA Studies undertaken that address this site	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 ▪ The Screening states that the most likely mechanism for the Preferred Strategy to have a significant effect on this site is through airborne pollution. 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 ▪ 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.

Site Name: Cefn Cribwr Grasslands **Location Grid Ref: SS870830** **JNCC Site Code: UK0030113** **Size: 58.35** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
Site Description	The site(s) is situated to the east of Bridgend in close proximity to the M4. This is one of four sites representing *Molinia* meadows in south and central Wales, one of the major UK strongholds for this habitat type. At this site, there are extensive stands of M24 *Molinia – Cirsium dissectum* fen-meadow, including the heathy sub-type with cross-leaved heath *Erica tetralix*, as well as other forms with a stronger representation of grasses, rushes and small sedges. Transitions to stands of more acidic *Molinia* and *Juncus* pasture, dry neutral grassland and wet scrub vegetation are well-represented. Uncommon and declining species associated with the *Molinia* meadows at this site include the nationally rare viper's-grass *Scorzonera humilis* and the nationally scarce soft-leaved sedge *Carex montana*. 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.
Qualifying Features	Annex I Habitats primary reason for selection: ▪ Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) Annex II Species qualifying feature: ▪ Marsh fritillary butterfly *Euphydryas (Eurodryas, Hypodryas) aurinia*
Conservation Objectives	**Conservation Objective for Feature 1:** **Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)** Vision for feature 1 The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:

Site Name: Cefn Cribwr Grasslands Location Grid Ref: SS870830 JNCC Site Code: UK0030113 Size: 58.35 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	▪ eu-Molinion marshy grassland will occupy between 50% and 55% of the total site area. ▪ The remainder of the site will be other semi-natural habitat or areas of permanent pasture. ▪ The following plants will be common in the eu-Molinion marshy grassland: purple moor-grass Molinia caerulea; meadow thistle Cirsium dissectum; Carex hostiana; Carex pulicaris; devil's bit scabious Succisa pratensis; carnation sedge Carex panicea; saw wort Serratula tinctoria and; tormentil Potentilla erecta. ▪ Cross-leaved heath Erica tetralix and common heather Calluna vulgaris will also be common in some areas. ▪ Rushes and species indicative of agricultural modification, such as perennial rye grass Lolium perenne and white clover Trifolium repens will be largely absent from the eu-Molinion marshy grassland. ▪ Scrub species such as willow Salix (excluding Salix repens) and birch Betula will also be largely absent from the eu-Molinion marshy grassland. ▪ All factors affecting the achievement of the foregoing conditions are under control. Performance indicators for feature 1 The performance indicators are part of the conservation objective, not a substitute for it. Assessment of plans and projects must be based on the entire conservation objective, not just the performance indicators. The performance indicators can be found within the Cefn Cribwr Grasslands Management Plan. **Conservation Objective for Feature 2:** **Marsh fritillary butterfly *Euphydryas* (*Eurodryas*, *Hypodryas*) *aurinia*** Vision for feature 2 The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:

Site Name: Cefn Cribwr Grasslands Location Grid Ref: SS870830 JNCC Site Code: UK0030113 Size: 58.35 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	▪ The site will contribute towards supporting a sustainable metapopulation of the marsh fritillary in the Cefn Cribwr area. This will require a minimum of 50ha of suitable habitat, of which at least 10ha must be in good condition, although not all is expected to be found within the SAC. Some will be on nearby land within a radius of about 2km. ▪ The population will be viable in the long term, acknowledging the extreme population fluctuations of the species. ▪ Habitats on the site will be in optimal condition to support the metapopulation. ▪ At least 40ha within the SAC & associated SSSI will be marshy grassland suitable for supporting marsh fritillary, with Succisa pratensis present and only a low cover of scrub. ▪ At least 8ha will be marsh fritillary breeding habitat in good condition, dominated by purple moor-grass Molinia caerulea, with S. pratensis present throughout and a vegetation height of 10-20cm over the winter period. ▪ Suitable marsh fritillary habitat is defined as stands of grassland where Succisa pratensis is present and where scrub more than 1 metre tall covers no more than 10% of the stands ▪ Optimal marsh fritillary breeding habitat will be characterised by grassland where the vegetation height is 10-20 cm, with abundant purple moor-grass Molinia caerulea, frequent "large-leaved" devil's-bit scabious Succisa pratensis suitable for marsh fritillaries to lay their eggs and only occasional scrub. In peak years, a density of 200 larval webs per hectare of optimal habitat will be found across the site. ▪ The marshy grassland will be well sheltered by hedgerows and mature trees. ▪ All factors affecting the achievement of the foregoing conditions are under control. Performance indicators for feature 2 The performance indicators are part of the conservation objective, not a substitute for it. Assessment of plans and projects must be based on the entire conservation objective, not just the performance indicators. The performance indicators can be found within the Cefn Cribwr Grasslands Management Plan.

Site Name: Cefn Cribwr Grasslands Location Grid Ref: SS870830 JNCC Site Code: UK0030113 Size: 58.35 Designation: SAC	Habitats Regulations Assessment: Data Proforma
Component SSSIs	▪ Bryn-Bach, Cefn Cribwr. ▪ Pen y Castell Cefn Cribwr. ▪ Waun-fawr, Cefn Cribwr. ▪ Caeau Cefn Cribwr. 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.
Key Environmental Conditions (factors that maintain site integrity	▪ **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

Site Name: Cefn Cribwr Grasslands Location Grid Ref: SS870830 JNCC Site Code: UK0030113 Size: 58.35 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	conditions which the marsh fritillary requires. These should be retained and managed. On each component SSSI ○ 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. ▪ **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	**Conservation status for Feature 1:** **Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)** This assessment relates to monitoring results from 2001 and provisional results from monitoring undertaken in 2007. The current status of the feature is **Unfavourable** The status within each management unit where Eu-Molinion is Key Habitat: Caeau Cefn Cribwr SSSI: MU1 Unfavourable MU2 Unfavourable MU3 Unfavourable MU5 Unfavourable

Site Name: Cefn Cribwr Grasslands Location Grid Ref: SS870830 JNCC Site Code: UK0030113 Size: 58.35 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	Pen y Castell SSSI: MU1 Unfavourable MU2 Unfavourable Bryn Bach SSSI: MU1 Unfavourable Waun Fawr SSSI: MU1 Unfavourable **Conservation status for Feature 2: Marsh fritillary butterfly *Euphydryas* (*Eurodryas*, *Hypodryas*) *aurinia*** Both larvae and adults of marsh fritillary have been recorded on the site more recently, but it is suspected that the site does not currently support the required density of larval webs that would indicate a sustainable metapopulation. The current status of the feature is **unfavourable** The status within each management unit where marsh fritillary butterfly is the Key species: Caeau Cefn Cribwr SSSI: MU5 Unfavourable MU7 Unfavourable MU8 Unfavourable Pen y Castell SSSI: MU1 Unfavourable MU2 Unfavourable

Site Name: Cefn Cribwr Grasslands Location Grid Ref: SS870830 JNCC Site Code: UK0030113 Size: 58.35 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	Bryn Bach SSSI: MU1 Unfavourable MU3 Unfavourable
Vulnerabilities (includes existing pressures and trends)	▪ **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

Site Name: Cefn Cribwr Grasslands Location Grid Ref: SS870830 JNCC Site Code: UK0030113 Size: 58.35 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	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 particular, poor weather conditions during the adult flight period will reduce opportunities for mating, egg-laying and dispersal from core areas. Weather conditions during early spring influence the rate of larval development of the marsh fritillary and the effects of the parasitic wasp (see below). This factor is outside the influence of the site manager and an operational limit is not required. ▪ **Parasites** - The larvae of marsh fritillaries can be parasitised by species of braconid wasp of the *Cotesia* genus. The parasites can have good years and infect a large number of larval webs, causing a crash in the subsequent adult population of marsh fritillary. This factor is outside the influence of the site manager; and an operational limit is not required.
Landowner/ Management Responsibility	▪ N/A
HRA/AA Studies undertaken that address this site	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 ▪ 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 it 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: UK0030139** **Size: 6.47** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
Site Description	Dunraven Bay SAC is situated on a southwest facing cliff about 1km south east of the village of Southerndown in the Vale of Glamorgan. The coastline is generally eroding and the 20 or so plants of shore dock growing here on damp coastal limestone are the only remnant of the species former Bristol Channel range. This has now declined to six individuals due to cliff falls removing plants. The Dunraven Bay population is a significant seed-source for recolonisation of Bristol Channel dunes and beachheads when future management restores these habitats to favourable condition.
Qualifying Features	Annex II Species primary reason for selection: ▪ Shore dock *Rumex rupestris*
Conservation Objectives	**Conservation Objective for Feature 1:** ***Rumex rupestris* (shore dock)** Vision for feature 1 The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: ▪ There are at least 10 mature plants at the site ▪ The plant present are flowering and setting seed ▪ The population is stable and viable in the long term. Performance indicators for Feature 1 The performance indicators are part of the conservation objective, not a substitute for it. Assessment of plans and projects must be based on the entire conservation objective, not just the performance indicators. The performance indicators can be found within the Dunraven Bay Management Plan.

Site Name: Dunraven Bay **Location Grid Ref: SS886727** **JNCC Site Code: UK0030139** **Size: 6.47** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
Component SSSIs	▪ Southerndown Coast SSSI A map of the site can be viewed on the CCW website.
Key Environmental Conditions (factors that maintain site integrity	▪ **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	**Conservation Status of Feature 1:** ***Rumex rupestris* (shore dock)** In September 2003, 14 plants with flowering spikes greater than 10cm were identified (10 of which were confirmed as being shore dock). There was at least one plant found in each of the two areas, A and B. Therefore these two attributes were considered to be favourable. In October 2004, 10 plants were identified again with at least one plant in Area A and one in Area B. Therefore these attributes are again considered to be favourable. It is noted however that due to lateness in the season it was extremely difficult to locate the plants, even with binoculars and it is likely that more plants were present. In 2006 a cliff fall swept away 4 of the plants, leaving 6 remaining. The feature is therefore considered to be **unfavourable**.
Vulnerabilities (includes existing pressures and trends)	The Rumex rupestris 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

Site Name: Dunraven Bay Location Grid Ref: SS886727 JNCC Site Code: UK0030139 Size: 6.47 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	groundwater. In the very long term, the current site of the R. rupestris 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.
Landowner/ Management Responsibility	▪ N/A
HRA/AA Studies undertaken that address this site	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 ▪ 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 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.

