Monmouthshire County Council

Deposit Local Development Plan

Habitats Regulations Assessment (Appropriate Assessment) Report

June 2011

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HABITATS REGULATIONS ASSESSMENT (APPROPRIATE ASSESSMENT) REPORT

MONMOUTHSHIRE COUNTY COUNCIL

DEPOSIT LOCAL DEVELOPMENT PLAN

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EXECUTIVE SUMMARY

0.1 Habitats Regulations Assessment (HRA) of spatial, development plans is a requirement of the Habitats Directive (92/43/EEC) as set out in the Conservation of Habitats and Species Regulations 2010. This report details the HRA Appropriate Assessment (AA) stage for the Monmouthshire County Council Deposit Local Development Plan (LDP). It sets out the methods, findings and the conclusions of the AA.

0.2 The first stage of the HRA process (screening, May 2009) considered the likely significant effects of Pre-Deposit LDP Proposals on European sites. The screening identified that nine European sites may be potentially affected by activities/ impacts arising from Plan. The Screening Report concluded that the emerging LDP has the potential for likely significant effects on European sites and that the effects of certain policies are uncertain and dependent on the scale and location of development.

0.3 Following the HRA Screening of Pre-Deposit LDP Proposals, Monmouthshire County Council has progressed with the development of the LDP. In line with current guidance and the recommendations of the initial screening stage, the AA revisited the screening assessment to determine whether the changes and additions made to the LDP have the potential to lead to likely significant effects, beyond those considered in the screening stage.

0.4 The further screening work identified that there was the potential for the Deposit LDP to have significant effects alone on European sites as a result of the capacity and/ or location of proposed development. To address these issues the screening recommended a number of policy safeguards in relation to specific Deposit LDP Policies and site allocations. The screening concluded that the Deposit LDP (including site allocations) would not have likely significant effects alone on European sites, if the recommended policy safeguards are incorporated into the Plan.

0.5 The further screening work identified four main areas of impact arising when combined with the effects arising from other plans, programmes and projects that may have the potential for significant in combination effects on the integrity of the identified European sites: water resources, water quality, disturbance and air quality. These issues were taken forward into the AA and considered in further detail. The AA assessed that the Deposit LDP contains suitable mitigation measures to address the potential in combination effects on European sites that could arise through air quality, water quality, water resources and recreational disturbance.

0.6 The assessment identified that there is the potential for adverse effects on the integrity of the Usk Bat Sites SAC and Wye Valley and Forest of Dean Bat Sites SAC through habitat fragmentation and loss as a result

of the Deposit LDP acting in combination with development proposed in surrounding areas. To address this issue the AA recommended additional policy wording to ensure that development occurring through the LDP does not result in the loss or damage of linear habitat features. The AA concluded that the Deposit LDP would not have adverse in combination effects on European sites through habitat loss and fragmentation, if the recommended policy safeguards are incorporated into the Plan. The findings of this AA should be used to inform any future assessment work.

0.7 The Welsh Assembly Government (WAG) guidance notes that it is good practice to make information on HRA available to the public at each formal development plan consultation stage. Therefore, in addition to the statutory consultation undertaken with CCW, this report is being made available for consultation to the wider public.

1.0 INTRODUCTION

1.1 Monmouthshire County Council (MCC) is currently developing its Local Development Plan (LDP) and is undertaking Habitats Regulations Assessment in line with the requirements set by the Conservation of Habitats and Species Regulations 2010.

1.2 Monmouthshire County Council produced a Habitats Regulations Assessment (HRA) Screening Report of the LDP Pre-Deposit Proposals in May 2009. Enfusion Ltd, sustainability and environmental consultants, have been commissioned to further progress the HRA work. Enfusion undertook a review of the screening report (September 2010) and its findings helped to inform the development of this Appropriate Assessment (AA).

1.3 This HRA report addresses the AA stage of HRA which considers how the likely significant effects on designated European Sites identified through the first screening stage of the HRA may affect European site integrity. HRA is also commonly referred to as Appropriate Assessment although the requirement for AA is first determined by an initial 'screening' stage undertaken as part of the full HRA. This report addresses the AA stage of the HRA; it outlines the key tasks undertaken and the key findings/ recommendations emerging from the assessment.

Requirement for Habitats Regulations Assessment

1.4 The European Directive (92/43/EEC) on the Conservation of Natural Habitats and Wild Flora and Fauna (the Habitats Directive) protects habitats and species of European nature conservation importance. The Habitats Directive establishes a network of internationally important sites designated for their ecological status. These are referred to as Natura 2000 (N2K) sites or European Sites, and comprise Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) [which are classified under the Council Directive 79/409/EEC on the conservation of wild birds, the 'Birds Directive'].

1.5 Articles 6 (3) and 6 (4) of the Habitats Directive 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.[1] This requirement is set out in the Conservation of Habitats and Species Regulations 2010 which require the application of HRA to all land use plans. Welsh Assembly Government (WAG) guidance also requires that Ramsar sites (which support internationally important wetland habitats) and are listed

[1] Determining whether an effect is 'significant' is undertaken in relation to the designated interest features and conservation objectives of the Natura 2000 sites. If an impact on any conservation objective is assessed as being adverse then it should be treated as significant. Where information is limited the precautionary principle applies and significant effects should be assumed until evidence exists to the contrary.

under the Convention on Wetlands of International Importance (Ramsar Convention 1971) are included within HRA/AA and that candidate SACs and proposed SPAs are treated as 'designated' sites in the context of HRA.

1.6 The purpose of HRA/AA is to assess the impacts of a land-use plan, in combination with the effects of other plans and projects, against the conservation objectives of a European Site and to ascertain whether it would adversely affect the integrity[2] of that site. Where significant negative effects are identified, avoidance/ mitigation measures or alternative options should be examined to avoid any potential damaging effects. The scope of the HRA/AA is dependent on the location, size and significance of the proposed plan or project and the sensitivities and nature of the interest features of the European sites under consideration.

Guidance for Habitats Regulations Assessment/Appropriate Assessment

1.7 Guidance for HRA 'The Appraisal of Development Plans in Wales under the Provisions of the Habitats Regulations', is provided in Technical Advice Note 5: Nature Conservation and Planning (WAG, September 2009). CCW has also produced draft guidance 'The Appraisal of Plans under the Habitats Directive' (D Tyldesley and Associates, November 2009) which takes account of developments in HRA practice.

1.8 The methods and approach used for this AA are based on the formal Welsh guidance currently available and emergent practice, which recommends that HRA is approached in three main stages - outlined in **Table 1**. This report outlines the method and findings for stage 2 of the HRA process - the Appropriate Assessment.

[2] Integrity is described as the sites' coherence, ecological structure and function across the whole area that enables it to sustain the habitat, complex of habitats and/or levels of populations of species for which it was classified, (ODPM, 2005).

Table 1 **Habitats Regulations Assessment: Key Stages**	
Stage 1	
Screening for likely significant effect	▪ Identify international sites in and around the plan/ strategy area in search area agreed with the Statutory Body the Countryside Council for Wales ▪ Examine conservation objectives of the interest feature(s)(where available) ▪ Review plan policies and proposals and consider potential pathways and effects on European sites (magnitude, duration, location, extent) ▪ Examine other plans and programmes that could contribute to 'in combination' effects
	▪ *If no effects likely – report no significant effect (taking advice from CCW as necessary).* ▪ *If effects are judged likely or uncertainty exists – the precautionary principle applies proceed to* ***stage 2***
Stage 2	
Appropriate Assessment	▪ Complete additional scoping work including the collation of further information on sites as necessary to evaluate impact in light of conservation objectives ▪ Agree scope and method of AA with CCW ▪ Consider how plan 'in combination' with other plans and programmes will interact when implemented (the Appropriate Assessment) ▪ Consider how effect on integrity of site could be avoided by changes to plan and the consideration of alternatives ▪ Develop mitigation measures (including timescale and mechanisms) ▪ Report outcomes of AA including mitigation measures, consult with CCW and wider [public] stakeholders as necessary ▪ If plan will not significantly effect European site proceed without further reference to Habitats Regs
	▪ *If effects or uncertainty remain following the consideration of alternatives and development of mitigations proceed to* ***stage 3***
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 Welsh Government ▪ Develop and secure compensatory measures

Consultation

1.9 The Habitats Regulations require the plan making/competent authority to consult the appropriate nature conservation statutory body [Countryside Council for Wales (CCW)].

1.10 Consultation with CCW has been undertaken at key stages of the HRA of MCC's LDP development. CCW commented on the HRA Screening report (May 2009) in July 2009 and provided advice on the scope of the AA in September/ October 2010. These comments and advice have been taken forward in the iterative HRA work documented in this report.

1.11 The Habitats Regulations leave consultation with other bodies and the public to the discretion of the plan making authority. WAG guidance notes that it is good practice to make information on HRA available to the public at each formal development plan consultation stage. Therefore, in addition to the statutory consultation undertaken with CCW, this AA report is available for wider public consultation.

Purpose & Structure of Report

1.12 This report documents the process and the findings from the screening work as they informed the AA and then the findings and recommendations of the main AA Stage. Following this introductory section the document is organised into a further four sections:

- **Section 2** - outlines the method used for the re-evaluation of screening findings and AA as well as including reference to the key information sources used and the consultation comments received to date.
- **Section 3** - outlines the process and summary findings of the re-evaluation of screening findings.
- **Section 4** - outlines the process and summary findings of the Appropriate Assessment.
- **Section 5** - outlines the conclusions and recommendations, including how the LDP should now proceed with reference to the Habitats Regulations.

2.0 METHOD

HRA Screening (May 2009)

2.1 The first Screening Stage report of the HRA of MCC's LDP Pre-Deposit Proposals identified which European sites within and around the plan area should be considered in further detail by the HRA process. Specifically, the screening identified that the following European sites may be potentially affected by activities/ impacts arising from Pre-Deposit LDP Proposals:

- Coed y Cerrig SAC;
- Cwm Clydach Woodlands SAC;
- River Usk SAC;
- River Wye SAC;
- Severn Estuary SAC, SPA & Ramsar;
- Sugar Loaf Woodlands SAC;
- Usk Bat Sites SAC;
- Wye Valley and Forest of Dean Bat Sites SAC; and
- Wye Valley Woodlands SAC.

2.2 The key potential impacts identified by the screening of Pre-Deposit policies were:

- atmospheric pollution;
- disturbance;
- water pollution; and
- water abstraction.

2.3 The Screening report concluded that there is the potential for these impacts to be either avoided or mitigated through LDP policies; however this would not be clear until the LDP had been progressed further.

Justification for European Sites Scoped out at Screening Stage

2.4 Aberbargoed Grasslands SAC and Llangorse Lake SAC were scoped out at the HRA screening stage (May 2009) as the assessment did not identify the potential for likely significant effects. In response to consultation on the HRA Screening report and in further discussions to establish the scope of the AA, CCW requested further rationale to clarify why these two European sites were scoped out of the assessment. In response the rationale for these screening decisions is provided in **Appendix 3**.

Deposit LDP Policy Screening

2.5 Following the HRA Screening (Stage 1 - May 2009) of Pre-Deposit LDP Proposals, MCC has progressed with the development of the LDP. In line with current guidance, the HRA revisited the policy screening to determine whether the changes and additions made to the LDP have

the potential to lead to likely significant effects, beyond those considered in the Stage 1 Screening. The screening of the Deposit LDP policies is presented in **Appendix 4** and summarised in **Section 3**.

Site Allocations Screening

2.6 Stage 1 of the HRA Screening concluded that the emerging LDP has the potential for likely significant effects on European sites and that the effects of certain policies are uncertain and dependent on the scale and location of development. Based on the findings of the Screening report and in consultation with CCW, it was considered appropriate that additional screening work be undertaken when further information became available with regard to the scale and location of proposed development. In line with this, a screening of site allocations was undertaken to consider the potential for the level of development proposed at these locations to have likely significant effects on European sites. The site allocations screening is presented in **Appendix 5** and a summary of the findings and recommendations are presented in **Section 3** of this report.

Appropriate Assessment

2.7 Assessing the impacts of plans, policies and proposals against the European site conservation objectives is required by Regulation 102 of the Conservation of Habitats and Species Regulations 2010. This 'appropriate assessment' is the core part of the HRA process and involves the key tasks set in **Table 2**.

2.8 The findings of the Screening identified that there was the potential for likely significant effects and therefore the possibility for adverse effects on site integrity should be considered further through the AA process for the following European sites:

- Coed y Cerrig SAC;
- Cwm Clydach Woodlands SAC;
- River Usk SAC;
- River Wye SAC;
- Severn Estuary SAC, SPA & Ramsar;
- Sugar Loaf Woodlands SAC;
- Usk Bat Sites SAC;
- Wye Valley and Forest of Dean Bat Sites SAC; and
- Wye Valley Woodlands SAC.

Table 2 **Appropriate Assessment Stage: Key Tasks**	
Task 1 **Scoping and Additional Information Gathering**	▪ Gathering additional information on European sites ▪ Gathering additional data on background environmental conditions ▪ Further analysis of plans/ projects that have the potential to generate 'in combination' effects
Task 2 **Assessing the Impacts (in-combination) Appropriate Assessment**	▪ Examination of the policies and proposals identified during the screening phase and their likely significant effects on European sites ▪ Consideration of whether effects are direct/ indirect/ cumulative ▪ Consideration of whether other plans and programmes are likely to generate effects that have the potential to act cumulatively with those arising from the plan
Task 3 **Developing Mitigation Measures (including initial avoidance)**	▪ If effects identified – either arising from the plan alone and/or 'in combination' with other plans – consider initial opportunities to avoid (e.g. delete/ remove or amend policy from plan) ▪ Develop mitigation measures – must be deliverable by the plan and have clear delivery/ monitoring responsibilities
Task 4 **Findings & Recommendations**	▪ Conclude the assessment, explain key findings and analysis informing conclusions.
Task 5 **Consultation**	▪ Undertake further consultation with CCW (assumes that consultation has also been an iterative process throughout the HRA/AA).

2.9 The full range of plans and projects [and their potential impacts] considered by the assessment in relation to possible in combination effects, are detailed in **Appendix 2**. This in combination analysis is integral to the assessment process as detailed in **Section 4**. As part of the AA process consideration was also given to related HRA work undertaken at a strategic level (the HRA of the Wales Spatial Plan Update and HRA of Welsh Water's Draft Water Resource Management Plan) and neighbouring authorities' HRAs, where available.

3.0 RE-EVALUATION OF SCREENING FINDINGS (2011)

3.1 In line with current guidance and good practice, the HRA revisited the screening assessment to determine whether the changes and additions made to the LDP have the potential to lead to likely significant effects, beyond those considered in the Stage 1 Screening of the LDP Pre-Deposit Proposals in May 2009. This Section outlines the findings of this further screening assessment.

Deposit LDP Policy Screening

3.2 Screening of the Deposit LDP involved identifying the policies that may lead to significant effects on European sites both alone and in combination. The approach taken was in accordance with CCW draft guidance for plan making authorities in Wales, 'the Appraisal of Plans under the Habitats Directive' (Tyldesley, D. 2009). In order to complete the policy screening each policy was categorised as to its likely effects on the European sites identified in **Appendix 4**. There are four categories of potential effects:

- **Category A**: elements of the plan/options that would have no negative effect on a European site at all;
- **Category B**: elements of the plan/options that could have an effect, but the likelihood is there would be no significant negative effect on a European site either alone or in combination with other elements of the same plan, or other plans or projects;
- **Category C**: elements of the plan/options that could or would be likely to have a significant effect alone and will require the plan to be subject to an appropriate assessment before the plan may be adopted;
- **Category D**: elements of the plan/options that would be likely to have a significant effect in combination with other elements of the same plan, or other plans or projects and will require the plan to be subject to an appropriate assessment before the plan may be adopted.

3.3 Categories A, C and D are subdivided so that the specific reason why a policy has been allocated to a particular category is clear. The detail of the screening assessment which considers each of the Deposit LDP policies against the categories is provided in **Appendix 4** and policies which were considered to potentially lead to likely significant effects are listed in **Table 3.**

Table 3	
Deposit LDP policies screened in to the assessment process	**Assessment Category**
Strategic Policies	
S1 - The Spatial Distribution of New Housing Provision	**D2**
S2 - Housing Provision	**C2 & D2**
S3 - Strategic Housing Sites	**C2 & D2**
S4 - Affordable Housing	**D2**
S8 - Enterprise and Economy	**D2**
S9 - Employment Sites Provision	**D2**
S10 - Rural Enterprise	**D2**
S11 - Visitor Economy	**D2**
S14 - Waste	**D2**
S15 - Minerals	**D2**
S16 - Transport	**D2**
Development Management Policies	
H1 - Residential Development in Main Towns, Severnside Settlements and Primary Rural Settlements	**D2**
H2 - Residential Development in Main Villages	**D2**
H3 - Residential Development in Minor Villages	**D2**
H4 - Conversion / Rehabilitation of Buildings in the Open Countryside for Residential Use	**C2**
H5 - Replacement Dwellings in the Open Countryside	**C2**
H6 - Extension of Rural Dwellings	**D2**
H7 - Affordable Housing Rural Exceptions	**D2**
H8 - Gypsy, Traveller and Travelling Show People Sites	**D2**
H9 - Flat Conversions	**D2**
RET3 - Neighbourhood Centres	**D2**
RET4 - New Retail Proposals	**D2**
E2 - Non-allocated Employment Sites	**D2**
E3 - Working from Home	**D2**
RE1 - Employment within Villages	**D2**
RE2 - Conversion or Rehabilitation of Buildings in the Open Countryside for Employment Use	**C2**
RE3 - Agricultural Diversification	**D2**
RE4 - New Agricultural and Forestry Buildings	**D2**
RE5 - Intensive Livestock and Free Range Poultry Units	**D2**
RE6 - Provision of Recreation, Tourism and Leisure Facilities in the Open Countryside	**D2**
Policy T1 - Touring Caravan and Tented Camping Sites	**D2**
Policy T2 - Visitor Accommodation outside Settlements	**D2**
Policy T3 - Golf Courses	**C4**
SD1- Renewable Energy	**D2**
SD3 - Flood Risk	**D2**
SD4 - Sustainable Drainage	**D2**
LC1 - New Buildings in the Open Countryside	**D2**
LC2 - Blaenavon Industrial Landscape World Heritage Site	**D2**
LC3 - Brecon Beacons National Park	**D2**
EP4 - Telecommunications	**D2**
W2 - Waste Recovery Facilities	**D2**
W3 - Waste Management Facilities	**D2**

W4 - Rural Composting	**D2**
W5 - Waste Disposal by Landfill or Landraising	**D2**
W6 - Waste Deposition on Agricultural Land for Agricultural Improvement Purposes	**D2**
M1 - Local Building and Walling Stone	**D2**
MV2 - Sustainable Transport Access	**D2**
MV4 - Cycleways	**D2**
MV5 - Improvements to Public Transport Interchanges and Facilities	**D2**
MV8 - Rail Freight	**D2**
Site Allocation Policies	
SAH1 - Deri Farm, Abergavenny	**D2**
SAH2 - Crick Road, Portskewett	**D2**
SAH3 - Fairfield Mabey, Chepstow	**C2 & D2**
SAH4 - Wonastow Road, Monmouth	**D2**
SAH5 - Rockfield Farm, Undy	**D2**
SAH6 - Tudor Road, Wyesham	**D2**
SAH7 - Rural Secondary Settlements	**D2**
SAH8 - Main Villages	**D2**
AE1 - Identified Industrial and Business Sites	**C2 & D2**
SAE2 - Identified Mixed Use Sites	**D2**
SAE3 - Protected Employment Sites	**D2**
SAT1 - Tourism Sites	**D2**
SAW1 - Identified Potential Waste Management Sites	**D2**

3.4 The HRA Screening Report (May 2009), consultation with CCW and screening of Deposit LDP Policies identified a number of impacts that have the potential to result in likely significant effects on European sites. The significance of these impacts is dependent to some extent on the location of proposed development. Certain policies (S2, S3, SAH3 & AE1) were identified as having the potential for a significant effect alone given the quantum and/ or location of the proposed development. The screening of site allocations (**Appendix 5**) considered the capacity and location of proposed sites in further detail. The findings and recommendations of the site allocations screening are presented later in this Section.

3.5 Policies H4, H5 and RE2 were also identified by the screening as having the potential for significant effects alone on European sites. The policies permit the conversion/ rehabilitation and/ or replacement of dwellings in the open countryside subject to a number of criteria and detailed planning considerations. Building conversion/ rehabilitation and/ or replacement can be a significant issue where old/ disused buildings are valuable for bat habitats (Usk Bat Sites SAC & Wye Valley and Forest of Dean Bat Sites SAC). The Deposit LDP (Policy NE1 - Nature Conservation and Development) ensures that development proposals relating to barns, old or redundant buildings and buildings to be demolished are accompanied by a properly conducted ecological survey for protected species and, where necessary, should make appropriate provision for safeguarding any identified protected species and their habitats. It also requires that all proposals for the

conversion or rehabilitation of buildings in the open countryside will be expected to provide a suitable nesting box for barn owls or bat roost within their design. Given the mitigation provided by Deposit LDP Policies, it was assessed that policies H4, H5 and RE2 would not have significant effects on European sites.

3.6 The majority of Deposit LDP Policies were identified as having the potential for in combination effects with other plans, programmes and projects. These impacts can be broadly characterised against the following 'pathways of impact':

- **Water Quality** - resulting from increased discharge requirements arising from new residential and employment developments and the potential for increased point source pollution, changes to surface water/ run-off.
- **Water Resources** - resulting from increased demand for water consumption arising from new residential and employment developments.
- **Atmospheric Pollution** - arising from a growth in airborne and surface transport as well as general development (emissions from construction/ building stock).
- **Disturbance** - as a result of noise and light pollution as well as increased recreational activity arising from new residential and employment developments. There is also the potential for disturbance through the loss and fragmentation of supporting habitats.

3.7 The potential for the Deposit LDP to act in combination with other plans, programmes and projects to have significant effects on European sites through the pathways of impact identified above is considered in **Section 4**.

Site Allocations Screening

3.8 The site allocations screening (**Appendix 5**) considered the potential for site allocations identified in the Deposit LDP to have likely significant effects on European sites. A range of information sources were used to carry out the screening, including information from the European site characterisations and strategic site studies. The capacity and location of the sites was taken into consideration alongside the potential pathways for impact and known sensitivities of European sites.

3.9 The screening found that for the majority of site allocations there were no pathways for development to have direct impacts on European sites, given the distance of the allocations from designated habitats and species, and the lack of connectivity between the development and the potential receptors. The potential for development at the sites to have indirect impacts on European sites was also considered. The screening assessed that the potential indirect impacts of development at all the proposed site allocations could be either mitigated or avoided through the Deposit LDP Policies, which seek to protect

biodiversity and minimise the impact of development on the environment. This includes the following policy mitigation/ safeguards in the Draft Deposit LDP:

- Policy S5 - Community and recreation Facilities
  - Policy CRF2 - Outdoor Recreation/ Public Open Space and Allotment Standards
- Policy S7 - Infrastructure Provision
- Policy S12 - Sustainable Development
  - Policy SD3 - Flood Risk
  - Policy SD4 - Sustainable Drainage
- Policy S13 - Landscape, Green Infrastructure and the Natural Environment
  - Policy LC6 - Green Wedges
  - Policy NE1 - Nature Conservation and Development
  - Policy EP1 - Amenity and Environmental Protection
  - Policy EP2 - Protection of Water Sources and the Water Environment
  - Policy EP3 - Lighting
- Policy S16 - Transport
  - Policy MV1 - Proposed Developments and Highway Considerations
- Policy S17 - Place Making and Design

3.10 It was also considered that appropriate site level mitigation would be available and could be required at the planning application stage to address any unforeseen impacts of individual developments on European sites.