Site Name: Kenfig/ Cynffig **Location Grid Ref: SS790813** **JNCC Site Code: UK0012566** **Size: 1191.67** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
Site Description	Kenfig is a largely intact dune system in south Wales with extensive areas of fixed dune vegetation with red fescue *Festuca rubra* and lady's bedstraw *Galium verum* and semi-fixed dune grassland with marram *Ammophila arenaria* and red fescue. 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 *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 Pool is a shallow lake system within the extensive sand dune system of Kenfig, alongside Swansea Bay in south Wales. The water chemistry is indicative of a coastal, alkaline lake with a moderate nutrient status. High alkalinity, conductivity, sodium and chloride values reflect this marine influence. Elevated calcium values are probably derived from marine shell remains in the sandy substrate. Large stands of common reed *Phragmites australis* are found on the pool's seaward side. Grey club-rush Scirpus *lacustris* ssp. *tabernaemontani*, sea club-rush *Scirpus maritimus*, branched bur-reed *Sparganium erectum* and yellow iris *Iris pseudacorus* are also present. The site is also designated as it is one of two sites selected for petalwort *Petalophyllum ralfsii* in south Wales and supports a large population of the species, numbering thousands of thalli. The calcareous dune system has many dune slacks that include the early successional, open slack vegetation this species requires. It also holds the largest populations of fen orchid *Liparis loeselii* in the UK, comprising about 50% of the UK resource. Management of the site is directed towards the maintenance and enhancement of the populations of fen orchid. The variety that occurs here, as at Whiteford Burrows, is var. *ovata*, which is currently known to occur only in Wales and on the coast of Brittany, as well as in the past at Braunton Burrows, Devon, England.
Qualifying Features	Annex I Habitats primary reason for selection: ▪ Fixed dunes with herbaceous vegetation (`grey dunes`)* Priority feature ▪ *Dunes with Salix repens ssp. argentea (Salicion arenariae)* ▪ Humid dune slacks

Site Name: Kenfig/ Cynffig Location Grid Ref: SS790813 JNCC Site Code: UK0012566 Size: 1191.67 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	▪ Hard oligo-mesotrophic waters with benthic vegetation of *Chara spp.* Annex I Habitats qualifying feature: ▪ Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) Annex II Species primary reason for selection: ▪ Petalwort Petalophyllum ralfsii ▪ Fen orchid Liparis loeselii
Conservation Objectives	**Conservation Objective for Feature 1 and 2:** **Humid dune slacks and Dunes with Salix *repens* ssp. argentea (*Salicion arenariae*)** NB The division between 'humid dunes' and 'dunes with *Salix repens* ssp. *argentea* is unclear and difficult to define. The humid dune slack habitat includes both successionally young and mature slacks, which equate to NVC communities SD13-16. The dunes with *Salix repens* spp. *argentea* equate to drier areas of mature dune slack, and the low hummocks found around dune slacks which support *Salix repens*. These are sometimes known as hedgehog dunes. Because of the difficulties in separating these two habitats, for the purposes of monitoring these features are considered together. Vision for feature 1 The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: ▪ Dunes with Salix repens and humid dune slacks will occur as part of the dune system, their location will be determined by natural processes and appropriate grazing management ▪ A range of successional stages will be found in both features ▪ Factors affecting the features will be under control

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	Performance indicators for Feature 1 & 2 The performance indicators are part of the conservation objective, not a substitute for it. Assessment of plans and projects must be based on the entire conservation objective, not just the performance indicators. The performance indicators can be found within the Kenfig Management Plan. **Conservation Objective for Feature 3:** **Fixed dunes with herbaceous vegetation (`grey dunes`)** Vision for feature 3 The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: ▪ Fixed dunes with herbaceous vegetation (grey dunes) will occur where older, shifting dunes become more stabilised and in early successional stages become colonised by lichens and other species indicative of the transition from less mobile habitat. ▪ The habitat will encompass a range of successional stages throughout the area, determined by patterns of natural factors and grazing. ▪ Grey dunes will comprise a significant part of the dune system but will increase and decrease in extent and location as natural processes determine the landscape of the dune systems ▪ All factors are under management control Performance indicators for Feature 3 The performance indicators are 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

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	performance indicators can be found within the Kenfig Management Plan. **Conservation Objective for Feature 4:** **Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp.** Vision for feature 4 The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: ▪ Submerged Chara beds (mainly *Chara aspera* and *C. virgata*) growing in relatively shallow water form the predominant submerged macrophyte vegetation throughout most of the lake. ▪ Chara occur at more than 50% frequency along regular surveillance transects within the Western and Central arms. ▪ Charophyte species and uncommon pondweeds such as *Potamogeton gramineus* and *P. x nitens* are present in other embayments and pools, including *Tolypella glomerata* in dune pools. ▪ The lake is spring-fed so nutrient levels remain low. One of the main nutrients (phosphorus) reaches no more than 25 micrograms per litre in regular sampling areas. Nitrogen levels in the water are low (less than 1 milligram per litre) and declining or stable. ▪ The lake water is clear, but well vegetated with dense beds of submerged and marginal plants. A Secchi disc is visible on the lake bed in the deepest part of the lake (2.6m). ▪ Water depth is relatively stable, fluctuating naturally with groundwater. ▪ Reed, swamp and fringing bur-reed are restricted to shallow zones – covering not more than 10 % of the site. ▪ All factors affecting the achievement of these conditions are under control. Performance indicators for Feature 4

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	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. **Conservation Objective for Feature 5:** **Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)** Vision for feature 5 The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: ▪ The quality of the saltmarsh is within specified limits ▪ There is no increase in erosion along the length of the transition from salt marsh to sand dune ▪ The saltmarsh flora will continue to include the following scarce species; *Limonium binervosum*, and *Frankenia laevis* ▪ Light grazing by rabbits and /or stock will continue to be tolerated within limits ▪ The damaging effects of pony riding will have been reduced or eliminated Performance indicators for Feature 5 The performance indicators are part of the conservation objective, not a substitute for it. Assessment of plans and projects must be based on the entire conservation objective, not just the performance indicators. The performance indicators can be found within the Kenfig Management Plan. **Conservation Objective for Feature 6:** **Petalwort *Petalophyllum ralfsii***

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	Vision for feature 6 *Petalophyllum ralfsii* will continue to be found at its current locations in each of the two SSSI within the SAC. The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: The species will be found where conditions are suitable in sufficient numbers to form a viable and sustainable population The population will vary from year to year depending on conditions, especially in drier years, but the long term population will remain steady and sustainable Suitable dune slacks will have patches of bare ground that is being colonised by jelly lichens (*Collema* spp.) and *Barbula* mosses. The factors affecting the feature are under control Performance indicators for Feature 6 The performance indicators are part of the conservation objective, not a substitute for it. Assessment of plans and projects must be based on the entire conservation objective, not just the performance indicators. The performance indicators can be found within the Kenfig Management Plan. **Conservation Objective for Feature 7:** **Fen orchid *Liparis loeselii*** Vision for feature 7 The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:

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	▪ Sufficient suitable habitat is present to support the populations ▪ The factors affecting the feature are under control Performance indicators for Feature 7 The performance indicators are part of the conservation objective, not a substitute for it. Assessment of plans and projects must be based on the entire conservation objective, not just the performance indicators. The performance indicators can be found within the Kenfig Management Plan.
Component SSSIs	▪ Cynffig/ Kenfig (units 1 to 9) ▪ Merthyr Mawr Warren (10 to 16) 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.
Key Environmental Conditions (factors that maintain site integrity	▪ **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. ▪ **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: o Upper limit:

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- Mean annual levels of Total Phosphate (TP) should not exceed 24 micrommes 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:
  - >5mg l^{-1} dissolved O_2 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):
  - Acid - 4 keq ha^{-1} yr^{-1} (calendar year)
  - NO_X as NO_2 - 30 µg m^{-3} (calendar year)
  - SO_2 – 20 µg m^{-3} (calendar year and winter Oct 1 to Mar 31)
  - Nitrogen - 10-20 kg ha^{-1} yr^{-1} (calendar year)
  - Ammonia - 3 µg m^{-3} (calendar year)
  - Ozone – 3000 ppb h (3 months)

- **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 *P. ralfsii* 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

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	natural movement of sand. This should allow the continued process of slack formation, maintaining a presence of embryo and successionally young slacks on site. ▪ **Management of Grazing/ Scrub** - Humid dune slacks and dunes with *Salix repens* are maintained by the seasonally high water table, grazing and scrub control. Grazing by domestic stock facilitates rabbit and hare grazing since rabbits tend to graze where the sward is already short. Grazing levels should be set to allow the maintenance of a low, species rich sward throughout the majority of the dune slacks and to reduce the spread of scrub. 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 *Epipactis palustris*. ▪ **Fishery** (Hard oligo-mesotrophic waters with benthic vegetation of *Chara* 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	**Conservation Status and Management Requirements of Feature 1 & 2:** **Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*) and Humid dune slacks** These two features have been considered together as the issues and management of both are intimately

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	linked. Conservation Status of Feature 1 & 2 No distinction has been made between the Humid dune slacks and Dunes with *Salix repens* ssp. *argentea* as outlined in 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 successionally young habitat in 1997. As the system is stabilising and no new natural areas of habitat have been created, we can assume that the slack habitats outside of the sample plots are also unfavourable, despite mowing and scraping has artificially created areas of habitat (see comments below). Therefore, the Humid dune slacks and Dunes with *Salix repens* ssp. *argentea* at Kenfig SAC are considered to be in **unfavourable declining** condition (August 2006 SAC Monitoring Report). **Conservation Status and Management Requirements of Feature 3:** **Fixed dunes with herbaceous vegetation (`grey dunes`)** 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. **Conservation Status and Management Requirements of Feature 4:** **Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp.** Conservation Status of Feature 4 The Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp. feature of Kenfig/Cynffig SAC is considered to be in **unfavourable recovering** conservation status (2006).

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	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) **Conservation Status and Management Requirements of Feature 5:** **Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)** 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). **Conservation Status and Management Requirements of Feature 6: Petalwort *Petalophyllum ralfsii*** Conservation status of Feature 6 The *Petalophyllum ralfsii* of Kenfig/Cynffig SAC is considered to be in **unfavourable declining** conservation status (November 2007). This analysis is based on the most recent SAC monitoring report for the feature, which shows that the performance indicators for the habitat and the extent, distribution and numbers of thalli were not met. Long-term surveillance indicates that *P. ralfsii* used to have a much wider distribution and that it was regularly found with greater than 50 thalli per m² in more than two discrete locations within more than two dune slacks. **Conservation Status and Management Requirements of Feature 6:** **Fen Orchid *Liparis loeselii*** Conservation status of Feature 6 The *Liparis loeselii* of Kenfig/Cynffig SAC is considered to be in **unfavourable declining** conservation status (July 2007).

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

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	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 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 *P. ralfsii* habitat should be continued, with access to sensitive habitats discouraged via deviation onto other less sensitive habitat. ▪ **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 *Liparis loeselii* and *Petalophyllum ralfsii*, which are species of early successional changes. ▪ **Air quality*:** ○ 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.

* 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

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	▪ **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 *Elodea canadensis*. This species is currently rare. ▪ The **Fen Orchid** is also under threat from: o Natural processes of succession in dune slacks. o Work undertaken to stabilise sand dunes. ▪ The **Pealwort** is also under threat from: o Loss of habitat due to development, dune stabilisation and natural succession. o Drainage. o Recreation. o Botanical collection. 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.
Landowner/ Management Responsibility	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

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	through a separate lease with The Kenfig Hill and District Angling Association.
HRA/AA Studies undertaken that address this site	AA of the Neath Port Talbot UDP June 2007: http://www.neath-porttalbot.gov.uk/pdf/udp_200706_appropriate_assessment.pdf ▪ 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: o Water quality; o Water quantity; o Air Pollution; o Human interference; and o Invasive species. 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 ▪ 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: o sediment transportation pathways and linkage; and o hydrological pathways and processes. 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 ▪ The Screening concludes that development resulting from the LDP in the proximity of the SAC is therefore

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	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.