3.11 The Fairfield Mabey (Chepstow) Strategic Site (SAH3) and South Woodside (Usk) industrial and business site (E1g) allocations were identified as having the potential for direct impacts on a European site; the River Wye SAC and River Usk SAC respectively. The boundary of the European site extends into the proposed boundary of the Fairfield Mabey site, which is considered suitable for a mixed use development with a capacity of 300 new dwellings and 3 ha of industrial/ employment use. There is potential for development at this site to have direct impacts on the River Wye SAC through habitats loss and fragmentation (loss of vegetation adjacent to river corridor), disturbance (noise, light and vibration) and changes to the water environment (reduced water quality through pollution/contamination impacts and changes to water regimes).

3.12 An ecological appraisal of the site was undertaken in 2010[3] as part of further assessments needed for the evidence base of strategic sites. CCW was consulted during the preparation of the ecological appraisal report where it was determined that the SAC site boundary may be considered to extend between 5 and 25m into the proposed

[3] Ecological Appraisal (June 2010) Fairfield Mabey Site, Station Road, Chepstow. Prepared by CSa Environmental Planning on behalf of Beachley (Chepstow) Ltd.

development site. As a result, the scheme for the site has been developed to avoid any construction within the SAC itself, with the intention that the development will respect the SAC and provide a sympathetic interface with the river. The appraisal states that assuming proposals will avoid adverse changes to sewerage/ drainage systems feeding into the River Wye, or loss of suitable areas important for protected species or habitats, it is anticipated that reasonable mitigation measures could be agreed to protect and enhance any ecological interests of the protected sites.

3.13 The ecological appraisal concludes that, "whilst the results of detailed surveys are required to fully assess the impacts from redevelopment and the nature of any mitigation that may be required, it is considered that given the current nature of this largely industrial site, there is good potential for development to come forwards which avoids unacceptable residual nature conservation impacts[4]".

3.14 Any proposal for the site must comply with LDP policies that seek to protect biodiversity and minimise the impact of development on the environment and Policy SAH3 (Fairfield Mabey, Chepstow) requires that for planning permission to be granted it must be satisfactorily demonstrated that appropriate mitigation and compensatory measures can be taken in relation to the adjoining River Wye SAC. Given that any proposal must demonstrate appropriate mitigation measures and compensatory measures can be taken with regard to the River Wye SAC, the screening assessed that development at this location will not have likely significant effects on the River Wye SAC alone.

3.15 The findings of this HRA/AA do not obviate the need for project level HRA and should be used to support future assessment work. In addition to consideration of the physical development footprint and the associated mitigation measures to minimise any impact on the SAC (e.g. new planting, sensitive design of lighting and drainage etc.) the project level HRA should also incorporate consideration of construction methods and timings. For example, given the proximity of the site to the river, construction methods such as pile-driving may not be appropriate, particularly if they were to be undertaken during migration periods for Salmonids or Lamprey (potential for creation of acoustic barriers to fish movement). It is recommended that the wording in Policy SAH3 is amended to read:

i) project level HRA can satisfactorily demonstrate that appropriate mitigation and compensatory measures (if required) can be taken during construction and operation of the scheme to avoid adverse effects (either direct or indirect) on the integrity of the River Wye SAC.

[4] Ibid.

3.16 The South Woodside site (E1g) is approximately 30m from the River Usk SAC and lies between an existing industrial estate and playing field. It is considered suitable for B1uses, with the potential for 142 jobs. There is potential for development at this site to have direct impacts on the River Usk SAC through disturbance (noise, light and vibration) and changes to the water environment (reduced water quality through pollution/contamination impacts and changes to water regimes).

3.17 It is considered that the potential impacts of proposed development on the designated features would most appropriately be addressed at the project level. Project level HRA would provide a detailed site level analysis and consideration of effects on water quality from site drainage and from inappropriate construction methods/timing that could create acoustic barriers to fish movement.

3.18 It is recommended that the supporting text of Policy SAE1 incorporates the following text:

Any proposals for site E1g South Woodside, Usk must be accompanied by a project level HRA that can satisfactorily demonstrate that appropriate mitigation and compensatory measures (if required) can be taken during construction and operation of the scheme to avoid adverse effects (either direct or indirect) on the integrity of the River Usk SAC.

3.19 The screening concluded that the site allocations would not have likely significant effects on European sites alone if the recommended policy safeguards are incorporated into the Plan.

4.0 APPROPRIATE ASSESSMENT STAGE

Appropriate Assessment Analysis & Findings

4.1 The Deposit LDP policy screening (**Appendix 4**), site allocations screening (**Appendix 5**) and the review of plans and programmes in combination (**Appendix 2**) identified four main areas of impact arising that may have the potential for significant effects when combined with the effects arising from other plans, programmes and projects on the integrity of the identified European sites: water resources, water quality, disturbance and air quality. These issues are investigated further below. This potential for in combination effects is explained in more detail through the AA analysis below.

Air Quality

- Coed y Cerrig SAC;
- Cwm Clydach Woodlands SAC;
- River Usk SAC;
- River Wye SAC;
- Severn Estuary SAC, SPA & Ramsar;
- Sugar Loaf Woodlands SAC;
- Usk Bat Sites SAC; and
- Wye Valley Woodlands SAC.

What are the issues arising from the plan?

4.2 Development proposed in the Deposit LDP and surrounding areas has the potential to increase atmospheric pollution, which will predominantly arise from an increase in traffic associated with the projected population growth over the life of the plan.

How might the European sites be affected?

4.3 Atmospheric pollution from traffic is most likely to affect the habitats which comprise the qualifying features of the identified European sites, although there is the potential for designated species to also be affected, as in most cases they rely upon the designated habitats. **Table 4** below, identifies the potential impacts of atmospheric pollution on the designated habitats of the European sites considered in this AA.

Table 4: Impacts of Atmospheric Pollution on Annex I Habitats[5]

Annex I Habitats[6]	Impacts of Atmospheric Pollution[7]
Marine, Coastal and Halophytic[8] Habitats (Severn Estuary SAC)	
▪ Sandbanks which are slightly	The air pollutant threats to coastal and marine habitats may differ

[5] Adapted from the South East Wales Strategic Planning Group HRA Toolkit (2011)
[6] JNCC - Annex I Habitat Accounts: http://www.jncc.gov.uk/ProtectedSites/SACselection/SAC_habitats.asp
[7] APIS - Impacts by Ecosystem: http://www.apis.ac.uk/
[8] Halophytic plants are plants that can tolerate salty conditions.

Annex I Habitats[6]	Impacts of Atmospheric Pollution[7]
covered by sea water all the time (1110) ▪ Estuaries (1130) ▪ Mudflats and sandflats not covered by seawater at low tide (1140) ▪ Reefs (1170) ▪ Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) (1330)	compared with other environments, either because of different air pollution stresses or ecosystem sensitivity. **Eutrophication** - Many coastal habitats are potentially sensitive to nitrogen deposition. Similarly, salt water ecosystems, such as estuarine habitats may be under the dual threat of nutrient inputs from river inputs and atmospheric deposition. Some coastal environments can be highly eutrophic (highly productive ecosystems, which are rich in plant nutrients) as a result of droppings from sea bird colonies. **Ozone** - As with other semi-natural ecosystems, coastal habitats are expected to be sensitive to ozone concentrations. The effects are expected to parallel those for example grassland ecosystems. It should be noted, however, that the structure of the coastal atmospheric boundary layer permits a greater mixing down of ozone concentrations, so that the ozone exposure of coastal ecosystems is larger than for inland areas. This additional stress will encourage the development of ozone tolerant ecotypes. As these are expected to have different competitive abilities, the community species composition may gradually change. Impacts of ozone on marine ecosystems are not expected, since the ozone is rapidly destroyed following contact with the sea surface.
Freshwater Habitats (River Usk SAC & River Wye SAC)	
▪ Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation (3260)	There are five pollutant groups that could affect the quality of freshwaters: nutrients; acid deposition; heavy metals; POPs and radioactive particles. **Eutrophication** - nutrients, specifically phosphorus and nitrogen, are responsible for the eutrophication of rivers and lakes. There are signs of eutrophication in rivers, mainly of lower oxygen concentrations and increased macrophyte growth. The response of lakes to increased phosphorus concentrations is quite well understood and, in general, there is increased growth and change of species of phytoplankton, zooplankton, sediment-dwelling invertebrates, fish and macrophytes and lower oxygen concentrations, especially in the deeper parts of lakes. **Acid Deposition** - onto freshwaters (and catchments) can lead to acidification. The management and regulation of the acidification of freshwater is well developed in the United Kingdom. The biological groups affected by freshwater acidification are fish (mainly brown trout), invertebrates (mayfly and caddis larvae), macrophytes and the dipper. **Deposition of heavy metals and Persistent Organic Pollutants (POPs)** - onto lakes occurs, even in rural and remote areas, but the ecological effects of this are not known. If any biological group are affected, they are likely to be fish (and fish-eating birds) and sediment-dwelling organisms.
Temperate Heath and Scrub (Usk Bat Sites SAC)	
▪ European dry heaths (4030)	The prime air pollution concerns for heathlands and sub-arctic scrub habitats in the UK are nitrogen deposition and ozone. **Nitrogen Deposition** - as heathlands and sub-arctic scrubs are naturally poor in nutrients, they are particularly sensitive to additional atmospheric nitrogen inputs. Most at risk are high altitude habits (such as montane heaths and scrubs), which are subject to high levels of wet deposition from long-range

Annex I Habitats[6]	Impacts of Atmospheric Pollution[7]
	atmospheric transport of oxidised and reduced nitrogen, and lowland heaths where these occur in the vicinity of intensive agricultural activities. This can lead to changes in species composition. **Ozone** - concentrations increase with altitude, since increased elevation reduces likely hood of being in the nocturnal atmospheric boundary layer, which leads to ozone depletion. As a result, concentrations at high altitude sites can build up to much higher levels during photochemical episodes. This makes high altitude ecosystems such as alpine heaths and scrubs particularly prone to the effects of ozone.
Raised Bogs and Mires and Fens (River Wye SAC & Usk Bat Sites SAC)	
▪ Degraded raised bogs still capable of natural regeneration (7120) ▪ *Blanket bogs (7130) ▪ Transition mires and quaking bogs (7140)	Bog habitats divide into two types: raised bogs and blanket bogs. Raised bogs are typically described as being a discrete single dome of peat with a "halo" of lagg fen. Blanket bog may consist of morphological units similar to raised bogs, but they are typically joined together by thin areas of peat at the edges. These ecosystems - often described as 'ombrotrophic' (rain-fed) mires - are especially sensitive to nitrogen air pollutants, and may be sensitive to ozone. Wetlands habitats divide into alkaline fens, reedbeds and grazing marsh. These habitats experience rather different sensitivity to nitrogen air pollutants, although similar responses to ozone might be expected. **Nitrogen Deposition:** ▪ Fen ecosystems - can be 'ombrotrophic' (rain-fed) and are therefore especially sensitive to nitrogen deposition, as they derive all their nutrients from the atmosphere. Excess nitrogen leads to preferential growth of grass and tree species at the expense of the forming species. Coupled to these changes, the presence of less dominant associated herbs, bryophytes and lichens may change accordingly. ▪ Bogs are highly sensitive to nitrogen deposition, as they derive all their nutrients from the atmosphere. Excess nitrogen leads to preferential growth of grass and tree species at the expense of the bog forming Sphagnum mosses, this can have a substantial impact on the development of bog systems. Coupled to these changes, the presence of less dominant associated herbs, bryophytes and lichens may change accordingly. By contrast, grazing marshes may be less sensitive to atmospheric deposition, although there is much less information regarding the impacts on this habitat type. The most concern in such systems is often the species composition adjacent to ditches, and this may by differently sensitive to the main sward. **Ozone** - the impact of ozone on habitats is generally mediated through a primary impact on plants, either directly in the case of mosses and lichens or indirectly for higher plants. Ozone episodes often occur in periods with dry conditions, when plants will tend to close their stomata. Wetland habitats in the UK are less likely to experience water shortage; as a result, such habitats may be particularly prone to ozone impacts. Currently there is little available data on ozone impacts on wetlands. However, it is expected that responses will be similar to grassland ecosystems.
Rocky Habitats and Caves (Usk Bat Sites SAC)	
▪ Calcareous rocky slopes with	Rocky habitats include shingle, rocks and cliffs, scree and limestone pavements. Each of these habitats is characterised by

Annex I Habitats[6]	Impacts of Atmospheric Pollution[7]
chasmophytic vegetation (8210) ▪ Caves not open to the public (8310)	grasses, herbs growing in restricted crevices. In many cases the result of this is that competition for light is less of an issue than in closed grassland canopies, so that the interaction with air pollutants may also differ. **Nitrogen Deposition** - as with grassland habitats, nitrogen deposition will affect the competitive performance of species growing in rocky habitats. Lower critical loads for nitrogen are generally set for acid habitats, than for calcareous habitats, some of which may be P limited rather than N limited. Nitrogen deposition impacts may also occur directly to lichens and bryophytes growing on rocks. In this case, however, effects may equally be a response to elevated concentrations of NOx and NH3, which would occur mainly in lowland areas. **Acid Deposition** - although calcareous rocks tend to be weathered faster by acid deposition (for example, as causing damage to stonework of buildings), this very weathering provides a buffering to protect species growing in such habitats. Acid deposition is therefore more likely to be an issue in already naturally acidic rocky habitats, with little neutralisation capacity. **Sulphur Dioxide** - exposure to SO2 in the atmosphere will have direct impacts on epiphytes, particularly lichens, growing on rock surfaces. Again the natural acidity/base richness in the rock surface is important in defining the exact species modifications that result. Extensive information is available in the use of lichens as biomonitors for SO2 concentrations. **Ozone** - as with other semi-natural habitats, ozone effects may be expected for rocky habitats, given the exceedance of the critical level over much of the UK. The largest concentrations and therefore impacts would be expected for high altitude and coastal rocky habitats.
Forests (Coed y Cerrig SAC, Cwm Clydach Woodlands SAC, Sugar Loaf Woodlands SAC, Usk Bat Sites SAC & Wye Valley Woodlands SAC)	
▪ Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion*) (9120) ▪ *Asperulo-Fagetum* beech forests (9130) ▪ *Tilio-Acerion forests of slopes, screes and ravines (9180) ▪ Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles (91A0) ▪ *Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) (91E0) ▪ * *Taxa baccata* woods of the British Isles (91J0)	**Nitrogen Deposition** - Woodlands and forests scavenge air pollutants effectively, with the result that inputs of nitrogen deposition to woodlands are generally larger than for other habitat types. There has been a long-running debate regarding the extent to which actual "forest decline" occurs as a result of nitrogen deposition. What is clear is that the most sensitive elements are actually the woodland ground flora and epiphyte communities, which are particularly relevant in defining conservation status. Changes in forest ground flora have been clearly documented as a result of enhanced N deposition near farms and are also expected to occur in regions with high wet deposition of ammonium and nitrate. **Acid Deposition** - Deposition of acidifying air pollutants is primarily seen as affecting the soils of woodland habitats, where effective inputs of sulphuric and nitric acids lead to leaching of the soil. The resulting soil acidification can lead to mobilisation of naturally occurring aluminium in the soil, which may have toxic effects on plant roots, leading to problems of tree health. Acidification also has the potential to reduce tree growth. **Ozone** - The impacts of ozone on forests are predicted to be widespread in the UK, due to the exceedance of the critical level for forests. The expected impacts include reduction in growth, as well as possibly changes in ground flora and epiphyte species

Annex I Habitats[6]	Impacts of Atmospheric Pollution[7]
	composition. The latter is an area where there is a serious gap in information. **Heavy Metals** - Heavy metals (especially lead, cadmium, copper, mercury and zinc) can, at high concentrations, have toxic effects on plants. Symptoms include reduced root growth, and inhibition of various physiological processes including transpiration, respiration and photosynthesis. However large variations in inter-species sensitivity and bioavailability heavy metals must be taken into account when assessing possible effects. Heavy metals can accumulate over a long period in the organic layer and top soil leading to contamination of soil organisms, especially those that play a role in the formation of the soil. Furthermore, acidification of soils cause the mobilisation of these accumulations in the soil where they can be taken up by plant and animal species of the forest ecosystems.

Which other plans/ projects could lead to in-combination effects?

4.4 The following plans and programmes have the potential to act in-combination with the Deposit LDP as they propose development that will lead to cumulative increases in road based traffic over the life of the plan:

- Blaenau Gwent County Borough Council LDP
- Powys County Council LDP
- Torfaen County Borough Council LDP
- Brecon Beacons National Park Authority LDP
- Newport City Council LDP
- Brecon Beacons National Park Management Plan 2009-2014
- Herefordshire Council Core Strategy
- Forest of Dean District Council Core Strategy
- Turning Heads... A Strategy for the Heads of the Valleys 2020 (A465 Dualling)
- The Trunk Road Forward Programme

Air Quality - What is the current situation?

4.5 At a national level, the seventh annual report on air quality in Wales[9] identified that there is a 'clear improvement' in the following Environment Strategy for Wales (2006) indicators:

- Level of emissions from Wales of sulphur dioxide
- Level of emissions from Wales of nitrogen oxides
- Level of emissions from Wales of fine particulates
- Level of emissions from Wales of Non Methane Volatile Organic Compounds (NMVOC)
- Level of emissions from Wales of carbon monoxide

[9] Welsh Air Quality Forum (2009) Air Pollution in Wales 2009.

- Level of emissions from Wales of ammonia
- Area of natural and semi-natural habitat where deposition of acid exceeds critical loads

4.6 It also identified that the following Environment Strategy for Wales (2006) indicators were rated 'stable' or they showed no clear trend:

- Number of days when air pollution is moderate or higher in rural zones and urban agglomerations
- Air concentrations of Heavy Metals
- Area of natural and semi-natural habitat where deposition of nitrogen compounds exceeds critical loads

4.7 At a local level, nitrogen dioxide (NOx) is the only pollutant that exceeds air quality objectives within Monmouthshire and these exceedences are contained in the two declared Air Quality Management Areas (AQMA) in Usk and Chepstow[10]. There is minimal risk of exceeding any other relevant air quality objectives, and therefore monitoring of benzene, 1,3-butadiene, carbon monoxide, lead and sulphur dioxide is not undertaken in Monmouthshire. The Air Quality Progress Report (2010) for Monmouthshire identifies that nitrogen dioxide and particulate matter were lower in 2009 than in 2008 across all monitoring locations.

Is there potential for adverse effects on the integrity of European sites?

4.8 Levels of primary pollutants, those emitted directly into the atmosphere, tend to be highest around their sources; these are usually located in urban and industrial areas. Motor vehicles are a major source of primary pollution throughout the UK, in particular, traffic is an important source of carbon monoxide, nitrogen dioxide and volatile hydrocarbons (VOCs) such as benzene and 1,3-butadiene and primary particles (PM_{10}). Concentrations of all these pollutants are therefore usually highest in built-up urban areas[11].

4.9 Currently the pollutant of most concern in Monmouthshire is NOx, the impacts of which are most relevant close to source. Therefore, the contribution of NOx beyond the specific areas where development and related infrastructure is located is likely to be negligible. The most acute impacts of NOx take place close to where they are emitted (generally within 200m of the roadside[12]) but these gases also have the potential to contribute to background pollution levels.

4.10 European sites in close proximity (within 200m) to a major road (M4, A449 & A48) that is likely to see a significant increase in traffic as a result of development proposed in the Deposit LDP and surrounding areas are the Severn Estuary SAC, SPA and Ramsar, River Usk SAC and River

[10] MCC (2010) Air Quality Progress Report 2010.
[11] Air Quality in Wales: Trends - Air Quality Indicators.
[12] Highways Agency (2007) Design Manual for Roads and Bridges: Volume 11, Section 3, Part 1.

Wye SAC. Given that the most acute impacts of NOx take place within 200m of the roadside only a very small proportion of the European sites have the potential to be affected by atmospheric pollution from increased levels of traffic.

4.11 The Core Management Plans (CMP) for the River Usk SAC and River Wye SAC indicate that hydrological process, in particular river flow (level and variability) and water chemistry, determine a range of habitat factors of critical importance to the designated features. These factors often interact, producing unfavourable conditions by promoting the growth of a range of algae and other species indicative of eutrophication. Under conditions of prolonged low flows and high nutrient status, epiphytic algae may suppress the growth of aquatic flowering plants. Inputs of atmospheric nitrogen from increased levels of traffic can contribute to the increase of nutrients in the water and therefore eutrophication. The CMPs identify that favourable management is largely dependent on ensuring that sufficient depth, velocity and duration of flow and sufficiently low phosphate levels are maintained within the natural range of the vegetation. This demonstrates that maintaining the river flow is key to the integrity of the European sites and suggests that the principal inputs of nutrients into these rivers are from water sources rather than atmospheric. Nitrate concentration in the River Usk and River Wye during 2008 ranged from Very Low to Moderate. One exception in the River Wye was the stretch of water from West Wycombe Park to High Wycombe Sewage Treatment Works, which from 2006 to 2008 was recorded as having very high nitrate concentrations[13].

4.12 The CMP for the Severn Estuary European Marine Site identifies that whilst nutrient levels and loadings within the Estuary are considered significant in UK terms, the high natural turbidity of the system negates these high levels, with algal productivity being generally low except in localised hotspots.

4.13 The Stage 4 RoC Action Plans for the River Usk SAC[14] and River Wye SAC[15] identified that long-range, Environment Agency regulated, sources of atmospheric pollution, can be shown to be having an adverse effect on the features of the European sites by contributing to acidification and eutrophication of the Rivers. According to the EA, the major regulated sources of sulphur and nitrogen emissions are from combustion plants. Power stations account for in the order of three quarters of the sulphur and nitrogen emitted from regulated sources in England and Wales. The next largest sector of emissions comes from the refineries. The sources of atmospheric pollutants are many and diffuse and there is a complex interaction of many processes. Regulation of these sources is undertaken by the EA and other Competent Authorities.

[13] Environment Agency - What's in your backyard?
[14] EA (March 2010) River Usk SAC Habitats Directive Review of Consents - Draft Stage 4 Site Action Plan, Version 2.
[15] EA (March 2010) River Wye SAC Habitats Directive Review of Consents - Stage 4 Site Action Plan, Version 2.

The EA identifies that management of the diffuse input via catchment sensitive farming or agri-environment schemes and site protection is the most effective way to both protect and enhance the European sites[16]. The EA is working with both power station and appropriate oil refinery operators to put in place monitoring requirements at key European sites in England and Wales to track anticipated changes in deposition. The EA states that it is able to take appropriate action if the monitoring indicated that the anticipated reductions were not being achieved.

4.14 At a strategic level MCC should seek to ensure that LDP policies address identified issues - in relation to potential adverse impacts on air quality - and put robust policy measures in place to provide mitigation. The Deposit LDP (Policy EP1) seeks to ensure that development proposals do not cause or result in unacceptable risk/ harm to a range of interests, including nature conservation, as a result of air pollution, unless it can be demonstrated that measures can be taken to overcome any significant risk. It also states that where it is considered that a development proposal may impact upon an AQMA, or exacerbate an existing problem, developers will be required to provide an assessment of air quality impact, together with proposals for mitigation. The Deposit LDP (Policy S16) also seeks to reduce reliance on the private vehicle by encouraging development proposals to promote sustainable forms of transport that reduce the need to travel, increase provision for walking and cycling and improve public transport provision. Development Management Policy MV1 (Proposed Developments and Highway Considerations) ensures that development will not be permitted if it is likely to create significant and unacceptable additional traffic growth in relation to the capacity of the existing road network, unless appropriate proposals for related improvements to the highway system or a contribution towards mitigating traffic management/ reduction measures are made. It also ensures that all planning applications for developments which are likely to have a significant impact on trip generation and travel demand must, as appropriate, be accompanied by a transport assessment and travel plan.

4.15 Given the measures being undertaken by the EA and the mitigation provided in the Deposit LDP, **it is assessed that the Deposit LDP in combination with development proposed in surrounding areas will not have adverse effects on the integrity of European sites through increased atmospheric pollution.**

Disturbance (Recreational Activity & Habitat Fragmentation and Loss)

- River Usk SAC;
- River Wye SAC;
- Severn Estuary SAC, SPA & Ramsar;
- Usk Bat Sites SAC;

[16] Ibid.

- Wye Valley and Forest of Dean Bat Sites SAC; and
- Wye Valley Woodlands SAC.

What are the issues arising from the plan?

4.16 Development proposed in the LDP and surrounding areas has the potential to increase the population and therefore levels of recreational activity. The development could also lead to the loss and fragmentation of supporting habitats, i.e. those that lie outside the designated area but have an identified role to play in maintaining the overall integrity of the European sites. Proposed development also has the potential to result in increased levels of noise and light pollution.

How might the European sites be affected?

4.17 Increased recreational activity at European sites has the potential to cause disturbance to designated habitats and species through a variety of different pathways. This could include physical disturbance through trampling of habitats or non-physical disturbance through noise and light pollution. There is also the potential for the development proposed in the Deposit LDP and surrounding areas to reduce the connectivity of important or supporting habitat, which are necessary to maintain the integrity of mobile or migratory species.

Which other plans/ projects could lead to in-combination effects?

4.18 The following plans and programmes have the potential to act in-combination with the Deposit LDP as they propose development that will lead to the cumulative increase of habitat fragmentation and loss as well as a cumulative increase in the population and therefore recreational activity:

- Blaenau Gwent County Borough Council LDP
- Powys County Council LDP
- Torfaen County Borough Council LDP
- Brecon Beacons National Park Authority LDP
- Newport City Council LDP
- Brecon Beacons National Park Management Plan 2009-2014
- Herefordshire Council Core Strategy
- Forest of Dean District Council Core Strategy
- Turning Heads... A Strategy for the Heads of the Valleys 2020 (A465 Dualling)
- The Trunk Road Forward Programme

Disturbance - What is the current situation?

4.19 Limited evidence/ information to determine the impact of recreational activity on European sites. A South East Wales Visitors survey undertaken in 2005 identified that the main influence for people to visit

the area is the scenery, landscape and countryside. There is a correlation between European sites and these factors.

Is there potential for adverse effects on the integrity of European sites?

4.20 All the European sites considered in this assessment are in some way vulnerable to the impacts of physical and non-physical disturbance, either as a result of recreational activity or of development itself (habitat loss and fragmentation).

Recreational Disturbance

4.21 The significance of recreational impacts is dependent on a variety of factors including the sensitivity of designated features and the level of their exposure to recreational activities. The European sites considered in this assessment are popular areas for a range of recreational activities including walking, canoeing and fishing.

4.22 Given the unique recreational opportunities that the European sites provide and the level of development proposed around them, it is not likely that an individual authority alone could avoid, mitigate or compensate for adverse effects of increased disturbance on the integrity of the identified European sites if they should occur. However, at a strategic level, such as the LDP, authorities should seek to ensure that policies recognise and address identified issues and put robust measures in place to provide mitigation.

4.23 To address recreational impacts at European sites it is appropriate to impose voluntary restrictions for particular recreational activities, such as for the use of personal water craft. These restrict particular areas of European sites for recreational use, often at certain times of the year, to minimise the level of disturbance on designated features. Co-operative measures such as voluntary agreements have been shown to be highly effective in the management of recreation and tourism impacts on European sites[17]. These measures have been most successful when affected stakeholders have been invited to participate and contribute in the design of the management measures.

4.24 CCW plays a key role in the collation of information to monitor the identified European sites and is responsible for assessing the condition of each feature within the sites. If monitoring carried out by CCW on the European sites were to find that voluntary agreements and restrictions in place are not protecting the designated features then they should be re-evaluated and possibly replaced by stricter regulations. This should be done in co-operation with key stakeholders including the various sport associations and land owners. The development of co-operative measures should already be going on through the management plans for European sites. The fundamental

[17] Proebstl, U. & Prutsch, A. (2010) Natura 2000 - Outdoor Recreation and Tourism; A guideline for the Application of the Habitats Directive and the Birds Directive. Bundesamt fuer Natuschutz, Bonn, Germany.

purpose of the management plans is to ensure the sustainable use of the European sites. It provides the basis for site-specific monitoring and the goal is to either maintain the favourable condition of the site it is protecting, or to define the ideal desired condition and the required actions for achieving them.

4.25 The Deposit LDP can only mitigate adverse effects arising as a result of recreational activity through policies that provide alternative recreational spaces and by contributions to strategic management approaches in collaboration with CCW and other Local Authorities. Policy mitigation and joint working at a strategic level can help to mitigate the impacts of recreational activity to a certain extent, however; the direct impacts of recreational activity are most appropriately addressed at the site level through co-operative measures. Disturbance to designated species and habitats by recreational activities should be tackled through management schemes for the European sites produced by CCW.

4.26 The Deposit LDP seeks to provide, protect and enhance open spaces in the County that are important for recreation and biodiversity. The provision of new areas of open space and /or contributions towards improving existing areas of open space will be sought in connection with new residential developments in order to enable the provision of an accessible network of open space for all. Policy CRF2 ensures that new residential development will provide appropriate amounts of space and facilities for children's play, outdoor adult recreation and public open space, in accordance with the Plan's adopted standards of 2.8 hectares per 1,000 population. Proposals for new residential development at the strategic sites listed in Policy S3 and any development exceeding 50 dwelling units per site, should also make provision for allotments if required. The Deposit LDP also states that wherever possible, provision for outdoor recreation and public open space should be made on site as an integral part of the development, and in a location well related to the proposed residential properties. Where some of the provision needs to be made off site, a financial contribution may be appropriate to allow facilities to be provided or improved in a suitable location nearby.

4.27 Given the mitigation provided in the Deposit LDP, **it is assessed that the Deposit LDP in combination with development proposed in surrounding areas will not have adverse effects on the integrity of European sites through increased recreational activity.**

Habitat Loss and Fragmentation

4.28 Considering the location of proposed development and sensitivities of the designated features, the European sites with the highest vulnerability to habitat fragmentation and loss are the Usk Bat Sites SAC and Wye Valley and Forest of Dean Bat Sites SAC.

4.29 Linear habitat features, such as hedgerows and tree lines are particularly important for bat species as these types of habitat are used for foraging and movement between roosts. There is currently limited information regarding the foraging areas and bat fly-ways of the Greater and Lesser Horseshoe Bat populations present in Monmouthshire. The Species Action Plan (part of the UK Biodiversity Action Plan) for the Lesser Horseshoe Bat states that females forage within 2-3 km of the maternity roost[18] and the Species Action Plan for the Greater Horseshoe Bat indicates that favourable habitat management should occur up to 4km around each roost[19]. However, both bat species are known to migrate over much larger distances. The CMP[20] for the Usk Bat Sites SAC states that Lesser Horseshoe Bats do not normally fly across open land and when foraging they remain close to wooded canopies.

4.30 The potential impacts of proposed development on linear habitat features and dark corridors would most appropriately be addressed at the project level. Project level HRA would provide a detailed site level analysis of the importance of the site to the bats, and provide suitable mitigation measures to reduce the adverse effects of the proposed allocation on bat populations. Key considerations are likely to involve avoiding or minimising loss/breaching of linear features (e.g. hedgerows, woodland belts) and appropriate design of site lighting to maintain 'dark corridors' as far as practicable. Where loss or interruption of linear features is unavoidable, either mitigation should be provided and/or any gaps kept to a width of 10m or less.

4.32 At a strategic level MCC should seek to ensure that Deposit LDP policies address identified issues - in relation to potential adverse impacts on habitat loss and fragmentation - and put robust measures in place to provide mitigation. The Deposit LDP seeks to ensure that development proposals have regard to their impact on any adjacent natural heritage resources, including landscape, and sites of nature conservation or wildlife interest. Policy NE1 (Nature Conservation and Development) requires development to accord with natural ecological processes and nature conservation interests. Specifically development is expected to retain and, where appropriate manage, existing semi-natural habitats and geological features and safeguard them during construction work. Development is also expected to conserve and, where practicable, enhance existing semi-natural habitats and features of nature conservation interest. Where this is not feasible appropriate provision for compensatory habitats and features of equal or greater quality and quantity of that lost must be provided. The Policy (NE1) also ensures that development proposals protect and

[18] UK BAP: Species Action Plan - Lesser Horseshoe Bat (*Rhinolophus hipposideros*). Available online: http://www.ukbap.org.uk/UKPlans.aspx?ID=551

[19] UK BAP: Species Action Plan - Greater Horseshoe Bat (*Rhinolophus ferrumequinum*). Available online: http://webarchive.nationalarchives.gov.uk/20110303145213/http://ukbap.org.uk/UKPlans.aspx?ID=550

[20] Countryside Council for Wales (CCW). 2008. Core Management Plan including conservation objectives for Usk Bat Sites Special Area of Conservation (SAC). March 2008.

enhance wildlife landscapes and resources through appropriate building design, site layouts, landscaping techniques and choice of plant species. The Deposit LDP also ensures that the impacts of light pollution are minimised. Policy EP3 (Lighting) requires that any development proposal with external lighting will include an appropriate lighting scheme to ensure potential impacts on rare, threatened or protected species are taken into consideration.

Recommendations for avoidance and mitigation

4.33 It is recommended that the wording in Policy DE 5 (Nature Conservation and Development) is amended to read:

a) Retain and, where appropriate manage, existing semi-natural habitats, linear habitat features and geological features and safeguard them during construction work;

4.34 If the recommended policy safeguard is incorporated into the Deposit LDP the AA can conclude **that the Deposit LDP in combination with development proposed in surrounding areas will not have adverse effects on the integrity of European sites through habitat loss and fragmentation.**

Water Resources

- River Usk SAC;
- River Wye SAC; and
- Severn Estuary SAC, SPA & Ramsar.

What are the issues arising from the plan?

4.35 The level of development proposed in the Deposit LDP has the potential to act in combination with development proposed in surrounding areas through increased levels of abstraction to provide water supply.

How might the European sites be affected?

4.36 Increased abstraction has the potential to lead to reduced water levels, which can have adverse effects on the integrity of water dependent European sites. Changes to water levels can impact river flow and water quality, which can adversely affect water dependent habitats and the species that rely upon them.

Which other plans/ projects could lead to in-combination effects?

4.37 The following plans and programmes have the potential to act in-combination with the Deposit LDP as they propose development that will lead to the cumulative increase in water abstraction:

- Blaenau Gwent County Borough Council LDP
- Powys County Council LDP
- Torfaen County Borough Council LDP
- Brecon Beacons National Park Authority LDP
- Newport City Council LDP
- Brecon Beacons National Park Management Plan 2009-2014
- Herefordshire Council Core Strategy
- Forest of Dean District Council Core Strategy
- Welsh Water (2008) Draft Water Resource Management Plan

Water Resources - What is the current situation?

4.38 Welsh Water has produced a draft Water Resource Management Plan (WRMP), which identifies twenty-four water resource zones[21] (WRZs) within the supply area for which it is responsible. The South East Wales Conjunctive Use System (SEWCUS) WRZ and Monmouth WRZ contain the majority of proposed development that has the potential to have adverse in combination effects on site integrity. The level of development proposed in the Deposit LDP in combination with development proposed in the surrounding area is likely to increase abstraction levels within the SEWCUS and Monmouth WRZs. Water is not only transferred between water bodies within WRZs but also between the WRZs themselves, therefore the SEWCUS and Monmouth WRZs have not been considered in isolation.

4.39 Welsh Water assesses that there are sufficient resources in the SEWCUS and Monmouth WRZs up to 2035 and envisages that the increase in housing demand during the life of the plan will be offset by customers switching to a measured water supply. This is based on a number of uncertainties, including the level of development that will occur up to 2035 and the amount of water that will be saved through metering and other potential measures, such as reducing leakage. The WRMP does not take account of potential sustainability restrictions imposed by the EAW based on the findings of the Habitats Directive Review of Consents (RoC) process[22].

Is there potential for adverse effects on the integrity of European sites?

4.40 Considering the sensitivities of the designated features, the European sites with the highest vulnerability to reduced water levels are the Severn Estuary SAC/ SPA/ Ramsar, River Usk SAC and River Wye SAC. The work undertaken by EAW for the Severn Estuary SAC and SPA through the RoC process[23] concluded that there are no other actions

[21] Welsh Water defines Water Resource Zones as, "the largest area in which all resources can be shared".
[22] Under the Habitats Regulations the Environment Agency Wales (EAW) has a duty to assess the effects of existing abstraction licences and any new applications (Review of Consents - RoC) to make sure they are not impacting on internationally important nature conservation sites.
[23] EA (Jan 2010) Severn Estuary SAC and SPA Stage 4 Proforma & Action Plan: Final Version

to be taken by another competent authority to achieve no adverse in combination effects on site integrity as a result of abstractions.

4.41 The Stage 4 RoC Action Plans for the River Usk SAC[24] and River Wye SAC[25] could not conclude no adverse effect upon site integrity due to the in combination effects of licensed abstraction on the quantity and variability of river flows and fish entrainment at abstraction intakes. The maintenance of river flows is important to support the life stages of designated features. The in combination effects of abstraction are particularly evident during low flows in the River. The EA has developed environmental outcomes that establish criteria to ensure adequate flows are maintained, which enables them to conclude that permissions have no adverse effect.

4.42 Any applications for new licences will be assessed by the EAW to make sure that they do not have adverse impacts on internationally important nature conservation sites. If the assessment of a new application shows that it could have an impact on a European site the EA will have to follow strict rules in setting a time limit for that license. This ensures that water levels at European sites do not fall below critical levels. This is supported by the HRA of Welsh Water's Draft Water Resource Management Plan (Nov 2008), which states that "accurate assessment of exposure (and therefore vulnerability)", of a European site "can only be achieved through detailed studies in the RoC process, informed by the site knowledge of the CCW local teams and officers"[26].

4.43 At a strategic level the Deposit LDP seeks to maintain and enhance the quality and quantity of water resources only permitting development where the Council, in consultation with the Environment Agency, is satisfied that suitable measures have been undertaken to protect water resources. The Deposit LDP also encourages initiatives that result in an improvement in water resources, for example water conservation initiatives within development design. Future development will also be limited to areas where adequate water resources exist or can be provided in time to serve the development without detrimentally affecting existing water abstraction, water quality, fisheries, and amenity or nature conservation. Policy EP2 (Protection of Water Sources and the Water Environment) ensures that proposed developments which may impact on the water environment will only be permitted where it would not pose unacceptable risk or harm to the quality and quantity of ground waters, surface waters, wetlands or coastal water systems including, where appropriate, their ecological and amenity value.

[24] EA (March 2010) River Usk SAC Habitats Directive Review of Consents - Draft Stage 4 Site Action Plan, Version 2.
[25] EA (March 2010) River Wye SAC Habitats Directive Review of Consents - Stage 4 Site Action Plan, Version 2.
[26] Welsh Water (2008) HRA of the Draft Water Resource Management Plan. Available online: http://www.dwrcymru.com/English/Company/Operations/resources/wrmp/index.asp

4.44 Given the findings of the EAW Habitats Directive Review of Consents and the mitigation provided in the Deposit LDP, **it is assessed that the Deposit LDP in combination with development proposed in surrounding areas will not have adverse effects on the integrity of European sites through reduced water levels.**

Recommendations for avoidance and mitigation

4.45 In acknowledgement of the pressures on water resources and the uncertainties arising from new development it is recommended that MCC take a practical approach to understanding future water requirements in the context of planning development. It is recommended that Monmouthshire County Council undertake a Water Cycle Study (in collaboration with neighbouring authorities across South East Wales) during the first 4 years of the LDP after its adoption. This is consistent with CCW advice for other HRAs of LDPs in SE Wales.

Water Quality

- River Usk SAC;
- River Wye SAC; and
- Severn Estuary SAC, SPA & Ramsar.

What are the issues arising from the plan?

4.46 Development proposed in the Deposit LDP has and surrounding areas has the potential to increase pressure on sewerage capacity and increase surface water run-off.

How might the European sites be affected?

4.47 Increased discharges (consented) and surface water run-off (which can transfer pollutants to water bodies) has the potential to reduce water quality, which can have adverse effects on designated habitats and species.

Which other plans/ projects could lead to in-combination effects?

Water Quality

4.48 The following plans and programmes have the potential to act in-combination with the LDP as they propose development that will lead to the cumulative increase in discharges and surface water run-off:

- Blaenau Gwent County Borough Council LDP
- Powys County Council LDP
- Torfaen County Borough Council LDP
- Brecon Beacons National Park Authority LDP

- Newport City Council LDP
- Brecon Beacons National Park Management Plan 2009-2014
- Herefordshire Council Core Strategy
- Forest of Dean District Council Core Strategy

Water Quality - What is the current situation?

4.49 The biological and chemical quality of river waters in Wales has been steadily improving for the past 10 years. The percentage of river lengths in Wales of good or fair chemical quality has been consistently higher than 98 per cent since 1994 and the percentage of river lengths in Wales of good or fair biological quality has consistently been 99 per cent or higher since 2002[27].

4.50 In 2008 the various stretches of the River Usk and River Wye were rated as having either Very Good (A) or Good (B) chemical and biological status, which according to the EA means that the rivers are either at, or close to a natural ecosystem and the biology is close to that of an unpolluted river[28]. The Severn Estuary is currently assessed by the EA as having moderate biological quality and good chemical quality[29].

Is there potential for adverse effects on the integrity of European sites?

4.51 Considering the sensitivities of the designated features, the European sites with the highest vulnerability to reduced water quality are the Severn Estuary SAC/ SPA/ Ramsar, River Usk SAC and River Wye SAC. The work undertaken by EAW for the Severn Estuary SAC and SPA through the RoC process [30] concluded that there are no other actions to be taken by another competent authority to achieve no adverse in combination effects on site integrity as a result of discharges.

4.52 The Stage 4 RoC Action Plan for the River Usk SAC[31] concluded that the phosphate targets were achieved and there was no adverse effect upon site integrity as a result of discharges. The Stage 4 RoC Action Plan for the River Wye SAC[32] could not conclude no adverse effect upon site integrity due to failures of Phosphate targets when assessing discharge consents in combination, which includes modifying discharge consents. These modifications are considered to achieve necessary environmental outcomes and allow the EA to conclude no adverse effect as a result of discharges.

4.53 At a strategic level the Deposit LDP seeks to maintain and enhance the quality and quantity of water resources only permitting development

[27] WAG (July 2010) State of the Environment.
[28] Environment Agency - What's in your backyard?
[29] Ibid.
[30] EA (Jan 2010) Severn Estuary SAC and SPA Stage 4 Proforma & Action Plan: Final Version
[31] EA (March 2010) River Usk SAC Habitats Directive Review of Consents - Draft Stage 4 Site Action Plan, Version 2.
[32] EA (March 2010) River Wye SAC Habitats Directive Review of Consents - Stage 4 Site Action Plan, Version 2.

where the Council, in consultation with the Environment Agency, is satisfied that suitable measures have been undertaken to protect water resources. Policy EP2 (Protection of Water Sources and the Water Environment) ensures that proposed developments which may impact on the water environment will only be permitted where it would not pose unacceptable risk or harm to the quality and quantity of ground waters, surface waters, wetlands or coastal water systems including, where appropriate, their ecological and amenity value. The Deposit LDP also encourages initiatives that result in an improvement in water resources, for example water conservation initiatives within development design. Development proposals are expected to incorporate water management measures, including Sustainable Drainage Systems (SUDS), to reduce surface water run-off and minimise its contribution to flood risk elsewhere (Policy SD4 - Sustainable Drainage). The Deposit LDP also ensures (Policy S7 - Infrastructure Provision) that the sewerage infrastructure needed to service development is in place or provided in phase with proposals. Where existing infrastructure is inadequate to serve the development, new or improved infrastructure and facilities to remedy deficiencies must be provided.

4.54 Given the findings of the EAW Habitats Directive Review of Consents and the mitigation provided in the Deposit LDP, **it is assessed that the Deposit LDP in combination with development proposed in surrounding areas will not have adverse effects on the integrity of European sites through reduced water quality.**

5.0 CONCLUSIONS/ FUTURE WORK

5.1 This report outlines the methods used and the findings for the AA stage of the HRA for the MCC's Deposit LDP. The first stage of the HRA process (screening, May 2009) considered the likely significant effects of Pre-Deposit LDP Proposals on European sites. The initial screening identified that nine European sites may be potentially affected by activities/ impacts arising from Pre-Deposit LDP Proposals. It concluded that the emerging LDP has the potential for likely significant effects on European sites and that the effects of certain policies are uncertain and dependent on the scale and location of development. It was also assessed that there is the potential for these impacts to be either avoided or mitigated through LDP policies; however this would not be clear until the LDP had been progressed further.

5.2 Following the HRA Screening of Pre-Deposit LDP Proposals, Monmouthshire County Council has progressed with the development of the LDP. In line with current guidance and the recommendations of the initial screening stage, the AA revisited the screening assessment to determine whether the changes and additions made to the LDP have the potential to lead to likely significant effects, beyond those considered in the initial screening of the LDP Pre-Deposit Proposals in May 2009.

5.3 The screening of Deposit LDP Policies and site allocations assessed that there was the potential for likely significant effects alone on European sites as a result of the quantum and/ or location of proposed development. To address these identified issues the re-evaluation of screening findings recommends a number of policy safeguards in relation to specific Deposit LDP Policies and site allocations. The further screening concluded that the Deposit LDP (including site allocations) would not have likely significant effects alone on European sites, if the recommended policy safeguards are incorporated into the Plan.

5.4 The further screening work identified four main areas of impact arising that may have the potential for significant in combination effects on the integrity of the identified European sites: water resources, water quality, disturbance and air quality. These issues were taken forward into the AA and considered in further detail.

5.5 The AA assessed that the Deposit LDP contains suitable mitigation measures to address the potential in combination effects on European sites that could occur through changes to air quality, water quality, water resources and recreational disturbance. Specifically, the Deposit LDP contains policies that protect biodiversity and minimise the impacts of development on the wider environment, such as air quality, supporting habitats and the water environment.

5.6 The assessment identified that there is the potential for adverse effects on the integrity of the Usk Bat Sites SAC and Wye Valley and Forest of Dean Bat Sites SAC through habitat fragmentation and loss as a result of the Deposit LDP acting in combination with development proposed in surrounding areas. Linear habitat features, such as hedgerows and tree lines are particularly important for bat species as these types of habitat are used for foraging and movement between roosts. To address this issue the AA recommends a policy safeguard to ensure that development proposed through the Deposit LDP does not result in the loss or damage of linear habitat features. The AA concluded that the Deposit LDP would not have adverse in combination effects on European sites through habitat loss and fragmentation, if the recommended policy safeguards are incorporated into the Plan.

5.7 This AA is subject to consultation with CCW, and Monmouthshire County Council will take advice from the Statutory Body and other relevant stakeholders, in taking forward the HRA and recommended inputs to the development plan process. Accordingly, this AA may be revised should further relevant comments be received or if there are significant changes to the Plan.

5.8 The findings of this plan level HRA do not obviate the need to undertake HRA for lower level, project scale/ implementation plans where there is potential for significant effect on one or more European sites. The findings of this HRA should be used to inform any future assessment work.

REFERENCES/ BIBLIOGRAPHY

Air Pollution Information System. www.apis.ac.uk

Countryside Council for Wales. www.ccw.gov.uk

CSa Environmental Planning (June 2010) Ecological Appraisal: Fairfield Mabey Site, Station Road, Chepstow. Prepared on behalf of Beachley (Chepstow) Ltd.