APPENDIX 2

SCREENING OF LOCAL FLOOD RISK MANAGEMENT STRATEGY OBJECTIVES

Objective References: Plan/ Proposal/Strategy	Potential effects (Criteria 1-8, see key) Rationale/ Comments	Likely Significant Effect (LSE) No X Yes ✓ Uncertain ?
LFRMS Measures		
Outline key Measures in turn	***Brief description of potential effect, using Criteria 1-8 as relevant.***	***Identification of LSE***
Prepare a BCBC-specific SUDS policy and co-ordinate work of SUDS Approving and Adopting Body. These policies will safeguard natural conservation and protect the receiving environment.	The specific LFRMS measure is intended to protect the natural environment, including biodiversity.	***X***
Prepare local supplementary planning guidance on Green Infrastructure	There is not a pathway between the specific LFRMS measure (the impact source) and the European site's interest features (the receiver) – whether direct, indirect or by induced pathway.	***X***
Work with DCWW to encourage retrospective SuDS and cost effective solutions to remove surface water from combined sewers. These solutions will ensure that biodiversity interests are protected in accordance with national regulations and guidance.	The specific LFRMS measure is intended to protect the natural environment, including biodiversity.	***X***
Continue with the culvert location/investigation/condition survey work	There is not a pathway between the specific LFRMS measure (the impact source) and the European site's interest	***X***

Objective References: Plan/ Proposal/Strategy	Potential effects (Criteria 1-8, see key) Rationale/ Comments	Likely Significant Effect (LSE) No X Yes ✓ Uncertain ?
	features (the receiver) – whether direct, indirect or by induced pathway.	
Designate third party surface water assets, which in the opinion of the LLFA have a beneficial role in flood risk management so that the flood risk is not adversely affected.	There is not a pathway between the specific LFRMS measure (the impact source) and the European site's interest features (the receiver) – whether direct, indirect or by induced pathway.	***X***
Record highway drainage on map-info: In order to provide better management of the system it has been considered appropriate to commence a programme of identifying and recording the highway drainage network onto a database and map-info layer.	There is not a pathway between the specific LFRMS measure (the impact source) and the European site's interest features (the receiver) – whether direct, indirect or by induced pathway.	***X***
Prepare a rolling programme of asset maintenance: it is proposed to prepare an ongoing inspection regime, define action points for intervention works and a programme for refurbishment work.	There are possible pathways between the specific LFRMS measure (the impact source) and the European site's interest features (the receiver) – whether by direct, indirect or induced pathway.	***X***
Review pre-feasibility studies from previous flooding. It is likely that previous conclusions may, on reflection, be reinterpreted and more effective ways of managing the flood risk be apparent. Any new management proposal will be environmentally friendly and sustainable.	The specific LFRMS measure is intended to protect the natural environment, including biodiversity.	***X***
Prepare a policy on culverting: This is likely to be a presumption against culverting, in order to preserve	There is not a pathway between the plan (the impact source) and the European	***X***

Objective References: Plan/ Proposal/Strategy	Potential effects (Criteria 1-8, see key) Rationale/ Comments	Likely Significant Effect (LSE) No X Yes ✓ Uncertain ?
the ecological benefits of open watercourses and accessibility for maintenance. The culverting policy will accord with national guidance and environment regulations.	site's interest features (the receiver) – whether direct, indirect or by induced pathway.	
Raise public awareness of riparian duties and responsibilities and of risk management measures that they can do themselves. These measures will safeguard natural conservation and protect the receiving environment.	The specific LFRMS measure is intended to protect the natural environment, including biodiversity.	***X***
Encourage public to monitor grids/watercourses and report issues	There is not a pathway between the specific LFRMS measure (the impact source) and the European site's interest features (the receiver) – whether direct, indirect or by induced pathway.	***X***
Use permissive powers to carry out enforcement/maintenance works on watercourses and culverts. This could include serving appropriate notices and if required carrying out necessary works. These works will not cause any harm to features of the natural environment – including protected or priority species, habitats and wildlife corridors.	The specific LFRMS measure is intended to protect the natural environment, including biodiversity.	***X***
Implement and regularly review the Bridgend County Borough Council Flood Plan: The Plan contains details to identify areas with a greater level of local flood risk, key infrastructure and vulnerable people and how the	The specific LFRMS measure is intended to protect the natural environment, including biodiversity.	***X***

Objective References: Plan/ Proposal/Strategy	Potential effects (Criteria 1-8, see key) Rationale/ Comments	Likely Significant Effect (LSE) No X Yes ✓ Uncertain ?
reactive plan will be activated, the roles and responsibilities of key personnel. **Any new action to be implemented will safeguard natural conservation and protect the receiving environment**		
Implement and regularly review the Wildmill Community Flood Plan: The Plan aims to raise awareness of risk, to assist vulnerable people in the Community and to implement preventative measures in Community buildings. These measures will safeguard natural conservation and protect the receiving environment.	The specific LFRMS measure is intended to protect the natural environment, including biodiversity.	***X***
Ensure the principles of Bridgend County Borough Council SFCA are incorporated into planning decisions. The SFCA was prepared to support the production of the Local Development Plan and its main objective is to enable a strategic and proactive approach to Flood Risk Management in Development Planning.	The specific LFRMS measure is intended to protect the natural environment, including biodiversity.	***X***
Investigation of Flooding Incidents, recording results and offering advice: Advice and assistance, where possible, will be offered to the relevant parties to mitigate and resolve any issues in an environmentally sustainable manner. .	The specific LFRMS measure is intended to protect the natural environment, including biodiversity.	***X***

Objective References: Plan/ Proposal/Strategy	Potential effects (Criteria 1-8, see key) Rationale/ Comments	Likely Significant Effect (LSE) No X Yes ✓ Uncertain ?
Maintain a register of surface water assets: In accordance with S21 of the FWMA 2010, BCBC has prepared an asset register of Structures and features, which in the opinion of the authority are likely to have a significant effect on flood risk.	There is not a pathway between the specific LFRMS measure (the impact source) and the European site's interest features (the receiver) – whether direct, indirect or by induced pathway.	***X***
Undertake regular inspections of "hot-spot surface water assets" including highway drainage network: to ensure that inlet grids are clear in locations where blockages may lead to flooding to properties.	There is not a pathway between the specific LFRMS measure (the impact source) and the European site's interest features (the receiver) – whether direct, indirect or by induced pathway.	***X***
Provide flood risk observations and advice on Development Applications including promotion of SuDS which safeguards and protect the environment. (Developers are required to show that the most sustainable drainage system for the site has been chosen).	The specific LFRMS measure is intended to protect the natural environment, including biodiversity.	***X***
Inspect coastal defence infrastructure: Minor defects noted are repaired as soon as possible; any major works required are subject to holding repairs whilst long-term solutions are implemented.	There are possible pathways between the specific LFRMS measure (the impact source) and the European site's interest features (the receiver) – whether by direct, indirect or induced pathway.	***?***
Implement and regularly review the provisions of the Shoreline Management Plan: BCBC is a member of the Swansea and Carmarthen Bay Coastal Group tasked with the responsibility for preparing and updating the	The specific LFRMS measure is intended to protect the natural environment, including biodiversity.	***X***

Objective References: Plan/ Proposal/Strategy	Potential effects (Criteria 1-8, see key) Rationale/ Comments	Likely Significant Effect (LSE) No X Yes ✓ Uncertain ?
Shoreline Management Plan.		
Implement the provisions of the Catchment Flood Management Plan: The plan considers the management of flooding over the next 50 to 100 years. It considers the increased risks due to climate change, effects of flooding on communities, infrastructure and the environment and potential management options for the future.	The specific LFRMS measure is intended to protect the natural environment, including biodiversity.	***X***
Implement the policies and provisions of the Local Development Plan. The Plan sets out the land-use planning policies of the County Borough which are used in the determination of planning applications.	The specific LFRMS measure is intended to protect the natural environment, including biodiversity.	***X***
Provide advice on management of flood risk: this includes explanations and guidance regarding responsibilities and maintenance, also practical advice on flood protection/mitigation measures. These will accord with national guidance and environment regulations.	The specific LFRMS measure is intended to protect the natural environment, including biodiversity.	***X***
Collaborative work between departments on investigations, maintenance and improvements to surface water assets and management regimes. These will accord with national guidance and environment regulations.	The specific LFRMS measure is intended to protect the natural environment, including biodiversity.	***X***

Objective References: Plan/ Proposal/Strategy	Potential effects (Criteria 1-8, see key) Rationale/ Comments	Likely Significant Effect (LSE) No X Yes ✓ Uncertain ?
Liaison with other risk management authorities and owners regarding maintenance of assets: BCBC has a good working relationship with most major owners of surface water assets (such as DCWW, Network Rail and Forestry Commission Wales) and works in collaboration to resolve issues	The specific LFRMS measure is intended to protect the natural environment, including biodiversity.	***X***
Liaison with Welsh Government and other LLFAs on flood risk management: Receives guidance and partakes in workshops and regularly discusses best practice	The specific LFRMS measure is intended to protect the natural environment, including biodiversity.	***X***
Undertake ad hoc maintenance of assets: This involves raising community awareness to the presence of surface water systems, riparian duties and the consequences of blockages is a priority and assist in monitoring conditions and planning maintenance works. These will accord with national guidance and environment regulations.	The specific LFRMS measure is intended to protect the natural environment, including biodiversity.	***X***
Electronic flood warning sensors at strategic culverts: The system sends text alerts, to duty officers and the Bryncethin CSU, should water levels rise above certain levels, which allows time for the location to be checked for blockages, or, to warn residents and deploy assistance (sandbags, etc.) if required	There is not a pathway between the specific LFRMS measure (the impact source) and the European site's interest features (the receiver) – whether direct, indirect or by induced pathway.	***X***
Consenting Works on Ordinary Watercourses: BCBC will review applications and consult internally and	The specific LFRMS measure is intended to protect the natural environment, including	***X***

Objective References: Plan/ Proposal/Strategy	Potential effects (Criteria 1-8, see key) Rationale/ Comments	Likely Significant Effect (LSE) No X Yes ✓ Uncertain ?
externally on any proposals to ensure that proposals do not have a detrimental effect on flood risk or the natural environment including biodiversity.	biodiversity.	

Policy Screening: Determining Potential Effects Criteria Key (Tyldesley, 2006)	
Criteria No	**Rationale**
Reasons why a policy will not have an effect on a European Site	
1.	The policy will steer development away from European sites and associated sensitive areas.
2.	The policy is intended to protect the natural environment, including biodiversity.
3.	The policy is intended to conserve or enhance the natural, built or historic environment, and such enhancements are unlikely to affect a European site.
4.	The policy concentrates development in existing urban areas, steering development away from European sites and sensitive areas.
5.	Where there is not a pathway between the plan (the impact source) and the European site's interest features (the receiver) – whether direct, indirect or by induced pathway.
Reasons why a policy could have an effect on a European Site	
6.	The plan steers a quantum or type of development towards or encourages development in, an area that includes a European site or an area where development may indirectly affect a European site
7.	Where there is a pathway between the plan (the impact source) and the European site's interest features (the receiver) – whether by direct, indirect or induced pathway.
Reasons why a policy would be likely to have a significant effect	
8.	The policy makes provision for a quantum or kind of development that in the location(s) proposed would be likely to have a significant effect on a European site. **This is evident whenever site conservation objectives are contravened.** Appropriate assessment required.

APPENDIX 3

INFORMATION:

Plans, Programmes & Projects (in-combination Effects)

Plans, Programmes and Projects Review

National

National	
People, Places, Futures: The Wales Spatial Plan (update) 2008: http://wales.gov.uk/consultations/currentconsultation/improveps/wspconsult/?lang=en	
Plan Type	**Regional Spatial Strategy**
Plan Owner/ Competent Authority	**Welsh Assembly**
Currency	**Adopted 2004**
Region/Geographic Coverage	**Wales**
Sector	**Planning**
Related work SA/SEA HRA/AA	**SEA of the Wales Spatial Plan Update 2008:** *http://wales.gov.uk/consultations/currentconsultation/improveps/wspconsult/?lang=en*
Document Details	**Potential impacts that could cause 'in-combination' effects**
The Wales Spatial Plan sets out an agenda for the sustainable development of Wales over the next 20 years. The purpose of the update is to reflect new drivers of change and to give status to the Area work which has developed over the past two years. The plan aims to make South East Wales a networked city-region able to provide quality of life for the population and to be able to compete with comparable areas in the UK and the EU for investment and growth. The pattern of housing development across South East Wales is seen as developing a greater mix and balance of housing in the Heads of the Valleys and Connections Corridor whilst ensuring that development in the Coastal Belt of South East Wales does not undermine this housing market. There should also be a targeted action to secure a supply of affordable	▪ Direct loss of habitat through development - One of the three Strategic Opportunity Areas identified is 'the area around Llantrisant and North West Cardiff'; Cardiff Beech Woods SAC is in close proximity to this. ▪ Housing and employment growth may lead to increased transport movements - the potential for in-combination effect is greater where housing sites are in close proximity to Natura 2000 sites. ▪ New communities require increased infrastructure – potential for land take, pollution increase, disturbance/ severance of habitats and species. ▪ Growth in the requirement for waste management/ transport disposal from new communities and businesses has the potential to increase pollution, and introduce land take issues. ▪ Recreation pressures may result from housing developments near/ adjacent to Natura 2000 sites. ▪ Atmospheric pollution generated as a result of housing, employment

National	
People, Places, Futures: The Wales Spatial Plan (update) 2008: http://wales.gov.uk/consultations/currentconsultation/improveps/wspconsult/?lang=en	
housing. Three Strategic Opportunity Areas (SOA) were identified as offering potential regional benefits from their sustainable development. These areas are: developments linked to the dualling of the Heads of the Valleys road (A465); the area around Llantrisant and North West Cardiff which has seen major growth over the past 30 years; and development in the Vale of Glamorgan linked to the proposed St Athan military training academy. The Plan states that improvements to transport are essential to making the city-region work, and to the regeneration of Valleys communities, highlighting the importance of external transport links, such as the M4, east/west rail links and Cardiff International Airport.	and transport growth.