Enfusion Ltd (2011) Habitats Regulations Assessment: A Toolkit to Support HRA Screening and Appropriate Assessment of Plans. Prepared for the South East Wales Strategic Planning Group.

Environment Agency (2008) Water for Life and Livelihoods: A Consultation on the Draft River Basin Management Plan Severn River Basin District.

Environment Agency. What's in Your Backyard? Available online: http://maps.environment-agency.gov.uk/wiyby/wiybyController?ep=maptopics&lang=_e

Environment Agency (Jan 2010) Severn Estuary SAC and SPA Stage 4 Proforma & Action Plan: Final Version.

Environment Agency (March 2010) River Usk SAC Habitats Directive Review of Consents - Draft Stage 4 Site Action Plan, Version 2.

Environment Agency (March 2010) River Wye SAC Habitats Directive Review of Consents - Stage 4 Site Action Plan, Version 2.

Highways Agency (2007) Design Manual for Roads and Bridges: Volume 11, Section 3, Part 1

Joint Nature Conservation Committee. www.jncc.gov.uk

Joint Nature Conservation Committee. UK Biodiversity Action Plan - Species Action Plans: http://www.ukbap.org.uk/default.aspx

Monmouthshire County Council (2009) HRA of Monmouthshire Local Development Plan - Pre-Deposit Proposals. Screening Assessment.

Monmouthshire County Council (2010) Air Quality Progress Report 2010.

Proebstl, U. & Prutsch, A. (2010) Natura 2000 - Outdoor Recreation and Tourism; A guideline for the Application of the Habitats Directive and the Birds Directive. Bundesamt fuer Natuschutz, Bonn, Germany.

Technical Advice Note (TAN) 5 (WAG, 2009) Nature Conservation and Planning: Annex 6 to TAN5 (WAG, 2009) The appraisal of development plans in Wales under the provisions of the Habitats Regulations.

Tyldesley, D., 2009, Draft Guidance for Plan Making Authorities in Wales: The Appraisal of Plans under the Habitats Directive for Countryside Council for Wales CCW Bangor.

Welsh Air Quality Forum. Air Quality in Wales: Trends - Air Quality Indicators. Available online: http://www.welshairquality.co.uk/

Welsh Air Quality Forum (2009) Air Pollution in Wales 2009.

Welsh Assembly Government (2006) Local Development Plan Manual: Planning Delivery for Wales Programme.

Welsh Assembly Government (July 2010) State of the Environment.

Welsh Water (2006) Drought Plan. Available online: http://www.dwrcymru.co.uk/English/Company/Operations/resources/dp.asp

Welsh Water (2008) Draft Water Resource Management Plan. Main Report. Available online: http://www.dwrcymru.co.uk/English/Company/Operations/resources/wrmp/index.asp

Welsh Water (2008) Draft Water Resource Management Plan. Habitats Regulations Assessment. Available online: http://www.dwrcymru.co.uk/English/Company/Operations/resources/wrmp/hra/index.asp

Welsh Water (2008) Draft Water Resource Management Plan. Strategic Environmental Assessment, Environmental Report. Available online: http://www.dwrcymru.co.uk/English/Company/Operations/resources/wrmp/SEA/index.asp

Appendix 1: European Site Characterisations

Special Areas of Conservation

1. Coed Y Cerrig
2. Cym Clydach Woodlands
3. River Usk
4. River Wye
5. Severn Estuary
6. Sugar Loaf Woodlands
7. Usk Bat Sites
8. Wye Valley and Forest of Dean Bat Sites
9. Wye Valley Woodlands

Special Protection Areas

10. Severn Estuary

Ramsar Sites

11. Severn Estuary

All core site specific information unless otherwise stated has been referenced from the Countryside Council for Wales website and the Joint Nature Conservation Committee website.

Special Areas of Conservation

Site Name: Coed Y Cerrig **Location Grid Ref: SO291210** **JNCC Site Code: UK0012766** **Size: 9.1ha** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
Site Description	Coed y Cerrig is situated approximately 4.8km to the North of Abergavenny and is a good example of alluvial forest in southern Wales. The valley-bottom woodland has a canopy dominated by alder *Alnus glutinosa* with ash *Fraxinus excelsior*, and a rich understorey that includes guelder-rose *Viburnum opulus* and bird cherry *Prunus padus*. The ground flora is characterised by abundant large sedges *Carex spp.*, and a wide diversity of wet woodland species. The woodland is continuous with diverse ash-elm *Fraxinus-Ulmus* and oak *Quercus spp.* woodland on the valley sides.
Qualifying Features	Annex I Habitats primary reason for selection: ▪ Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)** Priority feature
Conservation Objectives	**Conservation Objective for Feature 2: Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incarnae, Salicion albae*)** 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: ▪ Around a third of the site is covered by wet alder and willow woodland. ▪ This wet woodland grades into areas of permanent open swamp dominated by lesser pond-sedge or other typical wetland plants, where the hydrological conditions are suitable. Adjacent areas of marshy grassland and spring-fed mire are intimately linked to the wet woodland and swamp. ▪ The remainder of the site supports mainly dry semi-natural woodland.

Site Name: Coed Y Cerrig **Location Grid Ref: SO291210** **JNCC Site Code: UK0012766** **Size: 9.1ha** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
	▪ The wet woodland has a variable canopy structure, based on a small-scale patchwork, with alder of different ages and some standing as well as fallen dead wood. Ash does not make up more than 25% of the canopy. ▪ Young trees/saplings and/or vegetative re-growth of the above species are present. ▪ The understorey includes locally native shrubs typical of this habitat and the ground flora consists of a variety of typical wetland plants, such as lesser pond-sedge, common marsh-bedstraw, meadowsweet, yellow pimpernel, opposite-leaved golden-saxifrage, marsh-marigold, hemlock water-dropwort, water mint, lady fern and rushes. ▪ Plants associated with nutrient enrichment, such as stinging nettle and cleavers, are not dominant over large areas and invasive alien plants like Japanese knotweed and Indian balsam are absent. ▪ This wet woodland grades into areas of permanent open swamp dominated by lesser pond-sedge or other typical wetland plants, where the hydrological conditions are suitable. Adjacent areas of marshy grassland and spring-fed mire are intimately linked to the wet woodland and swamp. ▪ There is no significant input of nutrient-rich water from ditches and surrounding land. ▪ All factors affecting the achievement of these 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 Coed Y Cerrig Management Plan.
Component SSSIs	▪ Coed Y Cerrig SSSI Coed Y Cerrig SSSI is divided into 10 management units of which numbers 2, 4, 5 and 9 comprise to form the Coed Y Cerrig SAC. The management units can be viewed on a map that is available on the CCW website.
Key Environmental Conditions (factors that maintain site	▪ **Livestock grazing** - In units 2 & 4 there should be no deliberate grazing but light grazing, preferably by cattle or ponies, is desirable in unit 5 to maintain the fen-meadow vegetation.

Site Name: Coed Y Cerrig Location Grid Ref: SO291210 JNCC Site Code: UK0012766 Size: 9.1ha Designation: SAC	Habitats Regulations Assessment: Data Proforma
integrity	○ Lower limits: Unit 5 should be subject to light summer grazing by cattle and/or ponies at least 4 in every 5 years. ○ Upper limits: No significant grazing in units 2 and 4; ○ AND: No significant grazing outside the growing season in unit 5 or heavy grazing at any time during the summer. Light summer grazing is defined as - cattle and/or ponies at a rate of 0.4 LSU/ha/year for the period April to October. Heavy grazing is defined as greater than 1 LSU/ha/year (1 LSU is equivalent to a cow/horse, plus calf/foal). ▪ **Woodland Management** - Small-scale coppicing over a long cycle is desirable to maintain the dominance of alder and create a varied canopy structure in the wet woodland. More frequent coppicing is required to maintain the open glades that are dominated by sedge swamp. Standing and fallen dead timber provides an important habitat for a variety of wildlife, including fungi, invertebrates and birds and is also essential for nutrient recycling and restoring soil nutrients. Therefore dead and decaying trees should normally be retained. Wherever possible, standing dead trees should be allowed to decay and fall naturally. Movement and cutting/tidying of fallen trees and dead wood should be avoided unless essential for legal obligations or public safety. ▪ **Drainage** - hydrology is important in maintaining wet woodland. The alder woodland and associated swamp, marshy grassland and spring-fed mire, as well as the marsh fern, are found in areas of impeded drainage in the valley bottom. There should be no drainage works that could interfere with the springs and the generally waterlogged ground. ○ No new drainage ditches to be installed within units 2, 4 & 5. ▪ **Public Access** - Maintain boardwalks and footpaths to minimise trampling damage within the wet woodland. In theory, public access to the Nature Reserve area could cause a lot trampling damage but in practice the ground is so wet that visitors tend to keep to the boardwalks provided. ○ Upper limits: No more that 30% bare ground with signs of trampling within 10m radius of a sample point;

Site Name: Coed Y Cerrig Location Grid Ref: SO291210 JNCC Site Code: UK0012766 Size: 9.1ha Designation: SAC	Habitats Regulations Assessment: Data Proforma
	○ AND: No net loss of habitat to provide additional boardwalks.
SAC Condition Assessment	**Conservation Status of Feature 1: Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incarnae, Salicion albae*)** Conservation Status of Feature 1 The conservation status of this feature within the site is considered to be **Favourable** (2005). Monitoring carried out in June 2005 indicated that the condition of the feature was favourable, maintained [Draft Monitoring Report by L Barton-Allen, October 2005]. However, there is a threat to future conservation status if coppicing and glade maintenance is not kept up in units 2 & 4 or sufficient grazing maintained in unit 5.
Vulnerabilities (includes existing pressures and trends)	▪ **Grazing** - Past sporadic grazing in the wet woodland may have restricted the ash content and light grazing can have some positive benefits on overall species composition. However, the marsh fern and other grazing sensitive plants would be at risk from uncontrolled and anything more than light grazing. Heavy grazing in unit 5 is likely to eliminate sensitive species and could cause localised physical damage to the sward leading to invasion by "weedy" species. ▪ **Drainage** - There should be no drainage works that could interfere with the springs and the generally waterlogged ground. New drainage ditches could cause drying out of the site, leading to a loss of alluvial forest in favour of drier woodland types. Drainage maintenance along the roads (units 9 & 10) must be undertaken in a very sensitive manner. Maintenance of the road itself need to be carefully considered so as not to affect the drainage and adjoining habitat; CCW needs to be consulted before any materials are brought in to maintain the road so that there is no risk of invasive species such as Indian balsam being imported.

Site Name: Coed Y Cerrig Location Grid Ref: SO291210 JNCC Site Code: UK0012766 Size: 9.1ha Designation: SAC	Habitats Regulations Assessment: Data Proforma
	▪ **Nutrient Enrichment** - The wet woodland has developed relatively fertile valley soils because nutrients accumulate here as a result of down-slope water movement and leaf-fall. However, further enrichment from agricultural run-off would promote dominance by weed species, such as nettles. No new agricultural drains should be routed into the site and existing drains may need to be diverted if they are causing an enrichment problem.
Landowner/ Management Responsibility	▪ Unit 2 - NNR alder woodland (SAC). ▪ Unit 4 - Private broadleaved woodland (SAC). ▪ Unit 5 - Marshy grassland included in SAC boundary, with small area of alder woodland by stream and on boundaries. ▪ Unit 9 - Road straddling SAC habitat. Road within SAC but with no SAC habitat. Road straddles an area of SAC habitat and included for management reasons such that any works on road does not affect the SAC.
HRA/AA Studies undertaken that address this site	HRA Screening of the Torfaen Local Development Plan (2006-2021) January 2008. http://www.torfaen.gov.uk/EnvironmentAndPlanning/Planning/ForwardPlanning/Publications/HabitatsRegulationAssessment.pdf ▪ Given the distance of the site from Torfaen the Screening states that it is unlikely that proposals in the LDP Preferred Strategy would have a direct impact on Coed Y Cerrig SAC. The most likely mechanism for the Preferred Strategy to have a negative impact on the site is through airborne pollution. However the document states that the sites 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.

Site Name: Cym Clydach Woodlands **Location Grid Ref: SO207123** **JNCC Site Code: UK0030127** **Size: 28.81** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
Site Description	The site is situated on the southern side of the River Clydach valley, approximately 2km east, north east of Brynmawr and is in close proximity to the A465 Heads of the Valley Road. The underlying geology varies across the site, consisting of sedimentary rocks that range from Old Red Sandstone through Carboniferous Limestone into shales and sandstones of the Millstone Grit and Coal Measures. Soils mainly consist of typical brown earths and humo-ferric podsols. Altitude ranges from 170m by the River Clydach to 350m in Cwm Llammarch. Cwm Clydach is of special interest for its stands of broadleaved woodland dominated by beech, intergrading with more open habitats, which together support a number of rare and scarce vascular plants including whitebeams *Sorbus spp*. and soft-leaved sedge *Carex montana*. There are important woodland and grassland fungi assemblages with rare species such as *Squamanita paradoxa*.
Qualifying Features	Annex I Habitats primary reason for selection: ▪ *Asperulo-Fagetum* beech forests Annex I Habitats qualifying feature: ▪ Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (*Quercion robori-petraeae or Ilici-Fagenion*)
Conservation Objectives	**Conservation Objective for Feature 1:** *Asperulo – Fagetum* beech forests 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: Cym Clydach Woodlands Location Grid Ref: SO207123 JNCC Site Code: UK0030127 Size: 28.81 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	▪ At least 50% of the canopy-forming trees are beech. ▪ The canopy cover is at least 80% (excluding areas of crag) and composed of locally native trees. ▪ The woodland has trees of all age classes with a scattering of standing and fallen dead wood. ▪ Regeneration of trees is sufficient to maintain the woodland cover in the long term. ▪ The shrub layer and ground flora can be quite sparse, but where present consist of locally native plants such as yew, hawthorn, wych elm, ash, hazel, field maple and elder, bramble, dog's mercury, enchanter's-nightshade, lords-and-ladies, woodruff, male fern, sanicle, wood melick, ivy, false brome, violets, herb robert, wood avens, and tufted hair-grass. ▪ Scarcer plants, such as soft-leaved sedge and bird's-nest orchid are locally frequent and, more rarely, yellow bird's-nest orchid can be found. ▪ All factors affecting the achievement of the above 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 Cym Clydach Management Plan. **Conservation Objective for Feature 2:** Atlantic *acidophilous* beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion* 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: Cym Clydach Woodlands **Location Grid Ref: SO207123** **JNCC Site Code: UK0030127** **Size: 28.81** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
	At least 75% of the woodland vegetation meets the criteria for intact acid beech wood, where: ▪ At least 10% of the canopy forming trees are beech. ▪ The canopy cover is at least 80% and composed of locally native species. ▪ The woodland has trees of all age classes with a scattering of standing and fallen dead wood. ▪ Regeneration of trees is sufficient to maintain the woodland cover in the long term. ▪ The shrub layer and ground flora can be quite sparse, but where present consist of locally native plants. ▪ All factors affecting the achievement of the above 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 Cym Clydach Management Plan.
Component SSSIs	▪ Cym Clydach SSSI is composed of 5 management units of which numbers 1and 5 comprise to form the Cym Clydach Woodlands SAC. A map of the management units can be viewed on the CCW website.
Key Environmental Conditions (factors that maintain site integrity	▪ **Grazing** - Sufficiently low to allow regeneration in the long term. ▪ **Non-native and invasive species** - No increase in the area of woodland floor that is dominated by invasive species.
SAC Condition Assessment	**Conservation Status of Feature 1** *Asperulo – Fagetum* beech forests The conservation status of this feature within the site is considered to be **Favourable** (2006).

Site Name: Cym Clydach Woodlands **Location Grid Ref: SO207123** **JNCC Site Code: UK0030127** **Size: 28.81** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
	Conservation Status of Feature 2 Atlantic *acidophilous* beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion* The conservation status of this feature within the site is considered to be **Favourable** (2006).
Vulnerabilities (includes existing pressures and trends)	▪ **Woodland management** - Recent changes in management within the locality, a general reduction of sheep numbers and the construction of cycle route through the site may have the potential to adversely effect the grassland areas and the fungi in particular. ▪ **Grazing** - Past grazing has influenced the structure of the woodland, such as the dominance of beech in the canopy. It is therefore likely that occasional light grazing would be beneficial for the woodland habitat, although any increase in grazing pressure could prevent all tree and shrub regeneration and and suppress the woodland ground flora. ▪ **Dumping** - Due to roads passing through the site, parts are accessible to vehicles and the illegal dumping of domestic and commercial waste and abandoned vehicles can be a problem. It is essential that these barriers be maintained to prevent any future occurrences. ▪ **Invasive alien plants** - Japanese knotweed is a problem in parts of the site, usually having been introduced by illegal dumping of waste material, and this species will be controlled as necessary. Airborne acid and nutrient deposition are not a significant threat here as most of the woodland soils are well-buffered and nutrient-rich.
Landowner/ Management	▪ Unit 1 is owned by CCW and comprises the bulk of the SAC beech woodland. Most of the acidiophilous

Site Name: Cym Clydach Woodlands Location Grid Ref: SO207123 JNCC Site Code: UK0030127 Size: 28.81 Designation: SAC	Habitats Regulations Assessment: Data Proforma
Responsibility	beech woodland is found towards the western part of Unit 1. ▪ Unit 5 is other land within the SAC not owned by CCW.
HRA/AA Studies undertaken that address this site	HRA Screening of the Torfaen Local Development Plan (2006-2021) January 2008. http://www.torfaen.gov.uk/EnvironmentAndPlanning/Planning/ForwardPlanning/Publications/HabitatsRegulationAssessment.pdf ▪ It is considered that the potential impact from development in Torfaen would be negligible. Taking the precautionary approach the HRA Assessment for the LDP has identified the potential for in-combination effects on 4 SAC sites, which includes Cwm Clydach Woodlands SAC.

Site Name: River Usk **Location Grid Ref: SO301113** **JNCC Site Code: UK0013007** **Size: 1007.71** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
Site Description	The River Usk SAC rises in the Black Mountain range in the west of the Brecon Beacons National Park and flows east and then south, to enter the Severn Estuary at Newport. The overall form of the catchment is long and narrow, with short, generally steep tributaries flowing north from the Black Mountain, Fforest Fawr and Brecon Beacons, and south from Mynydd Epynt and the Black Mountains. The underlying geology consists predominantly of Devonian Old Red Sandstone with a moderate base status, resulting in waters that are generally well buffered against acidity. This geology also produces a generally low to moderate nutrient status, and a moderate base-flow index, intermediate between base-flow dominated rivers and more flashy rivers on less permeable geology. The run-off characteristics and nutrient status are significantly modified by land use in the catchment, which is predominantly pastoral with some woodland and commercial forestry in the headwaters and arable in the lower catchment. The Usk catchment is entirely within Wales. The ecological structure and functions of the site are dependent on hydrological and geomorphological processes (often referred to as hydromorphological processes), as well as the quality of riparian habitats and connectivity of habitats. Animals that move around and sometimes leave the site, such as migratory fish and otters, may also be affected by factors operating outside the site. The River Usk is also important for its population of sea lamprey *Petromyzon marinus*. The site also supports a healthy population of brook lamprey *Lampetra planeri* and river lamprey *Lampetra fluviatilis* and is considered to provide exceptionally good quality habitat likely to ensure the continued survival of the species in this part of the UK. The site supports a range of Annex II fish species, which includes twaite shad *Alosa falla*, salmon *Salmo sala* and bullhead *Cottus gobi*. The River Usk is an important site for otters Lutra lutra in Wales.
Qualifying Features	Annex I Habitats qualifying feature: ▪ Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation Annex II Species primary reason for selection:

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	▪ Sea lamprey *Petromyzon marinus* ▪ Brook lamprey *Lampetra planeri* ▪ River lamprey *Lampetra fluviatilis* ▪ Twaite shad *Alosa fallax* ▪ Atlantic salmon *Salmo salar* ▪ Bullhead *Cottus gobio* ▪ Otter *Lutra lutra* Annex II Species qualifying feature: ▪ Allis shad *Alosa alosa*
Conservation Objectives	**The ecological status of the water course is a major determinant of Favourable Condition Status (FCS) for all features. The required conservation objective for the water course is defined below.** **Conservation Objective for the water course** ▪ The capacity of the habitats in the SAC to support each feature at near-natural population levels, as determined by predominantly unmodified ecological and hydromorphological processes and characteristics, should be maintained as far as possible, or restored where necessary. ▪ The ecological status of the water environment should be sufficient to maintain a stable or increasing population of each feature. This will include elements of water quantity and quality, physical habitat and community composition and structure. It is anticipated that these limits will concur with the relevant standards used by the Review of Consents process given in Annexes 1-3. ▪ Flow regime, water quality and physical habitat should be maintained in, or restored as far as possible to, a near-natural state, in order to support the coherence of ecosystem structure and function across the whole area of the SAC. ▪ All known breeding, spawning and nursery sites of species features should be maintained as suitable habitat as far as possible, except where natural processes cause them to change.