National	
Wales Transport Strategy 2006: http://new.wales.gov.uk/consultations/closed/busandeconcloscons/951740/?lang=en	
Plan Type	**Transport**
Plan Owner/ Competent Authority	**Welsh Assembly Government – Transport Wales**
Currency	**Consultation document (ended Oct 2006)**
Region/Geographic Coverage	**Wales – with regional sections Including South East Wales Transport Alliance (SEWTA) region**
Sector	**Transport**
Related work SA/SEA HRA/AA	**N/A**
Document Details	**Potential impacts that could cause 'in-combination' effects**
The Wales Transport Strategy (WTS) Consultation Document is the 'parent document' to RTPs and sets out how the Welsh Assembly Government proposes to deliver its transport duty to 2030. The WTS vision is: 'To provide a framework that connects national, regional and local policy to maximise the contribution that transport can make to achieving a sustainable future for Wales, where actions for social, economic and environmental improvement work together to create positive change'. The WTS seeks to maximise the contribution transport can make to delivering 15 social, economic and environmental outcomes: **Social** ▪ Improving access to healthcare ▪ Improving access to education and life-long learning ▪ Improving access to shopping and leisure facilities ▪ Encouraging healthy lifestyles	▪ Improving the efficient, reliable and sustainable movement of people and freight as well as reducing the contribution of transport to greenhouse gas emissions will help to mitigate or offset any increase in diffuse air pollution as a result of this Strategy.

National	
Wales Transport Strategy 2006: http://new.wales.gov.uk/consultations/closed/busandeconcloscons/951740/?lang=en	
▪ Improving the actual and perceived safety of travel **Economic** ▪ Improving connectivity (links) within Wales and internationally ▪ Improving the efficient, reliable and sustainable movement of people ▪ Improving the efficient, reliable and sustainable movement of freight ▪ Improving access to employment opportunities ▪ Improving access to key visitor attractions ▪ Increasing the use of more sustainable materials in the maintenance of Wales' transport assets and in the provision of new transport infrastructure **Environmental** ▪ Reducing the contribution of transport to greenhouse gas emissions, adapting to the impacts of climate change and reducing the contribution of transport on air pollution and other harmful pollutant emissions ▪ Reducing the negative impact of transport on the local environment - water pollution, land contamination, noise and vibration, light pollution and links between communities ▪ Reducing the negative impact of transport on our heritage - landscape, townscape, historical environment and Wales' distinctiveness ▪ Reducing the negative impacts of transport on biodiversity and increasing positive impacts	

National	
The Trunk Road Forward Programme 2002: http://wales.gov.uk/topics/transport/roads/1397701/?lang=en	
Plan Type	**Transport**
Plan Owner/ Competent Authority	**Welsh Assembly Government – Transport Wales**
Currency	**Consultation document (ended Oct 2006)**
Region/Geographic Coverage	**Wales – with regional sections Including South East Wales Transport Alliance (SEWTA) region**
Sector	**Transport**
Related work SA/SEA HRA/AA	**N/A**
Document Details	**Potential impacts that could cause 'in-combination' effects**
Phase 1 (Start March 2007) A465 Abergavenny to Gilwern ▪ The scheme comprises the on-line widening of some 6km of the A465 between the existing Hardwick Roundabout and Glanbaiden junction, and then continues for just under 1km to Gilwern. Includes the areas: Hardwicke roundabout, Llanfoist, West of Llanfoist, Govilon and Gilwern East. http://new.wales.gov.uk/docrepos/40382/4038231141/403821125/Roads/newroadsphase1/40382112415/Section1.pdf?lang=en M4 Castleton to Coryton Widening ▪ A 13.5km (8.0 mile) long scheme to widen from dual two lane to dual three lane motorway standard at an estimated cost of £71m. The main programme of construction work started in May 2007. Reconstruction and realignment of the motorway within the central reserve is currently underway between Junctions 30 and 32. This will continue until June 2008. The main widening will then follow in core phases: ○ June 2008 - November 2008: J30 to J32 - Westbound	▪ A465 Abergavenny to Gilwern - Runs in close proximity and across the River Usk SAC. Potential for disturbance at point which the A465 crosses the River Usk and for pollution as a result of construction activities. ▪ M4 Castleton to Coryton Widening - Junction 32 of the M4 lies approximately 1.2km away from Cardiff Beech Woods SAC. ▪ A465 Gilwern to Brynmawr - This section of the A465 runs directly through Cwm Clydach Woodlands SAC and Usk Bat Sites SAC. Potential for direct land take, increased disturbance for bat population and possible pollution as a result of construction activities. ▪ New M4 Magor to Castleton - This development would involve the building of a bridge across the River Usk SAC. Potential for disturbance at point which the bridge crosses the River Usk and for pollution as a result of construction activities. There is potential for the bridge to have significant effects on migratory fish populations. ▪ All the development proposed has the potential to increase levels of traffic and therefore contribute to an increase in diffuse air pollution.

National	
The Trunk Road Forward Programme 2002: http://wales.gov.uk/topics/transport/roads/1397701/?lang=en	
widening. ○ November 2008 - April 2009: J29 to J30 - Eastbound widening. ○ April 2009 - August 2009: J29 to J30 - Central Reserve works. ○ August 2009 - December 2009: J29 to J32 - Westbound widening. **Phase 2 (Could be ready to start by April 2010)** A465 Brynmawr to Tredegor ▪ The A465 Trunk Road is part of the Trans European Road Network and is an important strategic route in South Wales, linking the Midlands and Northern England to West Wales and Ireland. Includes the areas: The Dingle, Blaen-y-Cwm Reservoir, Garn Lydan, Rassau Industrial Estate East, Rassau Industrial Estate West and Nantybwch Junction (phase two). http://new.wales.gov.uk/docrepos/40382/4038231141/403821125/Roads/newroadsphase1/40382112415/Section3.pdf?lang=en A465 Gilwern to Brynmawr ▪ The A465 Trunk Road is part of the Trans European Road Network and is an important strategic route in South Wales, linking the Midlands and Northern England to West Wales and Ireland. Includes the areas: Gilwern East (phase two), Gilwern West, Maesygwartha, Upper Clydach, Blackrock and Brynmawr. http://new.wales.gov.uk/docrepos/40382/4038231141/403821125/Roads/newroadsphase1/40382112415/Section2.pdf?lang=en	

National	
The Trunk Road Forward Programme 2002: http://wales.gov.uk/topics/transport/roads/1397701/?lang=en	
New M4 Magor to Castleton ▪ The Welsh Assembly Government has proposed a new dual 3-lane motorway link between Magor and Castleton as part of the optimum long-term wider integrated transport strategy for South-East Wales. The new dual 3-lane motorway will be 15 miles (24 km) long, linking Junction 23A at Magor and Junction 29 at Castleton. The route crosses the Gwent Levels, including several Sites of Special Scientific Interest (or SSSIs), so great care will be taken to minimise the effects on the SSSIs by using previous industrial land where feasible. http://new.wales.gov.uk/docrepos/40382/4038231141/403821125/Roads/newroadsphase2/NewM4/New_M4_Preferred_Route.pdf?lang=en **Phase 3 (Unlikely to start before April 2010)** A4042 Llanellen ▪ A narrow bridge crossing with limited pedestrian facilities and narrow winding approach from the south. Cardiff International Airport Access ▪ The scheme is proposed to address access problems to Cardiff International Airport and Culverhouse Cross. Detailed investigations are underway to ascertain how well various options address the identified issues whilst taking into account environmental, social and economic considerations. As part of the ongoing study traffic surveys and roadside interviews with travellers on roads in the Vale of Glamorgan area will be carried out in early March 2008. It is anticipated that solutions which are considered to best	

National	
The Trunk Road Forward Programme 2002: http://wales.gov.uk/topics/transport/roads/1397701/?lang=en	
address the issues will be the subject of a public consultation planned to start in July 2008. The study is expected to be complete by the end of 2008. http://new.wales.gov.uk/topics/transport/roads/NewRoads3/ImprovingAccessToCardiffAirport/?lang=en A465:A470 to Hirwaun A465 Dowlais Top to A470 ▪ Includes the areas: Dowlais Top Junction (phase two), Penywern, Galon Uchaf, Gurnos, Cefn Coed, A470 Junction and West of A470. http://new.wales.gov.uk/docrepos/40382/4038231141/403821125/Roads/newroadsphase1/40382112415/Section5.pdf?lang=en **On Hold** A4042 Penperlleni A40 Abergavenny	

National	
Minerals Planning Policy Wales 2001: http://new.wales.gov.uk/topics/planning/policy/minerals/mineralsplanning?lang=en	
Plan Type	**Minerals & Waste**
Plan Owner/ Competent Authority	**Welsh Assembly Government**
Currency	**2001 - ?**
Region/Geographic Coverage	**Wales**
Sector	**Minerals**
Related work SA/SEA HRA/AA	**N/A**
Document Details	**Potential impacts that could cause 'in-combination' effects**
Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar Sites 23. Minerals proposals within or likely to significantly affect potential and classified SPAs, designated, candidate or proposed SACs or Ramsar sites must be carefully examined in relation to the site's conservation objectives in order to ascertain whether or not they are likely to be significant in terms of the ecological objectives of the site. For the purpose of considering development proposals affecting them, potential SPAs and candidate SACs should be given the same protection and treated as classified SPAs and designated SACs. As a matter of policy, the Assembly has chosen to apply the same considerations to Ramsar sites. If a proposal individually or in combination with other proposals and sites with extant planning permission is likely have a significant effect on such a site, an appropriate assessment of the implications for the site must be made by the planning authority. If the proposal would adversely affect the integrity of the site (taking into account advice from the Countryside Council for Wales) and conditions would not remove this effect, planning permission will not be granted unless there are:	No locations are specified. The document contains strong policies in regard to the protection of Natura 2000 and Ramsar sites.

National	
Minerals Planning Policy Wales 2001: http://new.wales.gov.uk/topics/planning/policy/minerals/mineralsplanning?lang=en	
▪ no alternative solutions (i.e. alternative supplies cannot be made available at reasonable cost; and there is no scope for meeting the need in some other way); and, ▪ imperative reasons of overriding public interest – including those of a social and economic nature. In determining this, authorities should have regard to considerations such as the need for the development in terms of UK mineral supply; and, the impact of permitting the development or refusing it on the local economy. The Assembly would consider the question of whether there are imperative reasons of overriding public interest for the development, taking account of advice from the Countryside Council for Wales, and bearing in mind the views of any other competent authority. **Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs)** 25. Minerals proposals within SSSIs or likely to affect them should be very carefully considered, and where the impact is likely to be significant they should be subject to the most rigorous examination, and the need for the mineral must be balanced against environmental and other relevant considerations. Particular care should be taken in assessing proposals that are likely to affect an SSSI which has been designated an NNR24. Consideration must always include an assessment of: ▪ the need for the development in terms of UK considerations of mineral supply; ▪ the impact of permitting the development or refusing it on	

National	
Minerals Planning Policy Wales 2001: http://new.wales.gov.uk/topics/planning/policy/minerals/mineralsplanning?lang=en	
the local economy; ▪ whether alternative supplies can be made available at reasonable cost; and the scope for meeting the need in some other way; ▪ any detrimental effect of the proposals on the nature conservation interest of the site in terms of habitat, protected species, bio-diversity, environment and landscape, and the extent to which that should be moderated; and, ▪ in the case of extensions to existing quarries and other mineral extraction sites, the extent to which the proposal would achieve an enhancement to the nature conservation and biodiversity interest of the site. **Proposals for opencast or deep-mine development or colliery spoil disposal will be expected to meet the following requirements otherwise they should not be approved:** ▪ within or likely to affect Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs), Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar Sites must meet the additional tests set out in paragraphs 23 and 25 above;	

National	
Welsh Coastal Tourism Strategy Draft Final Strategy Document 2007: http://new.wales.gov.uk/docrepos/40371/403823114/403821/1257853/strategy?lang=en	
Plan Type	**Coastal Strategy**
Plan Owner/ Competent Authority	**Welsh Assembly Government**
Currency	**2007 - ?**
Region/Geographic Coverage	**Wales**
Sector	**Planning**
Related work SA/SEA HRA/AA	
Document Details	**Potential impacts that could cause 'in-combination' effects**
South East – The Capital Network South East Wales is the most populous area of Wales with the coast zone being a main economic driver. Cardiff and Newport are both coastal located cities and the former has an important tourism role as a capital city, regional shopping and cultural centre, a major sporting venue and increasingly as a conference centre and the Ryder Cup at Newport in 2010. The regeneration of Cardiff Waterfront has created an important arc of leisure and recreation facilities around an impounded area of water. The area also has the more traditional seaside resorts of Barry and Penarth and in the Vale of Glamorgan an extensive length of Heritage Coast. In the east of the area the Gwent Levels are important for its wildlife particularly migrating birds. Elements to consider in the South East Spatial Plan Area ▪ Establish and implement standards with regard to tourism facilities, information, accommodation and visitor	▪ Direct loss of habitat through development - Severn Estuary SPA, Ramsar and cSAC is present all along the Cardiff coastline. ▪ Increased levels of tourism and employment may lead to increased transport movements. ▪ Atmospheric pollution generated as a result of employment and transport growth. ▪ Increased recreational pressure through water sports. ▪ An increased level of waterborne transport and development along the coast has the potential to increase diffuse levels of water pollution.

National	
Welsh Coastal Tourism Strategy Draft Final Strategy Document 2007: http://new.wales.gov.uk/docrepos/40371/403823114/403821/1257853/strategy?lang=en	
expectations at popular coastal locations. ▪ To consider the potential of identifying a pilot area as a 'Coastal Recreation Area'. ▪ To continue to support the waterfront regeneration initiatives in Barry, Cardiff and Newport. ▪ To consider the opportunities for enhancing the role of beach wardens and voluntary/coastcare groups in the management and maintenance of beaches. ▪ To consider the potential of additional or new berths at Cardiff and Newport and the provision of visiting berths at existing marinas. ▪ To consider the improvement of facilities for cruise liners and for passengers in Cardiff. ▪ To consider opportunities for exploiting the potential of food, heritage and culture.	

Regional

Regional	
The South East Wales Consultation Draft Regional Waste Plan 1st Revision Oct 2007: http://www.sewaleswasteplan.org/	
Plan Type	**Waste & Minerals**
Plan Owner/ Competent Authority	**South East Wales Regional Waste Group**
Currency	**Consultation document (ended Dec 2007) Final document due 2008**
Region/Geographic Coverage	**Wales**
Sector	**Waste**
Related work SA/SEA HRA/AA	**Sustainability Appraisal & Life Cycle Analysis of the Strategic Waste Management Options (Environment Agency Wales, 2007).**
Document Details	**Potential impacts that could cause 'in-combination' effects**
The **estimated total land area required** in South East Wales for new in-building facilities by 2013 for the seven sub-Options ranges from between 48 hectares to 108 hectares. An analysis of the potentially available land area on existing B2 or major industry sites and B2 sites that have already been allocated in development plans has shown that in each UA area for which data is available there is, at the current time, a clear surplus of developable land with a B2 planning permission or proposed use to accommodate the highest estimate of the total land area required for new in-building waste management facilities. In South East Wales there is a total of 734 developable hectares of land with a B2 planning permission or proposed use. **Biodiversity** - The footprint of statutory designated sites, including Special Areas of Conservation, Ramsar sites, Sites of Special Scientific Interest, National Nature Reserves and Special Protection Areas have all been **designated as absolute areas of constraint**, constituting areas that are unsuitable for	Natura 2000 sites have designated as absolute areas of constraint, constituting areas that are unsuitable for waste management facilities. In addition, impacts on designated sites as a result of placing waste management facilities nearby have been considered.

Regional	
The South East Wales Consultation Draft Regional Waste Plan 1st Revision Oct 2007: http://www.sewaleswasteplan.org/	
waste management facilities. These have subsequently been omitted from the search. In addition, impacts on designated sites as a result of placing waste management facilities nearby have been considered. This has been undertaken by applying buffer areas around the footprint of designated sites, which present areas of some constraint. As the distance from the designated sites increases, the level of constraint decreases as reflected by the lowering weighting. The buffer zones vary depending on the importance of the designated site; buffers have been derived from information held within current planning policy regarding siting development near such sites, the weightings are appropriate to this and reflect the distance from the designated site, as well as the type of waste facility. For biodiversity issues, the Areas of Search subsequently reflect areas that are considered to be constrained by virtue of planning policy, reflected at the broad, national level. By excluding sites of nature conservation importance and applying buffers around them representing constraints, the permanent negative effects on biodiversity, including flora and fauna, are minimised.	

Regional	
South East Wales Transport Alliance: Outline of the Regional Transport Plan Jan 2007 http://www.sewta.gov.uk/PDF/OutlineRTP-Feb07.pdf	
Plan Type	**Regional Transport Plan**
Plan Owner/ Competent Authority	**South East Wales Transport Alliance**
Currency	**Consultation document (ended Oct 2006) Final document due March 2008**
Region/Geographic Coverage	**Wales – with regional sections Including South East Wales Transport Alliance (SEWTA) region**
Sector	**Transport**
Related work SA/SEA HRA/AA	**SEA Scoping Report completed on Outline Regional Transport Plan** http://www.sewta.gov.uk/strategy.htm
Document Details	**Potential impacts that could cause 'in-combination' effects**
Our vision is "to provide a modern, integrated and sustainable transport system for south east Wales that increases opportunity, promotes prosperity and protects the environment; where public transport, walking, cycling and sustainable freight provide real travel alternatives". Our priorities build on our vision. They set the general direction of the Plan by answering the question "what really matters?" ▪ To improve access to services, facilities and employment, particularly by public transport, walking and cycling. ▪ To provide a transport system that increases the use of sustainable modes of travel. ▪ To reduce the demand for travel. ▪ To develop an efficient and reliable transport system with reduced levels of congestion and improved transport links within the SEWTA region and to the rest of Wales, the UK and Europe. ▪ To provide a transport system that encourages healthy and active lifestyles, is safer and supports local communities.	▪ The key focus of the outline regional transport plan is to rebalance capital investment away from road building towards public transport, walking and cycling, this includes investment in travel planning measures. ▪ The overarching aim of this plan is to seek long term sustainable transport solutions. Key objectives include seeking a modal shift for private and freight transports onto more sustainable modes, reducing the impact of the transport system on the natural environment, reducing greenhouse gas emissions from transport, and reducing traffic growth and congestion. ▪ The in-combination effects of the Regional Transport Plan with Local Development Plans are likely to be positive in the long term. ▪ The shared approach of these plans to deliver more sustainable transport and travel solutions for commercial and private traffic provides strong support for overarching aims to reduce air pollution which can contribute to the reduction of damaging effects to habitats and species.

Regional	
South East Wales Transport Alliance: Outline of the Regional Transport Plan Jan 2007 **http://www.sewta.gov.uk/PDF/OutlineRTP-Feb07.pdf**	
▪ To reduce significantly the emission of greenhouse gases and air pollution from transport. ▪ To ensure that land use development in south east Wales is supported by sustainable transport measures. ▪ To make better use of the existing transport system. ▪ To play a full role in regenerating south east Wales. Our main problems are: ▪ Too many people are excluded from fully participating in society because their transport is poor. ▪ People see the transport system as being unsafe. They fear the impact of motor traffic on their local communities. ▪ We have become over-dependent on the motor car. That leads to high levels of traffic congestion and consequently an inefficient transport system. ▪ Carbon emissions hasten climate change and motor traffic degrades the environment. Our strategy has five practical cornerstones: ▪ Reducing the demand for travel through better land use planning and local service provision; ▪ Providing safer neighbourhoods for people to live in and to walk and cycle; ▪ Providing a much improved public transport system for medium and longer distance travel; ▪ Getting the best out of the existing highways, particularly the core highway network; ▪ Working with others to seek joint solutions to problems.	

Regional	
SEWTA Rail Strategy Study Jan 2006: http://www.sewta.gov.uk/PDF/RailStrategy.pdf	
Plan Type	**Rail Strategy**
Plan Owner/ Competent Authority	**South East Wales Transport Alliance**
Currency	**2009 - 2018**
Region/Geographic Coverage	**Wales – with regional sections Including South East Wales Transport Alliance (SEWTA) region**
Sector	**Transport**
Related work SA/SEA HRA/AA	**N/A**
Document Details	**Potential impacts that could cause 'in-combination' effects**
In summary the strategy includes: ▪ Additional rolling stock to strengthen peak trains to provide for passenger growth and to avoid overcrowding and rolling stock renewal; ▪ Station improvements including improved station facilities, information, security and access - including additional parking; ▪ Reliability and capacity improvements; changes to the network to reduce delays and improve the ability to cope with performance problems; specifically at Cardiff Central, Cardiff Queen Street, Barry, Cogan Junction and Llandaff; ▪ Frequency enhancements on existing lines; improving the levels of service on selected routes to meet passengers' expectations and increase the transfer of car trips to rail; specifically new services on the Abergavenny, Chepstow, Ebbw Vale, Rhymney Valley, Taff Vale and Vale of Glamorgan Lines. Additional services to the north of Cardiff are required to cope with the growth in passenger demand and will require a significant investment in the capacity of the network at and between Cardiff Queen Street and	▪ Improvements to the rail network could lead to a reduction in car use and improvements to air quality in the region.

Regional	
South East Wales Transport Alliance: Outline of the Regional Transport Plan Jan 2007 http://www.sewta.gov.uk/PDF/OutlineRTP-Feb07.pdf	
Cardiff Central stations; ▪ New stations on existing lines; improving access to the rail network and integrated with the development of improved services; specifically at Caerleon, Magor with Undy, Llanwern, Coedkernew and St Mellons. With those on the main line between Cardiff and Severn Tunnel sited on the Relief Lines; ▪ Network extensions and new stations; to investigate further improving access to the rail network through extending to Ebbw Vale Town and from Pontyclun to Beddau (with stations at Talbot Green, Llantrisant, Gwaun Meisgyn & Beddau); and ▪ Rail - Link Bus Services; to extend the reach of the rail services to communities remote from the network, specifically providing access to the Valleys to the north of Cardiff and Newport.	