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	▪ Flows, water quality, substrate quality and quantity at fish spawning sites and nursery areas will not be depleted by abstraction, discharges, engineering or gravel extraction activities or other impacts to the extent that these sites are damaged or destroyed. ▪ The river planform and profile should be predominantly unmodified. Physical modifications having an adverse effect on the integrity of the SAC, including, but not limited to, revetments on active alluvial river banks using stone, concrete or waste materials, unsustainable extraction of gravel, addition or release of excessive quantities of fine sediment, will be avoided. ▪ River habitat SSSI features should be in favourable condition. In the case of the Usk Tributaries SSSI, the SAC habitat is not underpinned by a river habitat SSSI feature. In this case, the target is to maintain the characteristic physical features of the river channel, banks and riparian zone. ▪ Artificial factors impacting on the capability of each species feature to occupy the full extent of its natural range should be modified where necessary to allow passage, eg. weirs, bridge sills, acoustic barriers. ▪ Natural factors such as waterfalls, which may limit the natural range of a species feature or dispersal between naturally isolated populations, should not be modified. ▪ Flows during the normal migration periods of each migratory fish species feature will not be depleted by abstraction to the extent that passage upstream to spawning sites is hindered. ▪ Flow objectives for assessment points in the Usk Catchment Abstraction Management Strategy will be agreed between EA and CCW as necessary. It is anticipated that these limits will concur with the standards used by the Review of Consents process given in Annex 1 of this document. ▪ Levels of nutrients, in particular phosphate, will be agreed between EA and CCW for each Water Framework Directive water body in the Usk SAC, and measures taken to maintain nutrients below these levels. It is anticipated that these limits will concur with the standards used by the Review of Consents process given in Annex 2 of this document. ▪ Levels of water quality parameters that are known to affect the distribution and abundance of SAC features will be agreed between EA and CCW for each Water Framework Directive water body in the Usk SAC, and measures taken to maintain pollution below these levels. It is anticipated that these limits will concur with the standards used by the Review of Consents process given in Annex 3 of this document. ▪ Potential sources of pollution not addressed in the Review of Consents, such as contaminated land, will be

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	considered in assessing plans and projects. ▪ Levels of suspended solids will be agreed between EA and CCW for each Water Framework Directive water body in the Usk SAC. Measures including, but not limited to, the control of suspended sediment generated by agriculture, forestry and engineering works, will be taken to maintain suspended solids below these levels. **Conservation Objective for Features 1-5:** - **Sea lamprey** *Petromyzon marinus*; - **Brook lamprey** *Lampetra planeri*; - **River lamprey** *Lampetra fluviatilis*; - **Twaite shad** *Alosa fallax*; - **Allis shad** *Alosa alosa*; - **Atlantic salmon** *Salmo salar*; - **Bullhead** *Cottus gobio*. Vision for features 1-5 The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: ▪ The conservation objective for the water course as defined in 4.1 above must be met. ▪ The population of the feature in the SAC is stable or increasing over the long term. ▪ The natural range of the feature in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. The natural range is taken to mean those reaches where predominantly suitable habitat for each life stage exists over the long term. Suitable habitat is defined in terms of near-natural hydrological and geomorphological processes and forms eg. suitable flows to allow upstream migration, depth of water and substrate type at spawning sites, and ecosystem structure and functions eg. food supply. Suitable habitat need not be present throughout the SAC but where present must be secured for the foreseeable

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	future. Natural factors such as waterfalls may limit the natural range of individual species. Existing artificial influences on natural range that cause an adverse effect on site integrity, such as physical barriers to migration, will be assessed in view of the following bullet point. ▪ There is, and will probably continue to be, a sufficiently large habitat to maintain the feature's population in the SAC on a long-term basis. Performance indicators for features 1-5 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 River Usk Management Plan. **Conservation Objective for Feature 6:** **- European otter** *Lutra lutra* Vision for feature 6 The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: ▪ The population of otters in the SAC is stable or increasing over the long term and reflects the natural carrying capacity of the habitat within the SAC, as determined by natural levels of prey abundance and associated territorial behaviour. ▪ The natural range of otters in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. The natural range is taken to mean those reaches that are potentially suitable to form part of a breeding territory and/or provide routes between breeding territories. The whole area of the Usk SAC is considered to form potentially suitable breeding habitat for otters. The size of breeding territories may vary depending on prey abundance. The population size should not be limited by the availability of suitable undisturbed breeding sites. Where these are insufficient they should be created through habitat

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	enhancement and where necessary the provision of artificial holts. No otter breeding site should be subject to a level of disturbance that could have an adverse effect on breeding success. Where necessary, potentially harmful levels of disturbance must be managed. ▪ The safe movement and dispersal of individuals around the SAC is facilitated by the provision, where necessary, of suitable riparian habitat, and underpasses, ledges, fencing etc at road bridges and other artificial barriers. 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 River Usk Management Plan. **Conservation Objective for Feature 7:** **- Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation** Vision 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 conservation objectives for the water course as defined above must be met. ▪ The natural range of the plant communities represented within this feature should be stable or increasing in the SAC. The natural range is taken to mean those reaches where predominantly suitable habitat exists over the long term. Suitable habitat and associated plant communities may vary from reach to reach. Suitable habitat is defined in terms of near-natural hydrological and geomorphological processes and forms eg. depth and stability of flow, stability of bed substrate, and ecosystem structure and functions eg. nutrient levels, shade. Suitable habitat for the feature need not be present throughout the SAC but where

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	present must be secured for the foreseeable future, except where natural processes cause it to decline in extent. ▪ The area covered by the feature within its natural range in the SAC should be stable or increasing. ▪ The conservation status of the feature's typical species should be favourable. The typical species are defined with reference to the species composition of the appropriate JNCC river vegetation type for the particular river reach, unless differing from this type due to natural variability when other typical species may be defined as appropriate. 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 River Usk Management Plan.
Component SSSIs	▪ River Usk (Upper Usk) SSSI ▪ River Usk (Lower Usk) SSSI ▪ River Usk (Tributaries) SSSI ▪ Penllwyn-yr-hendy SSSI ▪ Coed Dyrysiog SSSI ▪ Coed Nant Menascin SSSI ▪ Coed Ynysfaen SSSI The SAC has been divided into 10 management units: ▪ Units 1 to 3 - River Usk (Lower Usk) SSSI. ▪ Units 4 to 6 - River Usk (Upper Usk) SSSI. ▪ Units 7 to 10 - River Usk (Tributaries) SSSI. A map showing the various management units can be seen within the River Usk Management Plan.

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Key Environmental Conditions (factors that maintain site integrity	▪ **Hydrological processes**: ○ **River flow** (level and variability) and **water chemistry**, determine a range of habitat factors of critical importance to the SAC features, including current velocity, water depth, wetted area, substrate quality, dissolved oxygen levels and water temperature. Maintenance of both high 'spate' flows and base-flows is essential. Reduction in flows may reduce the ability of the adults of migratory fish to reach spawning sites. Water-crowfoot vegetation thrives in relatively stable, moderate flows and clean water. The flow regime should be characteristic of the river in order to support the functioning of the river ecosystem. ▪ **Geomorphological processes** - of erosion by water and subsequent deposition of eroded sediments downstream, create the physical structure of the river habitats. Whilst some sections of the river are naturally stable, especially where they flow over bedrock, others undergo constant and at times rapid change through the erosion and deposition of bed and bank sediments as is typical of meandering sections within floodplains (called 'alluvial' rivers). These processes help to sustain the river ecosystem by allowing a continued supply of clean gravels and other important substrates to be transported downstream. In addition, the freshly deposited and eroded surfaces, such as shingle banks and earth cliffs, enable processes of ecological succession to begin again, providing an essential habitat for specialist, early-successional species. Lampreys need clean gravel for spawning, and marginal silt or sand for the burrowing juvenile ammocoetes. Processes at the wider catchment scale generally govern processes of erosion and deposition occurring at the reach scale, although locally, factors such as the effect of grazing levels on riparian vegetation structure may contribute to enhanced erosion rates. In general, management that interferes with natural geomorphological processes, for example preventing bank erosion through the use of hard revetments or removing large amounts of gravel, are likely to be damaging to the coherence of the ecosystem structure and functions. ▪ **Riparian habitats** - including bank sides and habitats on adjacent land, are an integral part of the river ecosystem. Diverse and high quality riparian habitats have a vital role in maintaining the SAC features in a favourable condition. The type and condition of riparian vegetation influences shade and water

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	temperature, nutrient run-off from adjacent land, the availability of woody debris to the channel and inputs of leaf litter and invertebrates to support in-steam consumers. Light, temperature and nutrient levels influence in-stream plant production and habitat suitability for the SAC features. Woody debris is very important as it provides refuge areas from predators, traps sediment to create spawning and juvenile habitat and forms the base of an important aquatic food chain. Otters require sufficient undisturbed riparian habitats as breeding and resting sites. It is important that appropriate amounts of tree cover, in general at least 50% high canopy cover, tall vegetation and other semi-natural habitats are maintained on the riverbanks and in adjacent areas, and that they are properly managed to support the SAC features. This may be achieved, for example, through managing grazing levels, selective coppicing of riparian trees and restoring adjacent wetlands. In the urban sections the focus may be on maintaining the river as a communication corridor but this will still require that sufficient riparian habitat is present and managed to enable the river corridor to function effectively. ▪ **Habitat connectivity** - is an important property of a river ecosystem structure and function. Many of the fish that spawn in the river are migratory, depending on the maintenance of suitable conditions on their migration routes to allow the adults to reach available spawning habitat and juvenile fish to migrate downstream. For resident species, dispersal to new areas, or the prevention of dispersal causing isolated populations to become genetically distinct, may be important factors. Naturally isolated feature populations that are identified as having important genetic distinctiveness should be maintained. Artificial obstructions including weirs and bridge sills can reduce connectivity for some species. In addition, reaches subject to depleted flow levels, pollution, or disturbance due to noise, vibration or light, can all inhibit the movement of sensitive species. The dispersal of semi-terrestrial species such as the otter can be adversely affected by structures such as bridges under certain flow conditions; therefore, these must be designed to allow safe passage. The continuity of riparian habitats enables a wide range of terrestrial species, for example lesser horseshoe bats, to migrate and disperse through the landscape. Connectivity should be maintained or restored where necessary as a means to ensure access for the features to sufficient habitat within the SAC.

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SAC Condition Assessment	**Conservation status of Feature 1: Sea lamprey *Petromyzon marinus*** Status: **Unfavourable**: Unclassified. Sea lamprey monitoring showed that overall catchment mean ammocoete density considerably exceeded the JNCC target threshold and also complied with targets for spawning site and ammocoete distribution. A caveat on the latter is uncertainty over whether the natural range of sea lamprey extends above Brecon weir: this is assumed not to be the case. Factors leading to an unfavourable assessment are the presence of probable partial barriers further downstream (notably Crickhowell Bridge), and flow depletion resulting from abstractions including Brecon canal and Prioress Mill public water supply abstraction. The latter in particular has been shown to have effects both on a seasonal timescale by reducing spate flows during the migration period and on a diurnal timescale by substantially depleting flows during the night time to the extent that sea lamprey nests and nursery areas are likely to be exposed above the water level. The effect of the Brecon canal abstraction has been shown to comprise a substantial depletion of flows, at least locally, during low flow periods with a resulting reduction in river depth downstream of the off-take weir. **Conservation status of Feature 2: Brook lamprey *Lampetra planeri* and River lamprey *Lampetra fluviatilis*** Status: **Favourable**. Brook/river lamprey monitoring showed that overall catchment mean ammocoete density considerably exceeded the JNCC target threshold and also complied with targets for ammocoete distribution1. It has not been possible to distinguish between these two species during monitoring, due to the reliance on juvenile stages (ammocoetes). Anecdotal evidence suggests that both species are likely to be present in many reaches, though brook lamprey are expected to predominate in the headwaters and river lamprey may be the more abundant species in the main channel and the lower reaches of larger tributaries. More information on the relative abundance of these two species in different parts of the Usk SAC is desirable.

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	Records of spawning adult river lamprey would be particularly useful. **Conservation status of Feature 3: Twaite shad *Alosa fallax* and Allis shad *Alosa alosa*** Status: **Unfavourable**: Unclassified. Monitoring of these species in the Usk relies on two methods, Kick sampling for eggs provides qualitative information on spawning distribution, Netting for juveniles in the lower river and tidal reaches during late summer/autumn when juveniles drift downstream towards the estuary. These methods do not distinguish between the two species. Allis shad is thought to be rare, with no recent records in the Usk, while twaite shad is relatively common. Kick sampling for eggs is only able to give a broad scale indication of presence or absence at sampled locations. Netting for juveniles gives a quantitative estimate of abundance, though may be subject to a high degree of uncertainty due to sampling error. This uncertainty is likely to be compounded by variation between years in the size of the adult run, spawning success and resulting numbers of juveniles. Poor adult runs are likely to result from unsuitable flows during the March to June migration period, in particular prolonged low flows, while poor survival of eggs and juveniles is related to spate flows in the mid to late summer which can flush them into the estuary prematurely. CSM guidance states that adult run size should comply with an agreed target for each river, with no drop in the annual run greater than would be expected from variations in natural mortality alone. This attribute is not currently assessed in the Usk due to the absence of a fish counter. The current unfavourable status results from a precautionary assessment of feature distribution and abundance, and from the presence of adverse factors, in particular flow depletion and physical barriers to migration. **Conservation status of Feature 4: Atlantic salmon *Salmo salar***

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	Status: **Unfavourable**: Unclassified. Monitoring of Atlantic salmon in the Usk relies on two methods, 1. Estimation of adult run size from angling catch returns, 2. Electro-fishing for juveniles in nursery areas. The estimate of adult numbers is converted into an estimate of numbers of eggs deposited which is compared against an Egg Deposition Target (EDT), calculated by considering the area of suitable spawning habitat within the catchment. The equivalent adult run to achieve the EDT is described in terms of a Conservation Limit, which must be exceeded 4 years in 5 for the Management Target to be considered attained. Electro-fishing for juveniles is either quantitative or semi-quantitative, and estimated juvenile densities are classified in one of six categories A to F. The monitoring guidance produced by the LIFE in UK Rivers project recommends that ideally juvenile densities should be compared to predicted densities for the sample reach using the HABSCORE model6. These targets are calculated and monitored by the Environment Agency as part of the Salmon Action Plan for the Usk. The current unfavourable status results from a precautionary assessment of feature distribution and abundance, in particular the results of juvenile surveys, and from the presence of adverse factors, in particular flow depletion and localised water quality failures. **Conservation status of Feature 5: Bullhead *Cottus gobio*** Status: **Unfavourable**: Unclassified. The current unfavourable status results from the presence of adverse factors, in particular flow depletion and localised water quality failures. Records obtained from juvenile salmon monitoring show that bullhead are widespread in the main river and tributaries. There is a need for quantitative information on bullhead abundance, which will be addressed by targeted monitoring in 2007. **Conservation status of Feature 6: European otter *Lutra lutra*** Status: **Favourable**. The conservation status of otters in the Usk SAC is determined by monitoring their

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	distribution, breeding success, and the condition of potential breeding and feeding habitat outlined in the Performance Indicators. Their current condition can be considered favourable, but with scope for further improvement, if habitat and other natural factors can be maintained and enhanced. **Conservation status of Feature 7: Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation** Status: **Unfavourable**: Unclassified. This feature is not identified as one of the primary reasons for designation of the River Usk SAC; its distribution being apparently limited by the availability of suitable hydromorphological conditions. Important stands have been identified in the lower reaches of the main river below Abergavenny down to the tidal limit, and in the upper reaches of a headwater stream, the Afon Senni. These reaches may represent a sub-type of the feature where large submerged and floating leaved flowering plants, in particular Ranunculus, are dominant. Habitat suitability studies4 suggest that the natural range of the feature may be more widespread within the SAC. More widespread sub-types may consist of communities dominated by aquatic bryophytes. Where necessary, examples of these sub-types may be identified as priorities for management, for example through the management of riparian vegetation to preserve shade and humidity. Further understanding of the distribution and status of this feature and its natural range within the River Usk SAC is required. The present unfavourable status of the feature results from the over-abundance of invasive non-native species of bankside plant communities, which are included within the feature definition. These are predominantly giant hogweed and Himalayan balsam in the lower reaches of the main river.
Vulnerabilities (includes existing pressures and trends)	▪ **Abstraction levels -** Entrainment in water abstractions directly impacts on population dynamics through reduced recruitment and survival rates. The impact of flow depletion resulting from a small number of major abstractions was highlighted in the Review of Consents process. ▪ **Eutrophication** - factors that are important to the favourable conservation status of this feature include flow,

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	substrate quality and water quality, which in turn influence species composition and abundance. These factors often interact, producing unfavourable conditions by promoting the growth of a range of algae and other species indicative of eutrophication. Under conditions of prolonged low flows and high nutrient status, epiphytic algae may suppress the growth of aquatic flowering plants. ▪ **Diffuse Pollution** - The Atlantic salmon is the focus for much of the management activity carried out on the Usk. The relatively demanding water quality and spawning substrate quality requirements of this feature mean that reduction in diffuse pollution and siltation impacts is a high priority. In the Usk catchment, the most significant sources of diffuse pollution and siltation are from agriculture, including fertiliser run-off, livestock manure, silage effluent and soil erosion from ploughed land. The most intensively used areas such as heavily trampled gateways and tracks can be especially significant sources of polluting run-off. Farm operations should avoid ploughing land which is vulnerable to soil erosion or leaving such areas without crop cover during the winter. Contamination by synthetic pyrethroid sheep dips, which are extremely toxic to aquatic invertebrates, has a devastating impact on crayfish populations and can deprive fish populations of food over large stretches of river. These impacts can arise if recently dipped sheep are allowed access to a stream or hard standing area, which drains into a watercourse. Pollution from organophosphate sheep dips and silage effluent can be very damaging locally. Pollution from slurry and other agricultural and industrial chemicals, including fuels, can kill all forms of aquatic life. All sheep dips and silage, fuel and chemical storage areas should be sited away from watercourses or bunded to contain leakage. Recently dipped sheep should be kept off stream banks. Discharges from sewage treatment works, urban drainage, engineering works such as road improvement schemes, contaminated land, and other domestic and industrial sources can also be significant causes of pollution, and must be managed appropriately. Pollution of rivers with toxic chemicals, such as PCBs, was one of the major factors identified in the widespread decline of otters during the last century. ▪ **Barriers to migration** - There are few barriers to migration for the anadromous species and where barriers exist, investigation is proposed to analyse for potential impacts and remedy them through multi-species fish passes. Crickhowell Bridge is considered to be the most significant barrier to fish migration in the Usk.

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	Management to reduce or remove the effect of this barrier is a high priority for the River Usk SAC. Artificial physical barriers are probably the single most important factor in the decline of shad in Europe. Impassable obstacles between suitable spawning areas and the sea can eliminate breeding populations of shad. Both species (but particularly allis shad) can make migrations of hundreds of kilometres from the estuary to spawning grounds in the absence of artificial barriers. Existing fish passes designed for salmon are often not effective for shad. ▪ **Development pressure** - in the lower catchment can cause temporary physical, acoustic, chemical and sediment barrier effects that need to be addressed in the assessment of specific plans and projects. Noise/vibration e.g. due to impact piling, drilling, salmon fish counters present within or in close proximity to the river can create a barrier to shad migration. Land on both sides of the river in Newport is potentially highly contaminated. Contamination of the river can arise when this is disturbed e.g. as a result of development. Contamination can also arise from pollution events (which could be shipping or industry related). Barriers resulting from vibration, chemicals, low dissolved oxygen and artificially high sediment levels must be prevented at key times (generally March to June). ▪ **Invasive non-native plants** - are a detrimental impact on the water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation. Giant hogweed, Himalayan balsam and Japanese knotweed should be actively managed to control their spread and hopefully reduce their extent in the SAC. ▪ **Artificially enhanced densities of other fish** - may introduce unacceptable competition or predation pressure and the aim should be to minimise these risks in considering any proposals for stocking. ▪ **External factors** - operating outside the SAC, may also be influential, particularly for the migratory fish and otters. For example, salmon may be affected by barriers to migration in the Severn Estuary, inshore fishing and environmental conditions prevailing in their north Atlantic feeding grounds. Otters may be affected by developments that affect resting and breeding sites outside the SAC boundary.

Site Name: River Usk **Location Grid Ref: SO301113** **JNCC Site Code: UK0013007** **Size: 1007.71** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
Landowner/ Management Responsibility	▪ N/A
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. HRA Screening of the Torfaen Local Development Plan (2006-2021) January 2008. http://www.torfaen.gov.uk/EnvironmentAndPlanning/Planning/ForwardPlanning/Publications/HabitatsRegulationAssessment.pdf ▪ The Screening concludes that there is potential for significant effects on this site through discharge of sewerage, increased surface run-off and an increase in airborne pollutants.

Site Name: River Wye **Location Grid Ref: SO109369** **JNCC Site Code: UK0012642** **Size: 2234.89** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
Site Description	The River Wye rises on Plynlimon in the Cambrian Mountains and flows in a generally south-easterly direction to enter the Severn Estuary at Chepstow. The upper catchment comprises several large sub-catchments, including the Irfon on the generally infertile upland landscape in the north-west, the Ithon in the north-east often on more low-lying, fertile terrain and the Lugg in the east in a predominantly low-lying fertile landscape much of which lies within England. The underlying geology consists predominantly of impermeable, acidic rocks of Silurian and Ordovician age in the north-west and more permeable Devonian Old Red Sandstone with a moderate base status in the middle and lower catchment. This geology produces a generally low to moderate nutrient status and a low to moderate base-flow index, making the river characteristically flashy. The run-off characteristics and nutrient status are significantly modified by land use in the catchment, which is predominantly pastoral with some woodland and commercial forestry in the headwaters and arable in the lower catchment and the Lugg. The Wye catchment is divided between Wales and England; the river forms the border from south of Monmouth to Chepstow and to the east of Hay-on-Wye. Historically, the Wye is the most famous and productive river in Wales for Atlantic salmon *Salmo salar*, with high-quality spawning grounds and juvenile habitat in both the main channel and tributaries. The Wye salmon population is particularly notable for the very high proportion (around 75%) of multi sea winter (MSW) fish, a stock component which has declined sharply in recent years throughout the UK. This pattern has also occurred in the Wye, with a consequent marked decline in the population since the 1980s. However, the Wye salmon population is still of considerable importance in UK terms. The Atlantic salmon is the focus for much of the management activity carried out on the Wye. The relatively demanding water quality and spawning substrate quality requirements of this feature mean that reduction in diffuse pollution and siltation impacts is a high priority. The Wye also holds the densest and most well-established otter *Lutra lutra* population in Wales, representative of otters occurring in lowland freshwater habitats in the borders of Wales. The river has bank-side vegetation cover, abundant food supply, clean water and undisturbed areas of dense scrub suitable for breeding, making it particularly favourable as otter habitat. The population remained even during the lowest point of the UK decline, confirming that the site is particularly favourable for this species and the population likely to be highly stable. The site is considered one of the best in the UK for white-clawed crayfish

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	Austropotamobius pallipes. The tributaries are the main haven for the species, particularly at the confluences of the main river and the Edw, Dulas Brook, Sgithwen and Clettwr Brook. Other importance species supported by the River Wye are twaite shad, bullhead and river, sea and brook lamprey.
Qualifying Features	Annex I habitats primary reason for selection: ▪ Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation Annex I habitats qualifying feature: ▪ Transition mires and quaking bogs Annex II species primary reason for selection: ▪ White-clawed (or Atlantic stream) crayfish *Austropotamobius pallipes* ▪ Sea lamprey *Petromyzon marinus* ▪ Brook lamprey *Lampetra planeri* ▪ River lamprey *Lampetra fluviatilis* ▪ Twaite shad *Alosa fallax* ▪ Atlantic salmon *Salmo salar* ▪ Bullhead *Cottus gobio* ▪ Otter *Lutra lutra* Annex II Species qualifying feature: ▪ Allis shad *Alosa alosa*
Conservation Objectives	The ecological status of the watercourse is a major determinant of Favourable Condition Status for all features. The required conservation objective for the watercourse is defined below. **Conservation Objective for the watercourse**

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	▪ The capacity of the habitats in the SAC to support each feature at near-natural population levels, as determined by predominantly unmodified ecological and hydromorphological processes and characteristics, should be maintained as far as possible, or restored where necessary. ▪ The ecological status of the water environment should be sufficient to maintain a stable or increasing population of each feature. This will include elements of water quantity and quality, physical habitat and community composition and structure. It is anticipated that these limits will concur with the relevant standards used by the Review of Consents process given in Annexes 1-3. ▪ Flow regime, water quality and physical habitat should be maintained in, or restored as far as possible to, a near-natural state, in order to support the coherence of ecosystem structure and function across the whole area of the SAC. ▪ All known breeding, spawning and nursery sites of species features should be maintained as suitable habitat as far as possible, except where natural processes cause them to change. ▪ Flows, water quality, substrate quality and quantity at fish spawning sites and nursery areas will not be depleted by abstraction, discharges, engineering or gravel extraction activities or other impacts to the extent that these sites are damaged or destroyed. ▪ The river planform and profile should be predominantly unmodified. Physical modifications having an adverse effect on the integrity of the SAC, including, but not limited to, revetments on active alluvial river banks using stone, concrete or waste materials, unsustainable extraction of gravel, addition or release of excessive quantities of fine sediment, will be avoided. ▪ River habitat SSSI features should be in favourable condition. Where the SAC habitat is not underpinned by a river habitat SSSI feature, the target is to maintain the characteristic physical features of the river channel, banks and riparian zone. ▪ Artificial factors impacting on the capability of each species feature to occupy the full extent of its natural range should be modified where necessary to allow passage, eg. weirs, bridge sills, acoustic barriers. ▪ Natural factors such as waterfalls, which may limit, wholly or partially, the natural range of a species feature or dispersal between naturally isolated populations, should not be modified. ▪ Flows during the normal migration periods of each migratory fish species feature will not be depleted by

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	abstraction to the extent that passage upstream to spawning sites is hindered. ▪ Flow objectives for assessment points in the Wye Catchment Abstraction Management Strategy will be agreed between EA and CCW as necessary. It is anticipated that these limits will concur with the standards used by the Review of Consents process given in Annex 1 of this document. ▪ Levels of nutrients, in particular phosphate, will be agreed between EA and CCW for each Water Framework Directive water body in the Wye SAC, and measures taken to maintain nutrients below these levels. It is anticipated that these limits will concur with the standards used by the Review of Consents process given in Annex 2 of this document. ▪ Levels of water quality parameters that are known to affect the distribution and abundance of SAC features will be agreed between EA and CCW for each Water Framework Directive water body in the Wye SAC, and measures taken to maintain pollution below these levels. It is anticipated that these limits will concur with the standards used by the Review of Consents process given in Annex 3 of this document. ▪ Potential sources of pollution not addressed in the Review of Consents, such as contaminated land, will be considered in assessing plans and projects. ▪ Levels of suspended solids will be agreed between EA and CCW for each Water Framework Directive water body in the Wye SAC. Measures including, but not limited to, the control of suspended sediment generated by agriculture, forestry and engineering works, will be taken to maintain suspended solids below these levels. **Conservation Objective for Features 1-5:** - **Sea lamprey** *Petromyzon marinus*; - **Brook lamprey** *Lampetra planeri*; - **River lamprey** *Lampetra fluviatilis*; - **Twaite shad** *Alosa fallax*; - **Allis shad** *Alosa alosa*; - **Atlantic salmon** *Salmo salar*; - **Bullhead** *Cottus gobio*.