Local Development Plans

Local Development Plans	
Bridgend County Borough Council Local Development Plan Strategic Options and Preferred Strategy: http://www.bridgend.gov.uk/Web1/groups/public/documents/services/009560.hcsp#TopOfPage	
Plan Type	**Local Development Plan**
Plan Owner/ Competent Authority	**Bridgend County Borough Council**
Currency	**Draft Preferred Options May/June 2007** **Deposit LDP April 2008- May 2009**
Region/Geographic Coverage	**Bridgend County Borough Council administrative boundaries**
Sector	**Planning**
Related work SA/SEA HRA/AA	**SA/SEA Report** http://www.bridgend.gov.uk/Web1/groups/public/documents/report/019181.pdf
Document Details	**Potential impacts that could cause 'in-combination' effects**
Spatial Assessment of Draft Strategic Growth Options – Nov 2007. Two Draft Strategic Growth Options recommended by the Council (June 2007). **Trends-Based Growth Strategy** ▪ Produces a dwelling requirement up to 2021 of 8,100 dwellings. Includes an implicit commitment to 6,930 dwellings. ▪ A 217ha supply of employment land is currently available (applies to both strategy options). **UDP Growth Strategy** ▪ Produces a dwelling requirement of 7,470 dwellings between 2006 and 2021.	**Overarching Development Pressures** LDP impacts will be dependant on the final Preferred Strategy option. Generic effects related to development/ growth scenarios include: ▪ Potential for land take/ habitat fragmentation ▪ Increased demand for water resources/ abstraction/ hydrological impacts ▪ Increased traffic movements, contributions to atmospheric pollution loading ▪ Growth in requirements for waste management facilities, increased demand for minerals ▪ Increased recreational pressure from existing/ new populations **SAC Specific Issues**

Local Development Plans	
Bridgend County Borough Council Local Development Plan Strategic Options and Preferred Strategy: http://www.bridgend.gov.uk/Web1/groups/public/documents/services/009560.hcsp#TopOfPage	
Options for pursuing the Trend Based Growth Strategy: ▪ **1. Economic led** – focusing development on Bridgend and other main settlements with available employment opportunities to optimise their locational economic advantages whilst reducing the need to travel. Dwellings accommodated within existing settlement boundaries. ▪ **2. Regeneration Led** – focusing development with the Valleys and Valley Gateway north of the M4 to promote the regeneration priorities of the County Borough. Development can be accommodated within existing settlement boundaries in Llynfi Valley and the Valleys gateway but may need relaxing in the Ogmore and Garw Valleys. ▪ **3. Population Led** – a dispersed pattern of development with in the main urban areas optimizing the use of committed sites and allocating new development relative to the existing size of the settlement. Dwellings can be accommodated within existing settlement boundaries.	▪ Blackmill Woodlands SAC and Cefn Cribwr Grasslands SAC are both vulnerable to air pollution and development patterns that result in traffic growth near these sites have the potential to lead to significant effects.

Local Development Plans	
The Vale of Glamorgan Council Local Development Draft Preferred Strategy Dec 2007: http://www.valeofglamorgan.gov.uk/living/planning/planning_policy/local_development_plan.aspx	
Plan Type	**Local Development Plan**
Plan Owner/ Competent Authority	**The Vale of Glamorgan Council**
Currency	**Preferred Strategy January 2008**
Region/Geographic Coverage	**The Vale of Glamorgan Council administrative boundaries**
Sector	**Planning**
Related work SA/SEA HRA/AA	**The Vale of Glamorgan Council Local Development Plan 2006 – 2021 Initial Sustainability Appraisal Report 2007:** http://www.valeofglamorgan.gov.uk/files/Living/Planning/Policy/LDP/Initial_Sustainability_Appraisal_Report.pdf **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
Document Details	**Potential impacts that could cause 'in-combination' effects**
The document sets out the Vale of Glamorgan Council's strategic priorities for development between 2011 and 2026. It outlines a range of key issues affecting the Vale that the Draft Preferred Strategy will need to address and defines a vision of how the Vale of Glamorgan should develop. It identifies the general location of development, sets objectives and establishes a series of strategic policies that will guide future growth and development. The Draft Preferred Spatial Strategy "To concentrate development opportunities in Barry and the South East Zone. The St Athan area to be a key development opportunity. Other sustainable settlements to accommodate further housing and associated development"	The Habitats Regulations Assessment Screening for the Vale of Glamorgan LDP Draft Preferred Strategy has identified the potential for the Strategy to have a negative impact on 2 of the 6 European Sites identified within or in close proximity to the Vale of Glamorgan namely, the Severn Estuary SPA/cSAC/RAMSAR and the Kenfig SAC. In addition, it is concluded that a precautionary approach be undertaken in respect of the other 4 sites and that further investigations be undertaken. It is therefore recommended that an Appropriate Assessment is undertaken to fully ascertain the effect of the LDP on the integrity of the sites identified. **Severn Estuary SPA, Ramsar & cSAC** ▪ Given the extent of the Severn Estuary and the diverse range of activities and operations that could result in adverse impact to the European Site, it is considered inevitable that the Draft Preferred Strategy will in some way,

Local Development Plans	
The Vale of Glamorgan Council Local Development Draft Preferred Strategy Dec 2007: http://www.valeofglamorgan.gov.uk/living/planning/planning_policy/local_development_plan.aspx	
CSP4: Housing Need Provision for the development of 7500 new dwellings during the period 2011-2026. This provision will be met through: ▪ existing committed sites with planning permission ▪ the development of a range of strategic sites that accord with the council's strategic settlement hierarchy, and ▪ the subdivision of suitable dwellings, the appropriate reuse of vacant dwellings and buildings, and appropriate infill development. To ensure a sustainable supply of housing land is maintained during the plan period, housing development will be phased as follows: ▪ 2011-2016 2500 dwellings ▪ 2016-2021 2500 dwellings ▪ 2021-2026 2500 dwellings The phasing of sites will be considered in accordance with the council's strategic settlement hierarchy. **CSP8: Employment** The employment needs of the Vale of Glamorgan will be met through: ▪ the enhancement and improvement of existing employment sites; ▪ suitable extensions to existing employment sites; ▪ the safeguarding of existing employment sites from non-	impact upon the designated site. While much of the development arising from the draft preferred strategy is likely to be located well away from the Severn Estuary, the south-eastern zone has been identified as a growth area and abuts the boundary of the designated site. Therefore, it is recommended that a more detailed assessment of the LDP be undertaken following consultation on the Draft Preferred Strategy to ascertain and mitigate against any likely significant effects to the SPA, cSAC, RAMSAR. **Kenfig SAC** ▪ The primary focus of the Draft Preferred Strategy will be in Barry and the south-eastern zone with St Athan being seen as a major development opportunity. 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 as described above 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.

Local Development Plans	
The Vale of Glamorgan Council Local Development Draft Preferred Strategy Dec 2007: http://www.valeofglamorgan.gov.uk/living/planning/planning_policy/local_development_plan.aspx	
employment uses, and ▪ favouring farm diversification, and tourism initiatives. **CSP11: Strategic Transport Improvements** Strategic transport improvements that serve the economic, social and environmental needs of the Vale of Glamorgan and the objectives of the South East Wales Regional Transport Plan will be favoured. In support of these objectives land will be safeguarded for: ▪ the Barry Waterfront to Cardiff Link Road. ▪ Llysworney Bypass Priority will be given to schemes that improve safety and accessibility, public transport, walking and cycling. **CSP12: Sustainable Waste Management** Proposals for the sustainable management of waste will be favoured where they support the objectives of the South East Wales Regional Waste Plan and the Council's Local Waste Management Strategy. In support of these objectives the following locations have been identified as being suitable for waste management facilities: ▪ Atlantic trading estate. ▪ the operational Port of Barry Docks.	

Minerals & Waste	
Bridgend County Borough Council Municipal Waste Strategy 2003: http://www.bridgend.gov.uk/Web1/groups/public/documents/consultation/000852_ia483c442b-1.hcsp#P127_7259	
Plan Type	**Municipal Waste Strategy**
Plan Owner/ Competent Authority	**Bridgend County Borough Council**
Currency	**2003 - 2010**
Region/Geographic Coverage	**Bridgend County Borough Council administrative boundaries**
Sector	**Waste**
Related work SA/SEA HRA/AA	**N/A**
Document Details	**Potential impacts that could cause 'in-combination' effects**
The strategic objectives underpinning the Municipal Waste Management Strategy are: a) To set standards and targets and to monitor performance in implementing the Council's Municipal Waste Management Strategy and to review and update the Strategy on a regular basis. b) To promote waste minimisation to householders and local business through the provision of information, advice, education and awareness raising campaigns and, where appropriate, to provide support for local schemes to reduce waste through such measures as home composting, re-use of waste and reduction of waste at source. c) To promote the principles of sustainable waste management and waste minimisation, re-use and recycling by adopting and developing 'good practice' in the management and delivery of the Council's services and purchasing systems. d) To increase the amount of municipal waste that is	**Overarching Development Pressures** **Recycling** Air Pollution/ Disturbance ▪ Transport and energy emissions generated by collection, sorting and processing ▪ Dust, noise and odour associated with industrial process **Composting** Air/ Water Pollution, Introduced/Invasive Species ▪ Odour, litter, possible vermin generation ▪ Release of spores [non-native], requirement for buffer zones (at least 250 metres between composting operations and sensitive receptors) ▪ Production of liquid pollutant ▪ Potential for combustion **Mechanical Biological Treatment (MBT)** Air Pollution, Land Take, Hydrology ▪ Emissions, traffic impacts, land take and wider environmental impacts analogous with industrial process ▪ Processes produce residue **Refuse Derived Fuel (energy from waste)**

Minerals & Waste	
Bridgend County Borough Council Municipal Waste Strategy 2003: http://www.bridgend.gov.uk/Web1/groups/public/documents/consultation/000852_ia483c442b-1.hcsp#P127_7259	
recovered for re-use, particularly where such re-use creates employment and training opportunities locally. e) To increase the segregation at source of municipal waste for recycling and composting, with due regards to the benefits and costs and to ensure that further value is recovered from residual waste either for recycling, mixed waste composting or energy recovery. f) To ensure that contractors carry out the treatment or disposal of waste in a manner that minimises risks to the environment or health. g) To take measures to prevent the illegal disposal of waste through litter, fly-tipping or abandoned vehicles, and that to ensure that where it does occur, that due consideration is given to taking appropriate enforcement action against identified offenders.	Air Pollution ▪ Emission concerns, particulates and potentially dioxins **Anaerobic Digestion (energy from Waste)** Air/Water Pollution ▪ Emissions to air – odour (during collection, transport and pre-treatment) ▪ Wastewater – potential for high concentrations of metals, dissolved nitrogen and organic material **Incineration with Energy Recovery** Air/ Water Pollution ▪ Noise, dust, traffic, visual amenity, potential to impact fauna and flora ▪ Deposition of substances on surface water ▪ Solid, liquid emissions ▪ Gaseous emissions include odour, acid gas, heavy metals, particulates, organic compounds ▪ Ash residues comprising fine particles, [need to landfill ash/ scrap] dioxins, heavy metals salts, unreacted lime and carbon ▪ Contamination, accumulation of toxic substance (food chain)] **Landfill & Landraise** Air/ Water Pollution, Invasive Species, Land Take ▪ Methane and carbon monoxide emissions ▪ Leachate, salts, heavy metals, biodegradable and persistent organics ▪ Accumulation of hazardous substances in soil ▪ Topography alteration, visual intrusion ▪ Soil occupancy, prevention of other land uses ▪ Attraction of vermin ▪ Contamination, accumulation of toxic substances ▪ Potential exposure to hazardous substances ▪ Impact on surface water runoff, flood risk

Minerals & Waste	
Bridgend County Borough Council Municipal Waste Strategy 2003: http://www.bridgend.gov.uk/Web1/groups/public/documents/consultation/000852_ia483c442b-1.hcsp#P127_7259	
	SAC Specific Issues ▪ Specific potential in-combination impacts cannot be explored in absence of specific waste locations.

Minerals & Waste	
Vale of Glamorgan Council Municipal Waste Strategy 2004: http://www.valeofglamorgan.gov.uk/files/Living/Environment/Recycling%20and%20Waste/Waste%20Management%20Strategy/WasteStrategy.pdf	
Plan Type	**Municipal Waste Strategy**
Plan Owner/ Competent Authority	**Vale of Glamorgan Council**
Currency	**2004 - 2010**
Region/Geographic Coverage	**Vale of Glamorgan Council administrative boundaries**
Sector	**Waste**
Related work SA/SEA HRA/AA	**N/A**
Document Details	**Potential impacts that could cause 'in-combination' effects**
The preferred strategy is as follows: Expansion of recycling and reuse schemes for municipal waste such that the waste strategy targets for each of the target years of 2006/07 and 2009/10 are met and in fact exceeded. All residual waste would be sent to a Mechanical Biological Treatment plant. Continued landfill of waste residues will be required. The strategy for the Vale of Glamorgan will comprise a number of key elements, as follows:	**Overarching Development Pressures** **Recycling** Air Pollution/ Disturbance ▪ Transport and energy emissions generated by collection, sorting and processing ▪ Dust, noise and odour associated with industrial process **Composting** Air/ Water Pollution, Introduced/Invasive Species ▪ Odour, litter, possible vermin generation ▪ Release of spores [non-native], requirement for buffer zones (at least

Minerals & Waste	
Vale of Glamorgan Council Municipal Waste Strategy 2004: http://www.valeofglamorgan.gov.uk/files/Living/Environment/Recycling%20and%20Waste/Waste%20Management%20Strategy/WasteStrategy.pdf	
▪ Waste minimisation is central to reducing the amount of waste produced in the Vale, and this will be a priority for the Council over the next few years. ▪ Continued development of the kerbside collection scheme for dry recyclable and organic (compostable) materials. It will be necessary to develop the scheme over the period up to 2009/10 in order to achieve the level of diversion required to meet the targets. ▪ Enhancement of the Household Waste Recycling Centre (HWRC) provision across the Authority to facilitate improved access to the principal population centres and increased diversion of materials for recycling and reuse. This will include replacement of the two existing civic amenity sites in Sully and Llandow. ▪ Enhancement of the existing network of 'Bring Sites', to include the provision of a number of strategically located community based recycling centres. ▪ Development of waste handling and treatment facilities within the context of a 'Waste Resource Park', to include the following: ○ Provision of a Materials Recycling Facility (MRF) to deal with recyclable materials diverted at the kerbside and at HWRCs and 'Bring Sites'. ○ Development of an 'in-vessel' composting facility for the treatment of kerbside segregated organic materials (including green waste and organic kitchen wastes). ○ This will need to be in place to meet the 2006/07	250 metres between composting operations and sensitive receptors) ▪ Production of liquid pollutant ▪ Potential for combustion **Mechanical Biological Treatment (MBT)** Air Pollution, Land Take, Hydrology ▪ Emissions, traffic impacts, land take and wider environmental impacts analogous with industrial process ▪ Processes produce residue **Refuse Derived Fuel (energy from waste)** Air Pollution ▪ Emission concerns, particulates and potentially dioxins **Anaerobic Digestion (energy from Waste)** Air/Water Pollution ▪ Emissions to air – odour (during collection, transport and pre-treatment) ▪ Wastewater – potential for high concentrations of metals, dissolved nitrogen and organic material **Incineration with Energy Recovery** Air/ Water Pollution ▪ Noise, dust, traffic, visual amenity, potential to impact fauna and flora ▪ Deposition of substances on surface water ▪ Solid, liquid emissions ▪ Gaseous emissions include odour, acid gas, heavy metals, particulates, organic compounds ▪ Ash residues comprising fine particles, [need to landfill ash/ scrap] dioxins, heavy metals salts, unreacted lime and carbon ▪ Contamination, accumulation of toxic substance (food chain)] **Landfill & Landraise** Air/ Water Pollution, Invasive Species, Land Take

Minerals & Waste	
Vale of Glamorgan Council Municipal Waste Strategy 2004: http://www.valeofglamorgan.gov.uk/files/Living/Environment/Recycling%20and%20Waste/Waste%20Management%20Strategy/WasteStrategy.pdf	
and 2009/10 composting targets of 10% and 15%, respectively. ○ Provision of facilities for the local reuse and reprocessing of materials segregated from the municipal waste stream. ○ Provision of a new Household Waste Recycling Centre (HWRC) to replace the existing civic amenity site in Sully. ○ Provision of a waste transfer facility for residual waste (i.e. materials that are not segregated for recycling or composting). ○ Possible provision, in the medium to long term (by 2010, or soon thereafter), of a residual waste treatment facility. ▪ The continued use of small scale farm-based open windrow composting in the short term for green wastes. Open windrow techniques will also be required for further maturation of the product from the 'in-vessel' facility.	▪ Methane and carbon monoxide emissions ▪ Leachate, salts, heavy metals, biodegradable and persistent organics ▪ Accumulation of hazardous substances in soil ▪ Topography alteration, visual intrusion ▪ Soil occupancy, prevention of other land uses ▪ Attraction of vermin ▪ Contamination, accumulation of toxic substances ▪ Potential exposure to hazardous substances ▪ Impact on surface water runoff, flood risk **SAC Specific Issues** ▪ Specific potential in-combination impacts cannot be explored in absence of specific waste locations.

APPENDIX 4

APPENDIX 4

HABITAT REGULATION ASSESSMENT SCREENING TABLE

Kenfig SAC	Kenfig is a largely intact dune system in south Wales with extensive areas of fixed dune vegetation with red fescue and lady's bedstraw and semi-fixed dune grassland. 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 Salix repens ssp. argentea, which represent a mature phase in dune slack development. 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. 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. The major water quality concerns are related 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. This effect may occur both spatially and temporally.
Pre-Screening Assessment	Both the management areas of Kenfig and Merthyr Mawr are within Bridgend County Borough Planning boundary. Coastal impacts are unlikely, but there is possible deterioration of air composition and quality, water quality and, changes to the flow regime which could negatively affect the feature. The pre-screening has identified two processes that require further study as they have the potential to affect the site as a result of the LFRMS. These processes are: • sediment transportation pathways and linkage; and • hydrological pathways and processes.
Dunraven Bay SAC	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 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. The Rumex rupestris colony has a naturally very restricted distribution within the site, being limited to a small area of groundwater seepage. 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.
Pre-Screening Assessment	Dunraven SAC is approximately 3.7km south of the Bridgend County Borough Planning boundary. Although the possible

	loss of water seeping down the cliff face could negatively affect the features, no impact is likely from the LFRMS due to the location and scale of impact-causing factors relative to the impact areas. Therefore, taking into account the significant topographical separation between impact-causing factors relative to the impact areas, the pre-screening assessment concludes that there is unlikely to be any significant impact on the Dunraven SAC.
Cefn Cribwr Grasslands SAC	The site(s) is situated to the east of Bridgend in close proximity to the M4. This is one of four sites representing Molinia meadows in south and central Wales, one of the major UK strongholds for this habitat type. At this site, there are extensive stands of M24 Molinia – Cirsium dissectum fen-meadow, including the heathy sub-type with cross-leaved heath Erica tetralix, as well as other forms with a stronger representation of grasses, rushes and small sedges. The features are particularly vulnerable to: • Livestock grazing • 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. • Changes in hydrological regime – The eu-Molinion marshy grassland is dependent on a number of springs and watercourses feeding the site. • Off-site pollution (air)
Pre-Screening Assessment	Maintenance of the natural hydrological regime is critical for the maintenance of the character, composition and condition of the features. The nature of the underlying geology means that off-site activities a considerable distance away can potentially have an impact on the SAC. This needs to be investigated further.
Blackmill Woodlands	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. There is the potential for localised atmospheric pollution: • Nitrogen deposition. • Photochemical oxidants (ozone). • Acidification.
Pre-Screening Assessment	Due to the location of the designated features, deterioration of air composition and quality is the primary consideration. However, taking into account the location and scale of impact-causing factors relative to the impact areas, the pre-screening assessment concludes that there is unlikely to be any significant impact on the Blackmill Woodlands SAC. The pre-screening concludes that developments from the LFRMS are therefore unlikely to be of scale that would result in a detrimental impact upon the site.

Habitat Regulations Assessment Screening Table: Strategic Objectives					
Site	**Kenfig – SAC**				
LFRMS (Plan) Measures	**Potential Effects on SAC:**	**Risk of Likely Significant Effect (LSE)?**	**Potential Impacts – other Plans and Programmes:**	**Risk from 'In Combination' Effects?**	**AA Required?**
1. Prepare a rolling programme of asset maintenance. It is proposed to prepare an ongoing inspection regime, define action points for intervention works and a programme for refurbishment work. 2. Inspect coastal defense infrastructure: Minor defects noted are repaired as soon as possible; any major works required are subject to holding repairs whilst long-term solutions are implemented.	Possible deterioration of air composition and quality, water quality and, changes to the flow regime.	? ? ?	***The Wales Spatial Plan (update) 2008*** Atmospheric pollution generated as a result of housing, employment and transport growth. ***Wales Transport Strategy 2006*** Atmospheric pollution generated as a result strategy. ***The Trunk Road Forward Programme 2002*** All the development proposed has the potential to increase levels of traffic and therefore contribute to an increase in diffuse air pollution. ***Minerals Planning Policy Wales 2001*** No locations are specified. The document contains strong policies in regard to the protection of Natura 2000 and Ramsar sites. ***Welsh Coastal Tourism Strategy Draft Final Strategy (December 2007)***	? ? ? ? ***X*** ?	Yes Yes Yes No Yes

			Direct loss of habitat through development - Severn Estuary SPA, Ramsar and cSAC is present all along the Cardiff coastline. Increased levels of tourism and employment may lead to increased transport movements. Atmospheric pollution generated as a result of employment and transport growth. Increased recreational pressure through water sports. An increased level of waterborne transport and development along the coast has the potential to increase diffuse levels of water pollution.		
			SEWTA Consultation Draft Regional Waste Plan 1st Revision (October 2007) Natura 2000 sites have designated as absolute areas of constraint, constituting areas that are unsuitable for waste management facilities. In addition, impacts on designated sites as a result of placing waste management facilities nearby have been considered.	***X***	No
			Bridgend County Borough Council Local Development Plan Strategic Options and Preferred Strategy:	?	Yes

			Increased demand for water resources/ abstraction/ hydrological impacts Potential for air pollution and development patterns that result in traffic growth near these sites have the potential to lead to significant effects.		
			The Vale of Glamorgan Council Local Development Draft Preferred Strategy Dec 2007: Possible deterioration of air composition and quality, water quality and, changes to the flow regime.	?	Yes
			Bridgend County Borough Council Municipal Waste Strategy 2003: Air/Water Pollution Emissions to air – odour (during collection, transport and pre-treatment) Wastewater – potential for high concentrations of metals, dissolved nitrogen and organic material	?	Yes
			Vale of Glamorgan Council Municipal Waste Strategy 2004: Air/Water Pollution	?	Yes

			Emissions to air – odour (during collection, transport and pre-treatment) Wastewater – potential for high concentrations of metals, dissolved nitrogen and organic material		