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	Vision for features 1-5 The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: ▪ The conservation objective for the water course as defined in 4.1 above must be met. ▪ The population of the feature in the SAC is stable or increasing over the long term. ▪ The natural range of the feature in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. The natural range is taken to mean those reaches where predominantly suitable habitat for each life stage exists over the long term. Suitable habitat is defined in terms of near-natural hydrological and geomorphological processes and forms eg. suitable flows to allow upstream migration, depth of water and substrate type at spawning sites, and ecosystem structure and functions eg. food supply. Suitable habitat need not be present throughout the SAC but where present must be secured for the foreseeable future. Natural factors such as waterfalls may limit the natural range of individual species. Existing artificial influences on natural range that cause an adverse effect on site integrity, such as physical barriers to migration, will be assessed in view of the following bullet point. ▪ There is, and will probably continue to be, a sufficiently large habitat to maintain the feature's population in the SAC on a long-term basis. Performance indicators for features 1-5 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 River Wye Management Plan. **Conservation Objective for Feature 6:** **- European otter** *Lutra lutra*

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	Vision for feature 6 The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: ▪ The population of otters in the SAC is stable or increasing over the long term and reflects the natural carrying capacity of the habitat within the SAC, as determined by natural levels of prey abundance and associated territorial behaviour. ▪ The natural range of otters in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. The natural range is taken to mean those reaches that are potentially suitable to form part of a breeding territory and/or provide routes between breeding territories. The whole area of the Wye SAC is considered to form potentially suitable breeding habitat for otters. The size of breeding territories may vary depending on prey abundance. The population size should not be limited by the availability of suitable undisturbed breeding sites. Where these are insufficient they should be created through habitat enhancement and where necessary the provision of artificial holts. No otter breeding site should be subject to a level of disturbance that could have an adverse effect on breeding success. Where necessary, potentially harmful levels of disturbance must be managed. ▪ The safe movement and dispersal of individuals around the SAC is facilitated by the provision, where necessary, of suitable riparian habitat, and underpasses, ledges, fencing etc at road bridges and other artificial barriers. 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 River Wye Management Plan. **Conservation Objective for Feature 7:** **- Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation**

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	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: ▪ The conservation objectives for the water course as defined above must be met. ▪ The natural range of the plant communities represented within this feature should be stable or increasing in the SAC. The natural range is taken to mean those reaches where predominantly suitable habitat exists over the long term. Suitable habitat and associated plant communities may vary from reach to reach. Suitable habitat is defined in terms of near-natural hydrological and geomorphological processes and forms eg. depth and stability of flow, stability of bed substrate, and ecosystem structure and functions eg. nutrient levels, shade. Suitable habitat for the feature need not be present throughout the SAC but where present must be secured for the foreseeable future, except where natural processes cause it to decline in extent. ▪ The area covered by the feature within its natural range in the SAC should be stable or increasing. ▪ The conservation status of the feature's typical species should be favourable. The typical species are defined with reference to the species composition of the appropriate JNCC river vegetation type for the particular river reach, unless differing from this type due to natural variability when other typical species may be defined as appropriate. 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 River Wye Management Plan. **Conservation Objective for Feature 8:** **- White-clawed crayfish *Austropotamobius pallipes***

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	Vision for feature 8 The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: ▪ The conservation objective for the water course as defined in 4.1 above must be met. ▪ The population of the feature in the SAC is stable or increasing over the long term. ▪ The natural range of the feature in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. The natural range is taken to mean those reaches where predominantly suitable habitat for each life stage exists over the long term. Suitable habitat is defined in terms of near-natural hydrological and geomorphological processes and forms e.g. substrate type, water hardness and temperature, and ecosystem structure and functions e.g. food supply, absence of invasive non-native competitors. Suitable habitat need not be present throughout the SAC but where present must be secured for the foreseeable future. Natural factors such as waterfalls may limit the natural range of individual species. Existing artificial influences on natural range that cause an adverse effect on site integrity will be assessed in view of the objective below. ▪ There is, and will probably continue to be, a sufficiently large habitat to maintain the feature's population in the SAC on a long-term basis. Performance indicators for feature 8 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 River Wye Management Plan. **Conservation Objective for Feature 9:** **- Quaking bogs and transition mires**

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	Vision for feature 9 The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: ▪ The conservation objective for the water course as defined in 4.1 above must be met. ▪ The natural range of the plant communities represented within this feature should be stable or increasing in the SAC. The natural range is taken to mean those reaches where near-natural hydrological and geomorphological processes and landforms favour the development of this habitat. The feature need not be present in all suitable locations in the SAC but where present must be secured for the foreseeable future. ▪ The area covered by the feature within its natural range in the SAC should be stable or increasing. ▪ The conservation status of the feature's typical species should be favourable. The typical species are defined with reference to the species composition of the appropriate NVC type(s), unless differing from this type due to natural variability/local distinctiveness when other typical/indicator species may be defined as appropriate. Performance indicators for feature 9 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 River Wye Management Plan.
Component SSSIs	The site has been divided into management units to enable practical communication about features, objectives, and management. This will also allow us to differentiate between the different designations where necessary. In this plan the management units have been based on the following: ▪ SSSI boundaries

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- Natural hydromorphology, where there are significant differences in management issues/key features between reaches
- Units partly within England coincide with Natural England's equivalent units, as far as is practicable
- The units include one or more of EA's River Basin Management Plan water bodies; as far as is practicable, unit boundaries coincide with these water body boundaries.

The component SSSIs and management units that comprise to form the River Wye SAC are:

- **River Wye (Lower Wye) SSSI - Management units 1A to 1D;**
  - Twaite shad spawn in Unit 1C & possibly in 1D and migrate through Units 1A & 1B, where they may be subject to disturbance impacts, so are selected as key features in all units. Sea and river lamprey migrate though all units and may spawn.
  - Management for twaite shad and sea lamprey is expected to also be sympathetic for Atlantic salmon, river/brook lamprey and bullhead.
  - Specific management measures for otter relating to adjacent habitats and disturbance require its selection as a key feature in all units.
  - The status of allis shad is uncertain in River Wye (Lower Wye) SSSI. It is assumed to be present in the same units as twaite shad.
  - White-clawed crayfish have been recorded in the River Wye at Hay-on-Wye and in adjacent tributaries including Clyro Brook and Dulas Brook.
- **River Wye (Upper Wye) SSSI - Management units 2A & 2B;**
  - Atlantic salmon is a key feature in Unit 2B due to the presence of spawning sites, although salmon may occasionally also spawn within Unit 2A.
  - Twaite shad is recorded spawning throughout Unit 2A but only infrequently upstream of the River Irfon confluence.
  - The status of Allis shad is uncertain in the River Wye SAC. Allis shad is assumed to be present in the same units as twaite shad, but normally migrates further upstream and therefore would be expected to occur in the upper river.
  - Sea lamprey is frequently recorded spawning within Unit 2A; spawning has also been recorded within

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Unit 2B as far upstream as Rhayader.
  - Management for Atlantic salmon, twaite shad and sea lamprey is expected to be sympathetic for river/brook lamprey and bullhead.
  - Specific management measures for otter relating to adjacent habitats and disturbance require its selection as a key feature in all units.
- **River Wye (Tributaries) SSSI - Management unit 3;**
  - The tributaries included in this SSSI form the core range of the white-clawed crayfish in the River Wye SAC.
  - Atlantic salmon spawn in all tributaries within this SSSI although in the Sgithwen and Cletwr their natural range is limited to the lower reaches by waterfalls.
  - Twaite shad, allis shad and sea lamprey are thought not to occur within this SSSI.
- **Afon Llynfi SSSI - Management unit 4;**
  - An important population of white-clawed crayfish occurs in this SSSI.
  - Twaite shad, allis shad and sea lamprey are not known to occur within this SSSI but habitat in the lower reaches may possibly be suitable.
- **Duhonw SSSI - Management unit 5;**
  - An important population of white-clawed crayfish formerly occurred in this SSSI; restoration of the species here is a management objective.
  - Twaite shad, allis shad and sea lamprey are thought not to occur within this SSSI.
- **Afon Irfon SSSI - Management unit 6;**
  - Small populations of white-clawed crayfish are known to occur in the rivers Hafrena and Chwefri in this SSSI; restoration of the species here and to parts of its former range including the Garth Dulas is a management objective.
  - Twaite shad is frequently recorded spawning in the lowest approximately 0.6km of the Afon Irfon and at the confluence with the River Wye.
  - The status of Allis shad is uncertain in the River Wye SAC. Allis shad is assumed to be present in the same units as twaite shad, but normally migrates further upstream and therefore would be expected to occur in the upper river.

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	○ Sea lamprey is reported spawning within the Afon Irfon. ○ Atlantic salmon is recorded spawning throughout this SSSI but reproductive success is limited in parts of the upper Afon Irfon and Gwesyn due to acidification related to forestry. ▪ **River Ithon SSSI - Management unit 7;** ○ White-clawed crayfish has been recorded in this SSSI, including in Howey Brook, however its restoration to this sub-catchment is not a current management objective. ○ Twaite shad, allis shad and sea lamprey are not known to occur within this SSSI but habitat in the lower reaches may possibly be suitable. ▪ **Upper Wye Tributaries SSSI - Management unit 8; and** ○ This SSSI forms an important part of the spawning range of Atlantic salmon. ▪ **Colwyn Brook Marshes (North & South) SSSI - Management units 9A to 9G & 10A & 10E.** ○ This is the only component SSSI of the River Wye SAC that contains the feature 'quaking bogs and transition mires'. ○ The site comprises 5 separate ownership units. Note: a number of smaller SSSI have part of their area included within the River Wye SAC. These are not all included separately here, but management actions for adjacent SAC units also apply to these sites. Maps containing the component SSSIs and management units can be viewed on the CCW website.
Key Environmental Conditions (factors that maintain site integrity	The **ecological structure and functions of the site are dependent on hydrological and geomorphological processes** (often referred to as hydromorphological processes), as well as the quality of riparian habitats and connectivity of habitats. Animals that move around and sometimes leave the site, such as migratory fish and otters, may also be affected by factors operating outside the site. ▪ **Hydrological processes** in particular river flow (level and variability) and water chemistry, determine a range of habitat factors of importance to the SAC features, including current velocity, water depth, wetted area, substrate quality, dissolved oxygen levels and water temperature. Maintenance of both high 'spate'

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	flows and base-flows is essential. Reductions in flow may reduce the ability of the adult migratory fish to reach spawning sites. Water-crowfoot vegetation thrives in relatively stable, moderate flows and clean water. The flow regime should be characteristic of the river in order to support the functioning of the river ecosystem. ▪ **Geomorphological processes** of erosion by water and subsequent deposition of eroded sediments downstream create the physical structure of the river habitats. While some sections of the river are naturally stable, especially where they flow over bedrock, others undergo continual and at times rapid change through the erosion and deposition of bed and bank sediments as is typical of meandering sections within floodplains (called 'alluvial' rivers). These processes help to sustain the river ecosystem by allowing a continued supply of clean gravels and other important substrates to be transported downstream. In addition, the freshly deposited and eroded surfaces, such as shingle banks and earth cliffs, enable processes of ecological succession to begin again, providing an essential habitat for specialist, early-successional species. Processes at the wider catchment scale generally govern processes of erosion and deposition occurring at the reach scale, although locally factors such as the effect of grazing levels on riparian vegetation structure may contribute to enhanced erosion rates. In general, management that interferes with natural geomorphological processes, for example preventing bank erosion through the use of hard revetments or removing large amounts of gravel, are likely to be damaging to the coherence of the ecosystem structure and functions. ▪ **Riparian habitats** including bank sides and habitats on adjacent land, are an integral part of the river ecosystem. Diverse and high quality riparian habitats have a vital role in maintaining the SAC features in a favourable condition. The type and condition of riparian vegetation influences shade and water temperature, nutrient run-off from adjacent land, the availability of woody debris to the channel and inputs of leaf litter and invertebrates to support in-steam consumers. Light, temperature and nutrient levels influence in-stream plant production and habitat suitability for the SAC features. Woody debris is very important as it provides refuge areas from predators, traps sediment to create spawning and juvenile habitat and forms the base of an important aquatic food chain. Otters require sufficient undisturbed

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	riparian habitat for breeding and resting sites. It is important that appropriate amounts of tree cover, in general at least 50% high canopy cover, tall vegetation and other semi-natural habitats are maintained on the riverbanks and in adjacent areas, and that they are properly managed to support the SAC features. This may be achieved for example, through managing grazing levels, selective coppicing of riparian trees and restoring adjacent wetlands. In the urban sections the focus may be on maintaining the river as a communication corridor but this will still require that sufficient riparian habitat is present and managed to enable the river corridor to function effectively. Overhanging trees provide valuable shade and food sources for Atlantic salmon whilst tree root systems provide important cover and flow refuges for juveniles. Bullheads are particularly associated with woody debris in lowland reaches, where it is likely that it provides an alternative source of cover from predators and floods. It may also be used as an alternative spawning substrate. Debris dams and woody debris should be retained where characteristic of the river/reach. Woody debris removal should be minimised, and restricted to essential activities such as flood defence. ▪ **Habitat connectivity** is an important property of river ecosystem structure and function. Many of the fish that spawn in the river are migratory, depending on the maintenance of suitable conditions on their migration routes to allow the adults to reach available spawning habitat and juvenile fish to migrate downstream. For resident species, dispersal to new areas, or the prevention of dispersal causing isolated populations to become genetically distinct, may be important factors. Naturally isolated feature populations that are identified as having important genetic distinctiveness should be maintained. In all river types, artificial barriers should be made passable. Physical modification of barriers is required where depth/velocity/duration of flows is unsuitable to allow passage. Complete or partial natural barriers to potentially suitable spawning areas should not be modified or circumvented. Certain areas of the SAC are critical to the movement of otters both within the system and to adjacent sites. The Wye SAC provides a key movement corridor for otters passing between the relatively high densities in mid Wales and the south-east Wales coastal strip (Seven Estuary and Gwent Levels). The function of this aspect of the site should be protected through the maintenance of suitable resting sites (in terms of size, quality and levels of disturbance) through urban centres such as Monmouth. Connectivity should be maintained, or restored

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	where necessary, as a means to ensure access for the features to sufficient habitat within the SAC. ▪ **External factors** operating outside the SAC, may also be influential, particularly for the migratory fish and otters. For example, salmon may be affected by barriers to migration in the Severn Estuary, inshore fishing and environmental conditions prevailing in their north Atlantic feeding grounds. Otters may be affected by developments that affect resting and breeding sites outside the SAC boundary.
SAC Condition Assessment	**Conservation status of Feature 1: Sea lamprey *Petromyzon marinus*** Conservation status (2006) Status within the site: **Favourable: Unclassified**. Sea lamprey monitoring showed that overall catchment mean ammocoete density considerably exceeded the JNCC target threshold and also complied with targets for spawning site and ammocoete distribution. Sea lamprey ammocoetes were recorded in good numbers immediately upstream of the falls at Rhayader, their most upstream recorded site on the main Wye. They were also recorded in the Irfon and Ithon tributaries. **Conservation status of Feature 2: Brook lamprey Lampetra planeri and River lamprey *Lampetra fluviatilis*** Conservation status (2006) Status within the site: **Favourable: Unclassified**. Brook/river lamprey monitoring showed that overall catchment mean ammocoete density considerably exceeded the JNCC target threshold. However, Lampetra ammocoetes were recorded at only 30 of the 54 sample sites (56%) thus failed to meet the criterion of presence at least two thirds of sites within their natural range. Consequently, the feature may be in unfavourable condition. Further clarification is needed concerning a number of sample sites in the upper reaches (Upper Wye and Elan), which may reflect unsuitable habitat and be outside the natural ranges of the species.

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	It has not been possible to distinguish between these two species during monitoring, due to the reliance on juvenile stages (ammocoetes). Anecdotal evidence suggests that both species are likely to be present in many reaches, though brook lamprey are expected to predominate in the headwaters and river lamprey may be the more abundant species in the main channel and the lower reaches of larger tributaries. More information on the relative abundance of these two species in different parts of the Wye SAC is desirable. Records of spawning adult river lamprey would be particularly useful. **Conservation status of Feature 3: Twaite shad *Alosa fallax* and Allis shad *Alosa alosa*** Conservation status (2006) Status within the site: **Unfavourable: Unclassified**. Physical barriers to migration are a major cause of unfavourable status of these species in Europe as a whole; however, there are not thought to be any significant barriers to shad migration in the Wye. The current unfavourable status results from a precautionary assessment of feature abundance, and from the presence of adverse factors, in particular the potential for damaging flow depletion and entrainment/impingement in water intakes. **Conservation status of Feature 4: Atlantic salmon *Salmo salar*** Conservation status (2006) Status within the site: **Unfavourable: Unclassified**. The current unfavourable status results from failure of the Management Target for adult run size as well as a

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	precautionary assessment of juvenile distribution and abundance and the presence of adverse factors, in particular the potential for flow depletion and localised water quality failures. Acidification due to forestry is a factor in the upper reaches of the Wye and Irfon. **Conservation status of Feature 5: Bullhead *Cottus gobio*** Conservation status (2006) Status within the site: **Unfavourable: Unclassified**. The current unfavourable status results from the presence of adverse factors, in particular localised water quality failures. Records obtained from juvenile salmon monitoring show that bullhead are widespread in the main river and tributaries. Quantitative information on bullhead abundance is being provided through targeted monitoring. **Conservation status of Feature 6: European otter *Lutra lutra*** Conservation status (2006) Status within the site: **Unfavourable**. The conservation status of otters in the Wye SAC is determined by monitoring their distribution, breeding success, and the condition of potential breeding and feeding habitat as outlined in the Performance Indicators. Their current condition is considered unfavourable due a lack of suitable breeding sites around the middle reaches of the river. **Conservation status of Feature 7: Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation** Conservation status (2006) Status within the site: **Unfavourable: Declining**. The present unfavourable status of the feature results from

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	declining water quality in some tributaries of the Wye e.g. parts of the Ithon and Llynfi sub-catchments, due mainly to diffuse pollution from agriculture. A further adverse factor is the over-abundance of invasive non-native species of bankside plant communities, which are included within the feature definition. Japanese knotweed and Himalayan balsam are widespread in the catchment, including the Irfon sub-catchment. **Conservation status of Feature 8: White-clawed crayfish *Austropotamobius pallipes*** Conservation status (2006) Status within the site: **Unfavourable: Declining**. There is considerable anecdotal evidence of a major decline in the distribution and abundance of the native white-clawed crayfish in the Wye catchment over the last few decades. Native crayfish may have been lost from the main river channel, from tributaries such as the Duhonw and Ithon and have almost disappeared from the Afon Irfon. Significant populations within the Wye SAC are now confined to the Sgithwen, Cletwr, Edw, Llynfi Dulas and Builth Road Dulas. The most recent assessment of the condition of crayfish in the Wye SAC, using modified Common Standards Monitoring techniques, found that populations are unfavourable.
Vulnerabilities (includes existing pressures and trends)	▪ **Abstraction levels -** entrainment in water abstractions directly impacts on species population dynamics through reduced recruitment and survival rates. The impact of flow depletion resulting from a small number of major abstractions was highlighted in the Review of Consents process. As a result of this process, flow targets have been set which are considered likely to significantly reduce or remove the potential impacts on SAC features. ▪ **Eutrophication** - factors that are important to the favourable conservation status of this feature include flow, substrate quality and water quality, which in turn influence species composition and abundance. These factors often interact, producing unfavourable conditions by promoting the growth of a range of algae

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	and other species indicative of eutrophication. Under conditions of prolonged low flows and high nutrient status, epiphytic algae may suppress the growth of aquatic flowering plants. ▪ **Diffuse Pollution** - in the Wye catchment the most significant sources of diffuse pollution and siltation are from agriculture, including fertiliser run-off, livestock manure, silage effluent and soil erosion from ploughed land. The most intensively used areas such as heavily trampled gateways and tracks can be especially significant sources of polluting run-off. Preventative measures can include surfacing of tracks and gateways, moving feeding areas, and separating clean and dirty water in farmyards. Farm operations should avoid ploughing land which is vulnerable to soil erosion or leaving such areas without crop cover during the winter. Among toxic pollutants, sheep dip and silage effluent present a particular threat to aquatic animals in this predominantly rural area. Contamination by synthetic pyrethroid sheep dips, which are extremely toxic to aquatic invertebrates, has a devastating impact on crayfish populations and can deprive fish populations of food over large stretches of river. These impacts can arise if recently dipped sheep are allowed access to a stream or hard standing area, which drains into a watercourse. Pollution from organophosphate sheep dips and silage effluent can be very damaging locally. Pollution from slurry and other agricultural and industrial chemicals, including fuels, can kill all forms of aquatic life. All sheep dips and silage, fuel and chemical storage areas should be sited away from watercourses or bunded to contain leakage. Recently dipped sheep should be kept off stream banks. Discharges from sewage treatment works, urban drainage, engineering works such as road improvement schemes, contaminated land, and other domestic and industrial sources can also be significant causes of pollution, and must be managed appropriately. Used dip should be disposed of strictly in accordance with Environment Agency Regulations and guidelines. Statutory and voluntary agencies should work closely with landowners and occupiers to minimise the risk of any pollution incidents and enforce existing regulations. Measures to control diffuse pollution in the water environment, including 'Catchment Sensitive Farming', may be implemented as a result of the Water Framework Directive and, along with existing agri-

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	environment schemes, will help to achieve the conservation objectives for the SAC. Pollution of rivers with toxic chemicals, such as PCBs, was one of the major factors identified in the widespread decline of otters during the last century. There should be no increase in pollutants potentially toxic to otters. ▪ **Barriers to migration** - Artificial obstructions including weirs and bridge sills can reduce connectivity for some species. In addition, reaches subject to depleted flow levels, pollution, or disturbance due to noise, vibration or light, can all inhibit the movement of sensitive species. The dispersal of semi-terrestrial species, such as the otter, can be adversely affected by structures such as bridges under certain flow conditions, therefore these must be designed to allow safe passage. ▪ **Development pressure** - can cause temporary physical, acoustic, chemical and sediment barrier effects that need to be addressed in the assessment of specific plans and projects. Noise/vibration eg. due to impact piling, drilling, salmon fish counters present within or in close proximity to the river can create a barrier to shad migration. Barriers resulting from vibration, chemicals, low dissolved oxygen and artificially high sediment levels must be prevented at key times. Engineering works such as bridge repairs in reaches where white-clawed crayfish are known to occur should include appropriate pollution prevention measures and a crayfish rescue by a suitably licensed person where there is a risk of physical damage to crayfish. ▪ **Invasive and non-native species** - are a detrimental impact on the water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation. Giant hogweed, Himalayan balsam and Japanese knotweed should be actively managed to control their spread and hopefully reduce their extent in the SAC. The American signal crayfish is present in the Wye catchment and poses a very serious threat to the continued existence of the native white-clawed crayfish in the site and in Wales. Native crayfish are unable to co-exist where signal crayfish are present, due to the latter's superior competitive ability and a disease, crayfish plague, which it carries but to which native crayfish have no immunity. American signal crayfish and crayfish plague are widespread and abundant in nearby catchments such as the Lugg, Arrow and Severn. Crayfish plague can be transferred to streams on wet fishing gear, boots, canoes, machinery, stocked fish etc., so measures such as raising awareness, disinfection facilities and

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	where appropriate restrictions on access, should be implemented where a significant risk is identified. Signal crayfish are also extremely harmful to fish communities and the overall ecology of the river. It is illegal to release non-native crayfish into the wild, to keep live crayfish in most of Wales or to trap crayfish without a licence from the Environment Agency. Bullhead densities have been found to be negatively correlated with densities of non-native crayfish, suggesting competitive and/or predator-prey interactions. Non-native crayfish should be absent from the SAC. ▪ **Artificially enhanced densities of other fish** - may introduce unacceptable competition or predation pressure and the aim should be to minimise these risks in considering any proposals for stocking. A small-scale salmon rearing and stocking programme is currently in operation in the Wye, run by the Wye and Usk Foundation. The management objectives for SAC salmon populations are to attain naturally self-sustaining populations. Salmon stocking should not be routinely used as a management measure. Salmon stocking represents a loss of naturalness and, if successful, obscures the underlying causes of poor performance (potentially allowing these risks to perpetuate). It carries various ecological risks, including the loss of natural spawning from broodstock, competition between stocked and naturally produced individuals, disease introduction and genetic alterations to the population. Therefore, there is a presumption that salmon stocking in the Wye SAC will be phased out over time. The presence of artificially high densities of salmonids and other fish will create unacceptably high levels of predatory and competitive pressure on juvenile and adult bullhead. Stocking of fish should be avoided in the SAC. ▪ **External factors** - operating outside the SAC, may also be influential, particularly for the migratory fish and otters. For example, salmon may be affected by barriers to migration in the Severn Estuary, inshore fishing and environmental conditions prevailing in their north Atlantic feeding grounds. Otters may be affected by developments that affect resting and breeding sites outside the SAC boundary.
Landowner/ Management Responsibility	▪ N/A
HRA/AA Studies undertaken	HRA Screening of the Torfaen Local Development Plan (2006-2021) January 2008.