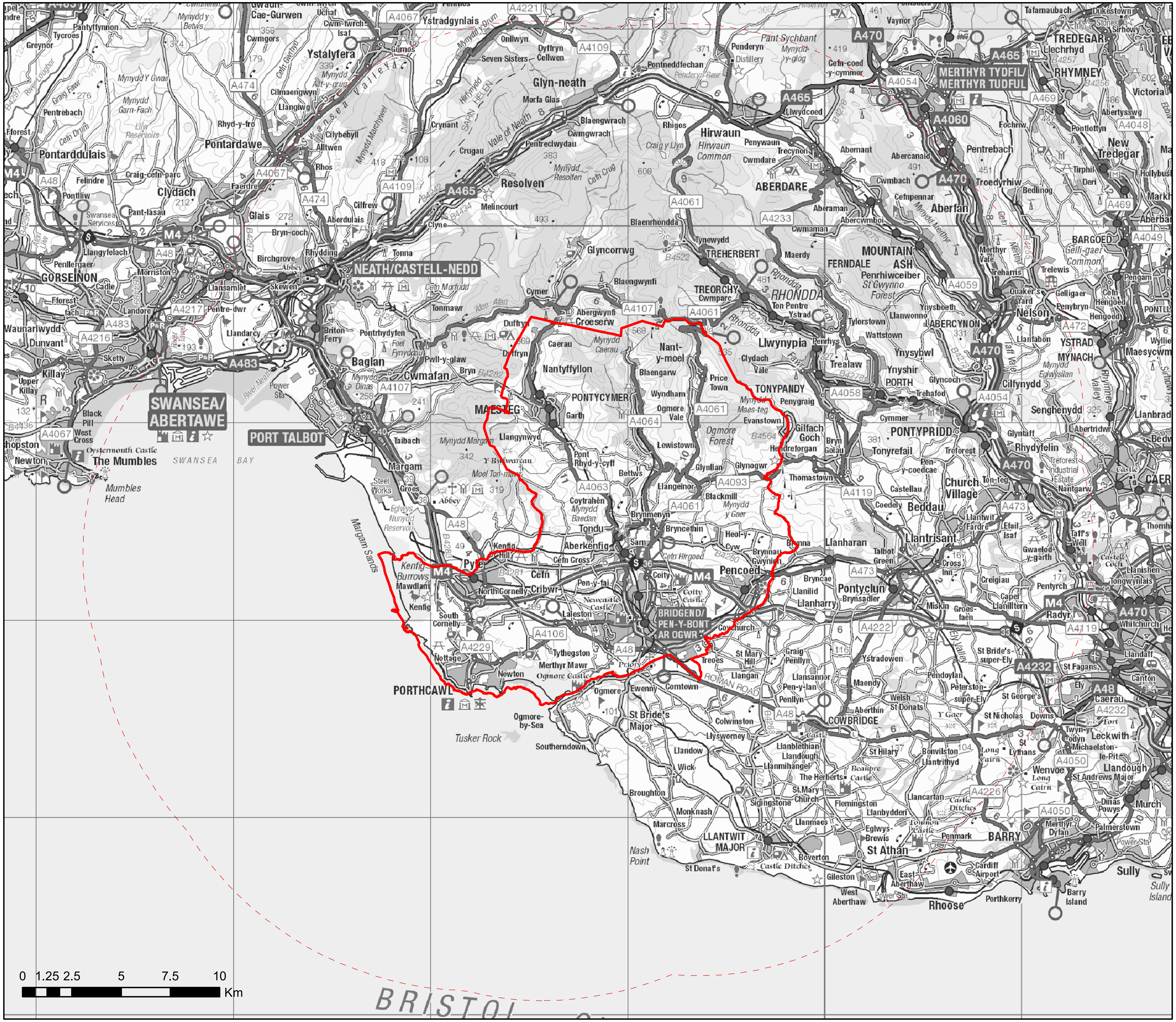
Habitat Regulations Assessment Screening Table: Strategic Objectives					
Site	**Cefn Cribwr – SAC**				
LFRMS (Plan) objective	**Potential Effects on SAC:**	**Risk of Likely Significant Effect (LSE)?**	**Potential Impacts – other Plans and Programmes:**	**Risk from 'In Combination' Effects?**	**AA Required?**
1. Prepare a rolling programme of asset maintenance. It is proposed to prepare an ongoing inspection regime, define action points for intervention works and a programme for refurbishment work. 2. Inspect coastal defense infrastructure: Minor defects noted are repaired as soon as possible; any major works required are subject to holding repairs whilst long-term solutions are implemented.	Possible deterioration of air composition and quality, water quality and, changes to the flow regime.	? ? ?	***The Wales Spatial Plan (update) 2008*** Atmospheric pollution generated as a result of housing, employment and transport growth. ***Wales Transport Strategy 2006*** Atmospheric pollution generated as a result strategy. ***The Trunk Road Forward Programme 2002*** All the development proposed has the potential to increase levels of traffic and therefore contribute to an increase in diffuse air pollution. ***Minerals Planning Policy Wales 2001*** No locations are specified. The document contains strong policies in regard to the protection of Natura 2000 and Ramsar sites. ***Welsh Coastal Tourism Strategy Draft Final Strategy (December 2007)***	? ? ? ***X*** ?	Yes Yes Yes No Yes

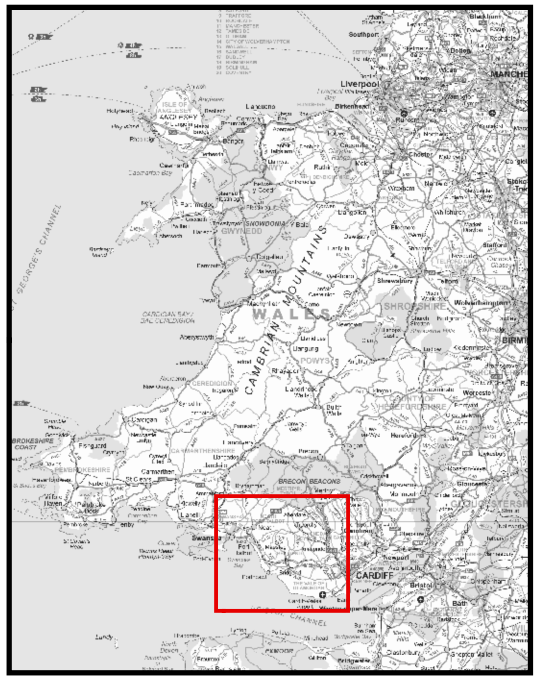
			Direct loss of habitat through development - Severn Estuary SPA, Ramsar and cSAC is present all along the Cardiff coastline. Increased levels of tourism and employment may lead to increased transport movements. Atmospheric pollution generated as a result of employment and transport growth. Increased recreational pressure through water sports. An increased level of waterborne transport and development along the coast has the potential to increase diffuse levels of water pollution.		
			SEWTA Consultation Draft Regional Waste Plan 1st Revision (October 2007) Natura 2000 sites have designated as absolute areas of constraint, constituting areas that are unsuitable for waste management facilities. In addition, impacts on designated sites as a result of placing waste management facilities nearby have been considered.	***X***	No
			Bridgend County Borough Council Local Development Plan Strategic Options and Preferred Strategy:	?	Yes

			Increased demand for water resources/ abstraction/ hydrological impacts Potential for air pollution and development patterns that result in traffic growth near these sites have the potential to lead to significant effects.		
			The Vale of Glamorgan Council Local Development Draft Preferred Strategy Dec 2007: Possible deterioration of air composition and quality, water quality and, changes to the flow regime.	?	Yes
			Bridgend County Borough Council Municipal Waste Strategy 2003: Air/Water Pollution Emissions to air – odour (during collection, transport and pre-treatment) Wastewater – potential for high concentrations of metals, dissolved nitrogen and organic material	?	Yes
			Vale of Glamorgan Council Municipal Waste Strategy 2004: Air/Water Pollution	?	Yes

			Emissions to air – odour (during collection, transport and pre-treatment) Wastewater – potential for high concentrations of metals, dissolved nitrogen and organic material		

APPENDIX 5





Key

Bridgend 15km buffer

Bridgend boundary

Scale: **1:180,000**

N

Client

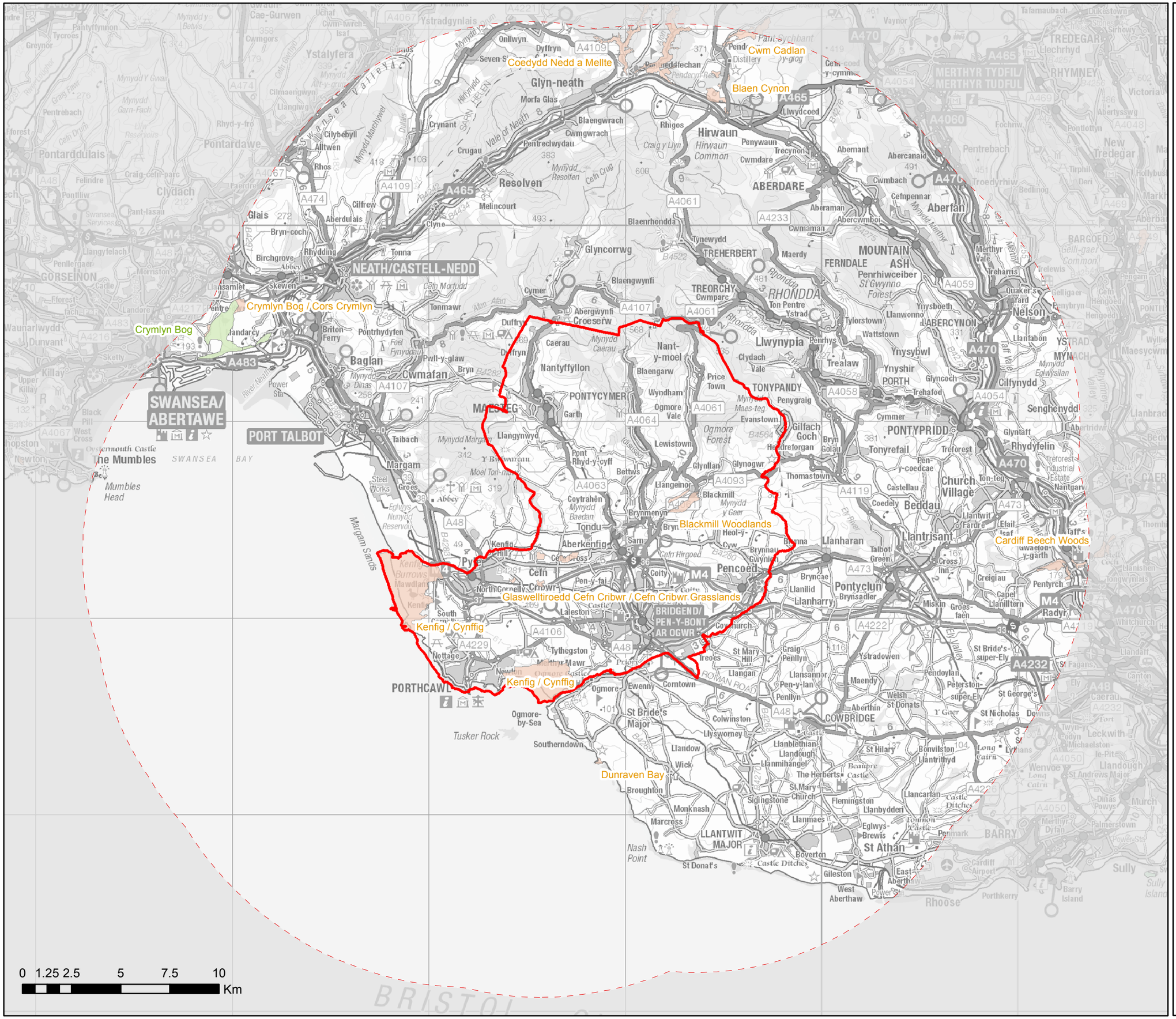
Bridgend HRA

REGIONAL OVERVIEW

Drawn By	BK
Checked By	KJ
Approved By	GP
Drawing No	CS/052638_020_01_RevA
Date	20th November 2012

CAPITA SYMONDS

Quays Office Park
Portishead
Bristol
BS3 1PE



Key

- Bridgend 15km buffer
- Bridgend_boundary
- Ramsar site
- Special Protection Area (SPA)
- Special Area of Conservation (SAC)

N

Scale: 1:180,000

Client

Bridgend HRA

ENVIRONMENTAL DESIGNATIONS

Drawn By	BK
Checked By	KJ
Approved By	GP
Drawing No	CS/052638_020_02_RevB
Date	21st November 2012

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