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that address this site	http://www.torfaen.gov.uk/Environm]entAndPlanning/Planning/ForwardPlanning/Publications/HabitatsRegulationAssessment.pdf ▪ The screening concludes that due to the distance between the SAC and Torfaen (approximately 30-35km) it is considered that the LDP is unlikely to have any significant effects on this SAC. Increases in airborne pollution could potentially have effects on particular habitats but this impact is considered negligible.

Site Name: Severn Estuary **Location Grid Ref: ST321748** **JNCC Site Code: UK0013030** **Size: 73715.4** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
Site Description	The Severn Estuary is the largest coastal plain estuary in the UK with extensive mudflats and sandflats, rocky shore platforms, shingle and islands. Saltmarsh fringes the coast, backed by grazing marsh with freshwater and occasional brackish ditches. The estuary's classic funnel shape, unique in the UK, is a factor causing the Severn to have the second highest tidal range in the world (after the Bay of Fundy in Canada) at more than 12 meters. This tidal regime results in plant and animal communities typical of the extreme physical conditions of strong flows, mobile sediments, changing salinity, high turbidity and heavy scouring. The resultant low diversity invertebrate communities, that frequently include populations of ragworms, lugworms and other invertebrates in high densities, form an important food source for passage and wintering birds. The site is important in the spring and autumn migration periods for waders moving along the west coast of Europe, as well as in winter for large numbers of waterbirds including swans, geese, ducks and waders. These bird populations are regarded as internationally important. Glassworts and annual sea-blite colonise the open mud, with beds of all three species of eelgrass *Zostera* occurring on more sheltered mud and sandbanks. Large expanses of common cord-grass also occur on the outer marshes. Heavily grazed saltmarsh fringes the estuary with a range of saltmarsh types present. The middle marsh sward is dominated by common saltmarsh-grass with typical associated species. In the upper marsh, red fescue and saltmarsh rush become more prominent. Areas of saltmarsh fringe the estuary, mostly grazed with a range of vegetation communities. There are gradual and stepped transitions between bare mudflat to upper marsh and grassland. Main vegetation types are: upper saltmarsh with *Festuca rubra* and *Juncus gerardii*; middle marsh dominated by *Puccinellia maritima* with *Glaux maritima* and *Triglochin maritima*; dense monocultures of *Spartina anglica* at the edge of the mudflats-brackish pools and depressions with *Phragmites australis* and *Bolboschoenus maritimus*.
Qualifying Features	Annex I Habitats primary reason for selection: ▪ Estuaries ▪ Mudflats and sandflats not covered by seawater at low tide

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	▪ Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) Annex I Habitats qualifying feature: ▪ Sandbanks which are slightly covered by sea water all the time ▪ Reefs Annex II Species primary reason for selection: ▪ Sea lamprey *Petromyzon marinus* ▪ River lamprey *Lampetra fluviatilis* ▪ Twaite shad *Alosa fallax*
Conservation Objectives	**SAC interest feature 1: Estuaries** The conservation objective for the "estuaries" feature of the Severn Estuary SAC is to maintain the feature in favourable condition, as defined below: The feature will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met: i. the total extent of the estuary is maintained; ii. the characteristic physical form (tidal prism/cross sectional area) and flow (tidal regime) of the estuary is maintained; iii. the characteristic range and relative proportions of sediment sizes and sediment budget within the site is maintained; iv. the extent, variety and spatial distribution of estuarine habitat communities5 within the site is maintained; v. the extent, variety, spatial distribution and community composition of hard substrate habitats and their

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notable communities is maintained;

vi. the abundance of the notable estuarine species assemblages7 is maintained or increased;

vii. the physico-chemical characteristics of the water column9 support the ecological objectives described above;

viii. Toxic contaminants in water column and sediment are below levels which would pose a risk to the ecological objectives described above.

ix. Airborne nutrient and contaminant loads are below levels which would pose a risk to the ecological objectives described above

SAC interest feature 2: Subtidal sandbanks which are covered by sea water all the time (subtidal sandbanks)

The conservation objective for the "subtidal sandbanks" feature of the Severn Estuary SAC is to maintain the feature in favourable condition, as defined below:

The feature will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:

i. the total extent of the subtidal sandbanks within the site is maintained;

ii. the extent and distribution of the individual subtidal sandbank communities within the site is maintained;

iii. the community composition of the subtidal sandbank feature within the site is maintained;

iv. the variety and distribution of sediment types across the subtidal sandbank feature is maintained;

v. the gross morphology (depth, distribution and profile) of the subtidal sandbank feature within the site is maintained.

SAC interest feature 3: Mudflats and sandflats not covered by seawater at low tide (mudflats and sandflats)

The conservation objective for "mudflats and sandflats" feature of the Severn Estuary SAC is to maintain the

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	feature in favourable condition, as defined below: The feature will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met: i. The total extent of the mudflats and sandflats feature is maintained; ii. the variety and extent of individual mudflats and sandflats communities within the site is maintained; iii. the distribution of individual mudflats and sandflats communities3 within the site is maintained; iv. the community composition of the mudflats and sandflats feature within the site is maintained; v. the topography of the intertidal flats and the morphology (dynamic processes of sediment movement and channel migration across the flats) are maintained. **SAC interest feature 4: Atlantic salt meadow** The conservation objective for the "Atlantic salt meadow" feature of the Severn Estuary SAC is to maintain the feature in favourable condition, as defined below: The feature will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met: i. the total extent of Atlantic salt meadow and associated transitional vegetation communities within the site is maintained; ii. the extent and distribution of the individual Atlantic salt meadow and associated transitional vegetation communities within the site is maintained; iii. the zonation of Atlantic salt meadow vegetation communities and their associated transitions to other estuary habitats is maintained; iv. the relative abundance of the typical species of the Atlantic salt meadow and associated transitional vegetation communities is maintained;

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	v. the abundance of the notable species of the Atlantic salt meadow and associated transitional vegetation communities is maintained. vi. the structural variation of the salt marsh sward (resulting from grazing) is maintained within limits sufficient to satisfy the requirements of conditions iv and v above and the requirements of the Ramsar and SPA features vii. the characteristic stepped morphology of the salt marshes and associated creeks, pills, drainage ditches and pans, and the estuarine processes that enable their development, is maintained. viii. Any areas of *Spartina anglica* salt marsh (SM6) are capable of developing naturally into other saltmarsh communities. **SAC interest feature 5: Reefs** The conservation objective for the "reefs" feature of the Severn Estuary SAC is to maintain the feature in a favourable condition, as defined below: The feature will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met: i. the total extent and distribution of *Sabellaria* reef is maintained; ii. the community composition of the *Sabellaria* reef is maintained; iii. the full range of different age structures of *Sabellaria* reef are present; iv. the physical5and ecological processes necessary to support *Sabellaria* reef are maintained. **SAC interest feature 6: River lamprey *Lampetra fluviatilis*** The conservation objective for the river lamprey *Lampetra fluviatilis* feature of the Severn Estuary SAC is to maintain the feature in a favourable condition, as defined below:

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	The feature will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met: i. the migratory passage of both adult and juvenile river lamprey through the Severn Estuary between the Bristol Channel and any of their spawning rivers is not obstructed or impeded by physical barriers, changes in flows, or poor water quality; ii. the size of the river lamprey population in the Severn Estuary and the rivers which drain into it, is at least maintained and is at a level that is sustainable in the long term; iii. the abundance of prey species forming the river lamprey's food resource within the estuary, is maintained. iv. Toxic contaminants in the water column and sediment are below levels which would pose a risk to the ecological objectives described above. **SAC interest feature 7: The conservation objective for sea lamprey *Petromyzon marinus*** The conservation objective for the sea lamprey *Petromyzon marinus* feature of the Severn Estuary SAC is to maintain the feature in a favourable condition, as defined below: The feature will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met: i. the migratory passage of both adult and juvenile sea lamprey through the Severn Estuary between the Bristol Channel and any of their spawning rivers is not obstructed or impeded by physical barriers, changes in flows, or poor water quality; ii. the size of the sea lamprey population in the Severn Estuary and the rivers which drain into it, is at least maintained as is at a level that is sustainable in the long term; iii. the abundance of prey species forming the sea lamprey's food resource within the estuary, is maintained.

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	vi. Toxic contaminants in the water column and sediment are below levels which would pose a risk to the ecological objectives described above. **SAC interest feature 8: The conservation objective for twaite shad *Alosa fallax*** The conservation objective for the twaite Shad *Alosa fallax* feature of the Severn Estuary SAC is to maintain the feature in a favourable condition, as defined below: The feature will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met: i. the migratory passage of both adult and juvenile twaite shad through the Severn Estuary between the Bristol Channel and their spawning rivers is not obstructed or impeded by physical barriers, changes in flows or poor water quality; ii. the size of the twaite shad population within the Severn Estuary and the rivers draining into it is at least maintained and is at a level that is sustainable in the long term. iii. the abundance of prey species forming the twaite shad's food resource within the estuary, in particular at the salt wedge, is maintained. iv. Toxic contaminants in the water column and sediment are below levels which would pose a risk to the ecological objectives described above.
Component SSSIs	▪ N/A
Key Environmental Conditions (factors that maintain site integrity	▪ **Hydrodynamic and sedimentary regime** - The conservation of the site features is dependent on the tidal regime. The tidal range in the Severn Estuary is the second-highest in the world and the scouring of the seabed and strong tidal streams result in natural erosion of the habitats and the presence of high sediment loads.

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	▪ **Maintain suitable distance between the site and development** - to allow for managed retreat of intertidal habitats and avoid coastal squeeze. ▪ **Manage public access and activities**.
SAC Condition Assessment	▪ N/A
Vulnerabilities (includes existing pressures and trends)	▪ **Physical loss of supporting habitats through removal** - The physical loss of areas of intertidal habitats may be caused directly through change of land use or indirectly as a consequence of changes to sedimentation processes (e.g. coastal defences) as well as via the effects of smothering by artificial structures (e.g. jetties) or the disposal of spoils. The intertidal mudflats and sandflats and the saltmarsh are highly sensitive to removal by land reclamation and barrage construction. Information provided by NE and CCW states that large areas of the European marine site are not currently under threat, however when combined with a high level of sensitivity this leads to a moderate vulnerability. ▪ **Contamination by synthetic and/or non-synthetic toxic compounds** - At the moment there is no evidence to show that this is the case on the Severn Estuary, but the estuary is vulnerable to oil spills and there is a continuous discharge of toxins into the estuary, some of which bind to the sediments. NE and CCW identify this is an area which requires further assessment. The intertidal mudflats and sandflats and the saltmarsh are currently highly vulnerable to the introduction of synthetic and non-synthetic compounds. ▪ **Damage by abrasion or selective extraction** - Saltmarsh may be physically damaged from overgrazing or eroded when boats are moored on it and when paths are worn through it to reach moored boats on foot or via vehicles. Currently all supporting habitats are considered to be moderately vulnerable to abrasion. Intertidal habitats are highly sensitive to damage by direct and indirect effects of aggregate dredging. The intertidal mudflats and sandflats and the shingle and rocky shore are therefore considered by NE and CCW to be highly vulnerable to selective extraction.

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	▪ **Changes in nutrient and/or organic loading** - Changes in organic or nutrient loading can change the species composition of the plants on the saltmarsh and thus the structure of the sward. Increases in nutrients can also cause excessive algal growth on the mudflats, denying the birds access to their invertebrate prey and changing the invertebrate species composition in the sediment. Though the water quality has been improved in recent years there are still local areas of concern and any increase in nutrient loading should be avoided. At present the intertidal mudflats and sandflats are moderately vulnerable to this category of operation. ▪ **Inappropriate grazing** - Much of the saltmarsh is managed by grazing and changes in management can alter the availability of prey and suitability of roosting sites. The saltmarsh is currently highly vulnerable to the selective extraction of species.
Landowner/ Management Responsibility	▪ N/A
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 significance of the potential impacts of the Eastern Bay Link (Pg. 50, Paragraph 6.23) in the Preferred Strategy (either alone or in-combination with other plans and projects) will be considered when a more detailed scheme is available. An appropriate assessment may be required for the scheme. HRA Screening of the Torfaen Local Development Plan (2006-2021) January 2008. http://www.torfaen.gov.uk/EnvironmentAndPlanning/Planning/ForwardPlanning/Publications/HabitatsRegulationAssessment.pdf ▪ It is likely that an increase of 7000 dwellings in Torfaen and associated development will in some way

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	impact upon the site. It is likely however that the potential impact will be as a result of in-combination effects with other implemented plans and programmes in close proximity to the Severn Estuary. 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 ▪ 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, 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. HRA & AA of the Wales Spatial Plan Update June 2008. http://wales.gov.uk/about/strategy/spatial/hra/download/?lang=en ▪ The HRA Screening concludes that the WSPU and other plans have the potential to give rise to adverse effects at this site. ▪ The AA states that it is not possible to predict in specific terms whether the WSPU would or would not give rise to significant adverse effects either alone or in combination with other plans/ strategies and projects upon specific European sites. However, it does identify that this site is likely to come under increasing risk of adverse in combination effects from transport infrastructure, urban and economic development and recreation and tourism as a result of the WSPU and English RSSs. The AA also identifies that in combination with the English RSSs the WSPU has the potential to have negative effects on water levels, flood protection and water quality issues, which could affect this site.

Site Name: Sugar Loaf Woodlands **Location Grid Ref: SO295166** **JNCC Site Code: UK0030072** **Size: 173.84** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
Site Description	Sugar Loaf Woodlands are the largest example of old sessile oak woods near the south-eastern fringe of the habitat's range in the UK and Europe. The relatively dry situation restricts the development of the Atlantic flora associated with the habitat, but the main floristic components of sessile oak *Quercus petraea* canopy, acidic ground flora (typically of bilberry *Vaccinium myrtillus* and wavy hair-grass *Deschampsia flexuosa*) and extensive fern and bryophyte cover are in place. The woodland is grazed, but regenerates within gaps and at the fringes, where transitions to upland grassland and heath communities occur. The woodland also supports a smaller area of beech woodland and a large colony of red wood ants, which are more commonly found in southern and eastern Britain.
Qualifying Features	Annex I Habitats qualifying feature: ▪ Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles
Conservation Objectives	**Conservation Objective for Feature:** **Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles** Vision for feature: The vision for this feature is for it to be in favourable conservation status within the site, as a functioning and regenerating* oak wood, where all of the following conditions are satisfied: ▪ The wooded area is no less than 122 ha; ▪ The remainder of the site is semi-natural acid grassland, heathland, bracken and scrub, often forming a transition zone at the woodland edge; ▪ Saplings of birch betula spp, oak Quercus petraea, alder Alnus glutinosa or holly Ilex aquifolium dominate the tree regeneration; ▪ Young beech Fagus sylvatica and sycamore Acer pseudoplatanus trees are rare;

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	▪ The woodland ground flora is composed of a range of typical native plants including bilberry Vaccinium myrtillus, wavy-hair grass Deschampsia flexuosa and the mosses Plagiothecium undulatum, Rhytidiadelphus loreus, Dicranum majus. ▪ The liverwort Bazzania trilobata to continue to be present in its core area of Unit 1. ▪ All factors affecting the achievement of these conditions will under control. *A "functioning and regenerating oak woodland" would include all the positive attributes described in the performance indicators. Performance indicators for Feature 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 Sugar Loaf Woodlands Management Plan.
Component SSSIs	▪ Sugar Loaf Woodlands SSSI The site has been divided into 4 management units. A map of these units can be viewed on the CCW website.
Key Environmental Conditions (factors that maintain site integrity	Canopy regeneration is a key attribute for signifying the functioning, habitat quality and sustainability of most woodland types, including sessile oak woods. ▪ **Grazing regime** - The grazing within all 4 units has suppressed the regeneration of native woody species and in combination with past coppicing has resulted in a uniform age structure. The areas of Sugarloaf woodlands not subjected to continuous grazing appear to become densely populated with saplings of all species. This may demonstrate that the main factor restricting natural regeneration of woody species in

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	Sugar Loaf Woodlands is grazing and that current grazing levels are incompatible with sustainable semi-natural woodland at this site. Liaison between owners/commoners is needed to discuss possible means of managing grazing to encourage natural regeneration in the woodland areas, including possible agreements to fence all new and some existing canopy gaps. Most of Unit 4 is already fenced and stock free and regeneration is now taking place, though some periodic grazing may be required to control bramble. ▪ **Manage non-native species** (Tree/shrub) - if necessary control the spread of non-native species (principally beech) through a programme of selective removal of saplings to ensure no further trees get into the canopy. Non-native beech trees can be accepted as part of the canopy in the short to medium term. Consequently, the limits need only be met in 75% of existing woodland. The upper limits are 5% cover of non-native trees in the canopy and no beech (or other invasive non-native shrubs) in the understorey or shrub layer. The conservation objectives state that the canopy should be composed of locally native trees and, apart from a beech woodland area within Unit 1, the canopy of Sugar Loaf Woodlands is currently dominated by oak throughout. Where beech is present its seedlings tend to dominate the regeneration and without management to control these locally non-native seedlings further parts of the SAC feature will become unfavourable. ▪ **Manage woodland by thinning/small group felling** - Much of the woodland lacks structure due to past woodland management to remove timber. It is likely to be decades before a more natural woodland structure can develop. Trees could be thinned to create a more uneven age structure or open gaps in the canopy when an appropriate means of controlling grazing levels have been identified and all dead/felled timber to be left in situ. This is already taking place in Unit 4 but elsewhere the grazing regime may be unsuitable. ▪ **Increase amounts of deadwood** - Deadwood is present on the site, but much has been removed in the past. In future, the owners should be encouraged to leave as much dead wood as possible.

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	▪ **Veteran trees** - Retain all veteran trees. ▪ **Manage bracken** - Bracken may require management where it is thought to be hindering successful regeneration, largely in the open areas and gaps. However, this needs to be balanced against the protection bracken offers for young saplings against browsing and its place as a key natural component of acidic woodlands. Together bracken and bramble should cover less than 75% of the woodland floor.
SAC Condition Assessment	**Conservation Status of Feature 1:** **Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles** Unfavourable (2007), due to: ▪ Grazing having a strong role in preventing some of the canopy regeneration and in creating a sparser ground flora; ▪ Some areas within the SAC/SSSI remain as open areas, especially on the fringe of the site. Whilst having some open areas is beneficial for a range of species, not all these open areas are of benefit to either the SAC or SSSI features; ▪ The even-aged and dense canopy in much of the wooded area. This is creating very densely shaded ground, field and shrub layers and is one of the barriers to regeneration of saplings and ground flora. However, more canopy gaps would be expected in the long term as the canopy trees die, or through storm damage in the more exposed parts of the site;
Vulnerabilities (includes existing pressures and trends)	▪ **Inappropriate grazing regime** - The grazing within all 4 units has suppressed the regeneration of native woody species and in combination with past coppicing has resulted in a uniform age structure. The areas of Sugarloaf woodlands not subjected to continuous grazing appear to become densely populated with

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	saplings of all species. This may demonstrate that the main factor restricting natural regeneration of woody species in Sugar Loaf Woodlands is grazing and that current grazing levels are incompatible with sustainable semi-natural woodland at this site. ▪ **Non-native species** - Where beech is present its seedlings tend to dominate the regeneration and without management to control these locally non-native seedlings further parts of the SAC feature will become unfavourable. ▪ **Bracken encroachment** - can hinder successful regeneration in the open areas and gaps. However the bracken also offers protection for young saplings against browsing and its place as a key natural component of acidic woodlands. The accumulation of bracken litter on the common poses a fire risk in dry weather. Restrictions on public access could be considered, but it would be very difficult to control most incidents as they appear to be the result of children deliberately setting fires. Control of bracken in a buffer strip at the wood edges may be a more sensible consideration. ▪ **Air pollution*** - Airborne acid and nutrient deposition could be a particular problem for epiphytic lichens on the oak trees. ○ Acidification. ○ Eutrophication. ○ Photochemical oxidants. ○ Particulate matter.
Landowner/ Management Responsibility	▪ Unit 1 - National Trust (common) ▪ Unit 3 - National Trust (common)

* 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

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	▪ Unit 4 - National Trust (tenanted) The management units have been largely based on the three woodland blocks that make up the SAC and SSSI. The SAC feature is the same for each block of woodland and units 1& 3 are on the same common and so are under broadly the same management, but their geographical isolation from each other gives them the status of separate units. Unit 2 is a small privately owned and enclosed area within Unit 1. Unit 4 is on a farm in the Tir Gofal agri-environment scheme and so is easily separated from the other two units. Unit 3 includes one isolated area of woodland joined to the enclosed Unit 4, but on the common and so potentially under the same management regime as the rest of Unit 3.
HRA/AA Studies undertaken that address this site	HRA Screening of the Torfaen Local Development Plan (2006-2021) January 2008. http://www.torfaen.gov.uk/Environm]entAndPlanning/Planning/ForwardPlanning/Publications/HabitatsRegulationAssessment.pdf ▪ The screening states that the LDP will not have a direct impact on the site; however, it is identified that airborne acid and nutrient deposition may be a problem for this site. It concludes that given the distance of the site from the Torfaen boundary the effect that the LDP could have on the site is negligible.

Site Name: Usk Bat Sites **Location Grid Ref: SO190145** **JNCC Site Code: UK0014784** **Size: 1686.4** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
Site Description	The site encompasses a series of lesser horseshoe bat roosts, upland habitats, woodlands and cave systems located around the valley of the River Usk near to Abergavenny. Mynydd Llangatwg is an area of open moorland and bog, with an impressive limestone escarpment along the northeastern edge, and is one of the largest exposures of upland limestone crag in south Wales. The Craig y Cilau National Nature Reserve (NNR) covers a large proportion of this escarpment area, including most of the unquarried scarp, with areas of limestone grassland, scree and quarry spoil, woodland and scrub. A small raised bog (Waun Ddu) bordered by two small streams has developed below the escarpment. An extensive system of caves lies beneath Mynydd Llangatwg and the plateau is peppered with sinkholes. The main reason for the presence of the NNR is to help control and manage access to the cave system to protect the bat roosts and the underground geology and also the surface habitats, which support an outstanding assemblage of plants. Species include large and small-leaved lime, several species of whitebeam (including least whitebeam (*Sorbus minima*) which is unique to this area of Brecknock), limestone fern, endemic hawkweeds and alpine enchanter's-nightshade. The chasmophytic vegetation encompasses the various crevices, nooks and crannies on the cliffs, boulders and partially vegetated unstable slopes of the limestone escarpment. It supports a typical range of ferns, bryophytes and calcareous lichens; these include ferns such as maidenhair spleenwort, mosses like *Tortella tortuosa*, and liverworts like *Scapania aspera*. This site is known to support a number of notable lichen species and provides some of the best examples in the area of calcicolous lichen communities, which include the jelly lichen Collema cristatum and examples of lichen communities like the *Leproplacetum chrysodetae* and *Aspicilion calcarea*. Patches of Tileo-Acerion forest are also scattered along the length of the cliffs on Mynydd Llangatwg and intermixed with beechwood in the Clydach gorge. These areas also support a number of rare whitebeams (*Sorbus* spp.).

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Qualifying Features	Annex I Habitats qualifying feature: ▪ European dry heaths ▪ Degraded raised bogs still capable of natural regeneration ▪ Blanket bogs* Priority feature ▪ Calcareous rocky slopes with chasmophytic vegetation ▪ Caves not open to the public ▪ Tilio-Acerion forests of slopes, screes and ravines* Priority feature Annex II Species primary reason for selection: ▪ Lesser horseshoe bat *Rhinolophus hipposideros*
Conservation Objectives	**Conservation Objective for Feature 1:** **Lesser Horseshoe Bat *Rhinolophus hipposideros*** 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: ▪ The site will support a sustainable population of lesser horseshoe bats in the River Usk area. ▪ The population will viable in the long term, acknowledging the population fluctuations of the species. ▪ Buildings, structures and habitats on the site will be in optimal condition to support the populations. ▪ Sufficient foraging habitat is available, in which factors such as disturbance, interruption to flight lines, and mortality from predation or vehicle collision, changes in habitat management that would reduce the available food source are not at levels which could cause any decline in population size or range ▪ Management of the surrounding habitats is of the appropriate type and sufficiently secure to ensure there is likely to be no reduction in population size or range, nor any decline in the extent or quality of breeding, foraging or hibernating habitat.

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	▪ There will be no loss or decline in quality of linear features (such as hedgerows and tree lines) which the bats use as flight lines - there will be no loss of foraging habitat use by the bats or decline in its quality, such as due to over-intensive woodland management ▪ All factors affecting the achievement of the above 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 Usk Bat Sites Management Plan. **Conservation Objective for Feature 2:** **Blanket bog** Vision for Feature 2 ▪ The extent, quality and species richness of the blanket bog vegetation is maintained and, where possible, degraded bog is restored to good condition so that this habitat occupies its full potential range within the site. ▪ The bog vegetation is largely a mixture of dwarf shrubs, hare's-tail cottongrass and mosses, including bog-mosses. ▪ Extensive areas of purple moor-grass or hare's-tail cottongrass show signs of recovery towards a more mixed dwarf shrub sward. ▪ The natural hydrological regime is maintained and there is continued peat formation and thus carbon storage. ▪ Areas of bare peat are not extensive and most areas show signs of recovery. ▪ Peat profiles containing important pollen records are maintained. ▪ All factors affecting the achievement of the above conditions are under control.

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	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 Usk Bat Sites Management Plan. **Conservation Objective for Feature 3:** **Tilio-Acerion forests of slopes, screes and ravines** Vision for Feature 3 The vision for this feature is for it to be in favourable conservation status within the site, as a functioning and regenerating ash woodland, where all of the following conditions are satisfied: ▪ There are extensive patches of semi-natural woodland on the cliffs of the Llangatwg escarpment and hillsides in the Clydach gorge. ▪ The woodland canopy is dominated by locally native species, including lime ash Fraxinus excelsior, Tilia spp., pedunculate oak Quercus robur, hazel Corylus avellana, birch Betula spp., whitebeams Sorbus spp. and, in the Clydach gorge, beech Fagus sylvatica. Rare whitebeams are a significant component of the canopy. ▪ Saplings of locally native species dominate the tree regeneration and there is evidence of sufficient regeneration to maintain the canopy in the long term. ▪ There is an accumulation of standing and fallen deadwood as the woodland develops. ▪ The woodland ground flora is composed of a range of typical native plants including enchanters-nightshade Circaea lutetiana, dog's-mercury Mercurialis perennis, wood-sorrel Oxalis acetosella, hart's-tongue Phyllitis scolopendrium and wood sage Teucrium scorodonia. ▪ The populations of rare whitebeams are stable or increasing. ▪ Young sycamore Acer pseudoplatanus trees are rare, as are beech Fagus sylvatica in areas away from the Clydach gorge.

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	▪ Plants indicating disturbance and nutrient enrichment, such as nettles, cleavers and weeds, are not dominant in the ground flora of the woodland. ▪ All factors affecting the achievement of the above conditions are under 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 performance indicators can be found within the Usk Bat Sites Management Plan. **Conservation Objective for Feature 4:** **Calcareous rocky slopes with chasmophytic vegetation** Vision for Feature 4 ▪ Sufficient vegetation within crevices remains free from disturbance to support typical plants, including mosses, ferns and rare hawkweeds (Hieracium spp.) and allow them to sustain their populations into the future. ▪ Areas accessible to grazing animals should free from being smothered by ivy or heavily shaded by trees. ▪ All factors affecting the achievement of the above conditions are under control. Performance indicators for Feature 4 The performance indicators are part of the conservation objective, not a substitute for it. Assessment of plans and projects must be based on the entire conservation objective, not just the performance indicators. The performance indicators can be found within the Usk Bat Sites Management Plan. **Conservation Objective for Feature 5:** **Caves not open to the public**

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	Vision for Feature 5 ▪ The cave system provides a winter hibernation site for large numbers of lesser horseshoe bats and other bat species, including Brandt's, whiskered, Daubenton's, Natterer's, brown long-eared and, occasionally, greater horseshoe bats. ▪ Numbers of roosting bats are stable or increasing in the system as a whole. ▪ All factors affecting the achievement of the above conditions are under control. Also see the vision for lesser horseshoe bats. As outlined in the JNCC description of this feature, the cavernicolous fauna is considered to be impoverished throughout the UK and this feature is not a primary reason for selection of any SAC in the UK (www.jncc.gov.uk). There is however significant bat interest associated with many of the caves within this SAC, particularly Lesser Horseshoe Bat. Great Horseshoe Bat has also been recorded in very small numbers. Several other bat species are recorded, particularly from the genus Myotis, but their habit of hibernating deep within crevices in the caves (rather than hanging freely from the cave roof, like horseshoe species) makes them extremely difficult to record. 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 Usk Bat Sites Management Plan. **Conservation Objective for Feature 6:** **Degraded raised bogs still capable of natural regeneration**

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	Vision for Feature 6 ▪ The extent, quality and diversity of raised bog vegetation is maintained and, where possible, restored to good condition, with active moss and peat growth across the raised bog surface. ▪ The vegetation consists of a mixture of dwarf shrubs, hare's-tail cottongrass, deergrass and bog mosses, grading at the edges into acid and alkaline flushes influenced by acidic water draining from the bog and springs rising in the limestone catchment. ▪ All factors affecting the achievement of the above conditions 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 Usk Bat Sites Management Plan. **Conservation Objective for Feature 7:** **European dry heaths** Vision for Feature 7 ▪ The extent, quality and diversity of heath vegetation within the constituent sites is maintained and, where possible, degraded heath is restored to good condition. ▪ The main heathland areas have a varied age structure with a mosaic of young heath, mature heath and degenerate heath. ▪ All factors affecting the achievement of these conditions 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

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	and projects must be based on the entire conservation objective, not just the performance indicators. The performance indicators can be found within the Usk Bat Sites Management Plan.
Component SSSIs	▪ Mynydd Llangatwg/ Mynydd Llangattock SSSI (units 1 to 15) ▪ Siambre Ddu SSSI (unit 19) ▪ Buckland Coach House & Ice House SSSI (unit 20) ▪ Foxwood SSSI (unit 21) The site has been divided into 21 management units of which units 1 to 15, 19, 20 and 21 comprise to form the Usk Bat Sites SAC. A map of the management units can be viewed on the CCW website.
Key Environmental Conditions (factors that maintain site integrity	**Key environmental conditions for the Lesser Horseshoe Bat:** **Buckland House Maternity Roost** ▪ Site security - Access to the site should be secured against unauthorized access ensuring doors, gates and security fences are in sound condition. ▪ External condition of building - Fabric of building sufficient to maintain roost conditions internally with: o Weatherproof roof. The roof covering materials (slates, tiles etc.) in weatherproof condition with no significant gaps, slippage or damage. o No holes large enough to allow soaking of roof timbers, excessive heat loss or high light levels in the roost area o Walls sound, rainwater goods in adequate condition. o The building is structurally stable. No significant deterioration in overall condition of the building. ▪ Roost entrance -buildings and underground sites: o Unobstructed roost entrance large enough for bats to fly through unimpeded. Normal minima: 300 x 200 mm. o No artificial lights shining on access or associated flight paths. ▪ External Disturbance - Disturbance levels acceptable to bats with:

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	○ No increase since previous visit. ○ Human access to roost controlled and limited. ▪ Internal condition of building/ underground site in roost area: ○ A vital element of the bats' behaviour involves extensive flight within a roost prior to emergence, which occurs shortly after dusk. Therefore the bats require fairly large open areas within the coach house roof and first floor voids to fly before they emerge. It is important that these areas are unobstructed and that the flying space (volume) is not significantly reduced. Areas used for pre-emergence flight should not be used for storage. ○ Low light levels with no through draught. ○ No toxic substances present, which would adversely affect the health of the bats (e.g. chemical timber treatment within inappropriate substances). ▪ Temperature of roost area: ○ Range of temperatures available to bats with mean temperature in July greater than 20°C ▪ Internal disturbance: ○ Human access to roost area controlled and limited. ○ Disturbance is kept to a minimum. **Hibernation Sites** ▪ Site entrance: ○ Existing entrances should be unobstructed. ○ No human-influenced new entrances causing a change to ventilation. ○ No change in size sufficient to affect airflow and internal temperature. ▪ External conditions of site: ○ Vegetation present close to entrance(s) but not obstructing it (them). ○ No artificial lights shinning on entrance(s). ▪ Internal conditions: ○ The temperature should remain constantly cool (8-12°C) and dark, once beyond the entrance zone. ○ No significant man-induced changes to ventilation or temperature regime.

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	○ No toxic substances present (dumping of oil or other substances). ▪ Internal disturbance: ○ Human access to roost area controlled and limited (at Agen Allwedd the number of visitors is already controlled). Lesser horseshoe bats are very sensitive to disturbance and even the presence of a single person in close proximity can cause problems. Cavers and geologists should avoid areas where bats are likely to be disturbed during the winter months. Where there is a risk of disturbance by unauthorised persons, grilling the cave entrances should be considered. Any structures placed at cave entrances to prevent unauthorized access should not hinder the passage of bats. ○ Disturbance is kept to a minimum. **Foraging areas and links to roosts** ▪ Habitat Quality: ○ There should be no net loss of suitable woodland, scrub and hedgerows within the SAC or adjoining areas used by the bats. Lesser horseshoe bats feed on flies (mainly midges), small moths, caddis flies, lacewings, beetles, small wasps and spiders. Suitable foraging habitat includes open broadleaved woodland, scrub, parkland, scrubby wetland and permanent pasture. Lesser horseshoe bats do not normally fly across open land and when foraging, remain close to wooded canopy. The insects they eat, though, may be derived from other unimproved insect rich habitat nearby. Management of foraging habitat should aim to maximise the amount of insect food as well as provide sufficient canopy cover to maximise opportunities for the bats to find their prey. ▪ Connectivity: ○ Connectivity of woodland, hedgerows, linear habitat and field boundary features should be maintained as lesser horseshoe bats tend to feed in wooded areas and use linear features to navigate their way between roosts and foraging habitat. Some management of woodlands and hedgerows and trees will be necessary to preserve these features in the landscape but such work should be carried out in a sensitive manner, particularly within the SAC itself, so as not to disrupt habitat continuity. Disturbance - Lesser horseshoe bats are very sensitive to disturbance and even the presence of a single person

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	in close proximity can cause problems. Light and noise pollution Habitat fragmentation **Key Environmental Conditions for the Blanket Bog:** ▪ **Drainage** - No new drainage ditches should be dug, and wherever possible old drainage ditches should be allowed to infill naturally. ○ There should be no evidence of new drains or major clearance of old drains or deepening of bog outlet streams. ▪ **Burning** - blanket bog should not normally be burnt, as burning is likely to damage important plant and animal species, especially bog mosses and invertebrates, and encourage the growth of rank species, like hare's-tail cottongrass; it can also result in erosion of the peat which can then cause water quality problems in cave system and adjacent reservoirs. Past unplanned or uncontrolled burning is likely to be at least partly responsible for the scarcity of bog-mosses in some areas. ○ No evidence of significant burning (patches larger than 1ha) in any areas of blanket bog. ▪ **Peat Erosion** - There is a natural cycle of peat erosion and deposition but the balance can be upset by burning, heavy grazing, pollution and vehicle damage. ○ The total extent of active erosion over a 5-year period should not exceed the total extent of areas showing signs of peat accumulation and re-vegetation. ▪ **Air quality** - No exceedence of critical loads for: ○ Sulphur dioxide – 20µg/m³ ○ Nitrous Oxides – 30µg/m³ ○ Ozone – 3000 ppb ○ ammonia – 1µg/m³ ○ N – 5-10 kg/ha/yr

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	○ acid – 0.35keq/ha/yr Monitoring stations located at grid location: 319097.79 214637.88 **Key Environmental Conditions for the Tilio-Acerion forests of slopes, screes and ravines:** ▪ **Grazing** - The greatest influence on the woodland, and its continued regeneration, is grazing. The present structure and species composition of the northern escarpment woodland, excluding the cliff ledges, is a result of natural regeneration. The cliff ledges are inaccessible to stock, have developed naturally and are not actively managed. In units 1 & 2, the woodland has developed on common land and parts are subject to high grazing levels by sheep. The woodland in units 5, 12 & 13 is now largely un-grazed and the ground flora is noticeably more luxuriant in these areas. ○ Grazing levels should be sufficient to allow regeneration in the long term. ○ On the common (units 1 & 2), maintain grazing at or below the current (2007) levels. ○ Un-grazed areas (unit 5, 12, 13) should remain un-grazed. ▪ **Woodland Management** - Natural ecological processes should be allowed to operate as far as possible. In many areas, these are gradually creating greater structural diversity. Most of the woodland on the site is not actively managed as the woodland occupies cliffs and steeply sloping ground, such that active woodland management is not a practical or desirable option ○ There should be no evidence of tree felling or coppicing within the past five years. (Tree surgery for safety reasons excluded). ○ Dead wood should ideally be left where it falls and standing dead trees should be allowed to fall naturally. Movement and cutting/tidying of dead wood should be avoided and/or limited, unless essential for public safety. ▪ **Non-native species** - Beech is at the edge of its range in this part of Wales. In units 5, 12 and 13 the beech wood appears to be natural, but the spread of beech over much of Units 1 & 2 may not be desirable, as it

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	would replace the ash woodland. Limits should be met in 70% of the woodland. o 5% cover of non-native trees in the canopy. o No cotoneaster (or other invasive non-native shrubs) in the understorey or shrub layer. **Key Environmental Conditions for the Calcareous rocky slopes with chasmophytic vegetation:** ▪ **Grazing** - Low grazing levels on the more accessible rocky areas in units 1 & 2 in are important in controlling the growth of ground-smothering species such as ivy, which have the potential to smother boulders and cliff faces that are important for their lower plant communities. Tree growth at the base of the cliffs may shade out important calcareous chasmophytic habitat, so should be controlled within limits outside the areas of agreed woodland. Surveillance of grazing levels and type should be maintained so that changes that may influence the features on the site are identified and recorded. o Sufficient grazing to prevent the development of scrub or spread of ivy and tall vegetation in units 1 & 2. ▪ **Rock Climbing** - Intensive rock climbing can dislodge plants and disturb breeding birds. These impacts may be avoided if climbing is subject to specific agreements, which include a code of conduct. o No rock climbing in the key areas of units 1 & 2 without agreement. ▪ **Quarrying** - any quarrying in the key areas of units 1 & 2 would lead to habitat loss. **Key Environmental Conditions for the Degraded raised bogs still capable of natural regeneration:** ▪ **Drainage** - See blanket bog above. ▪ **Grazing** - A way of reducing the grazing to acceptable levels must be found. A period without grazing will promote recovery, although some light grazing, ideally by cattle or ponies, will be required in the longer term to prevent the development of scrub or the dominating growth of dwarf shrubs or purple moor-grass. o Upper limits: Overall grazing pressure of 0.05 livestock units/ha/year on the bog area.

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	AND: ○ Minimal winter grazing. AND: ○ No stock feeding ○ Lower limit: Sufficient to prevent the establishment of trees and shrubs in the long term. ▪ **Burning** - will damage the feature and could encourage dominance by purple-moor grass if grazing is significantly reduced and result in a decline in the cover of bog mosses. At present there is generally insufficient vegetation to be burnt here. ▪ **Air quality** - See blanket bog above. **Key Environmental Conditions for the European dry heaths:** ▪ **Burning** - can be a useful management tool on the heathlands, provided that it forms part of an appropriate and controlled cycle of management. It is important to ensure that such management does not encourage the spread of bracken. ○ In areas subject to any burning plan, only a maximum of up to 15% of the total heathland area should be burnt in any one year. ▪ **Erosion/Bare Ground** - Is generally caused by uncontrolled fires (see above) or heavy trampling. ○ Upper Limit - 10% bare ground ▪ **Air Quality** - Increased cover of grasses and de-generate heather may be symptomatic of air pollution, as there is evidence that pollution makes heather plants more susceptible to damage by frost and heather beetles. The Environment Agency has set critical levels for these pollutants in relation to various types of vegetation. No critical loads are exceeded: ○ Sulphur dioxide - 20µg/m³

Site Name: Usk Bat Sites Location Grid Ref: SO190145 JNCC Site Code: UK0014784 Size: 1686.4 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	○ Nitrous Oxides - 30µg/m³ ○ Ozone - 3000 ppb ○ Ammonia - 1µg/m³ ○ N - 10-20 kg/ha/yr ○ Acid - 0.35keq/ha/yr Monitoring station located at grid location: 319097.79 214637.88
SAC Condition Assessment	**Conservation Status of Feature 1:** **Lesser horseshoe bat *Rhinolophus hipposideros*** The conservation status of this feature within the site is considered to be **Favourable** (2006). Based on annual counts made at all locations between 2000 and 2006, the lesser horseshoe bat feature is considered to be in favourable condition. **Conservation Status of Feature 2:** **Blanket bog** The conservation status of this feature within the site is considered to be **Unfavourable** (2006). Assessment carried out in April 2002 indicated that feature condition was: Unfavourable, no change. In many areas there was little or no bog mosses and the cover of dwarf shrubs exceeded the upper limits defined. In other areas the vegetation was dominated by hare's-tail cottongrass and the cover of bog mosses was limited. Past grazing, burning and drainage activity means that some stands of blanket bog have been damaged by deep drainage. There is also concern that the vegetation is being damaged by atmospheric pollution, due to

Site Name: Usk Bat Sites Location Grid Ref: SO190145 JNCC Site Code: UK0014784 Size: 1686.4 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	exceedence of many of the critical loads identified for this feature. **Conservation Status of Feature 3:** **Tilio-Acerion forests of slopes, screes and ravines** The conservation status of this feature within the site is considered to be **Favourable** (2006). Assessment carried out in August 2004 indicated that feature condition was: Favourable, maintained. All the factors affecting the features appear to be under control. **Conservation Status of Feature 4:** **Calcareous rocky slopes with chasmophytic vegetation** The conservation status of this feature within the site is considered to be **Favourable** (2006). Assessment carried out in August 2004 indicated that feature condition was: Favourable, maintained. All the factors affecting the features appear to be under control. **Conservation Status of Feature 5:** **Caves not open to the public** The conservation status of this feature within the site is considered to be **Favourable** (2006). Based on records of made at all locations between 2000 and 2006, the feature condition is considered to be: Favourable, maintained. All the factors affecting the features appear to be under control. **Conservation Status of Feature 6:** **Degraded raised bogs still capable of natural regeneration**

Site Name: Usk Bat Sites Location Grid Ref: SO190145 JNCC Site Code: UK0014784 Size: 1686.4 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	The conservation status of this feature within the site is considered to be **Unfavourable** (2006). Assessment carried out in July 2002 indicated that feature condition was: Unfavourable, declining. The feature is currently (2007) too heavily grazed because the most of it is common land and because it is on the sheltered side of the hill, is subject to high levels of grazing, particularly by sheep. There is also concern that the vegetation is being damaged by atmospheric pollution, due to exceedence of many of the critical loads identified for this feature. **Conservation Status of Feature 7:** **European dry heaths** The conservation status of this feature within the site is considered to be **Unfavourable** (2006). Assessment carried out in April 2002 indicated that feature condition was: Unfavourable, no change. Past grazing and burning activity means that some stands of dry heath have insufficient cover of dwarf shrubs. There is also concern that the vegetation is being damaged by atmospheric pollution, due to exceedence of many of the critical loads identified for this feature.
Vulnerabilities (includes existing pressures and trends)	**Lesser Horseshoe bat:** ▪ **Deterioration of buildings used to roost** - Alterations/neglect to the structure of the buildings could result in the site becoming unsuitable as a nursery roost by causing changes to the internal conditions of the roost. ▪ **Disturbance** - It is important that access to the cave systems and roosts is managed to protect the bats. Lesser horseshoe bats are very sensitive to disturbance, such as light and noise pollution and even the presence of a single person in close proximity can cause problems. Where there is a risk of disturbance by unauthorised persons, grilling the cave entrances should be considered. Any structures placed at cave

Site Name: Usk Bat Sites Location Grid Ref: SO190145 JNCC Site Code: UK0014784 Size: 1686.4 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	entrances to prevent unauthorised access should not hinder the passage of bats. ▪ **Temperature change** - Underground hibernation roosts should be dark, cool and humid with stable temperature (8 -120C) beyond the entrance zone. However, the boulder roof of the Foxwood cave is gappy and internal temperatures are dependant on external temperatures, unlike the situation in many true caves. The consequence is that declining winter ambient temperature leads to a decline in roost temperature and in the colder winter months roost temperature falls below the required temperature range, triggering departures of bats to other unknown roosts. ▪ **Habitat fragmentation** - Development allocations pressures and transport development could lead to the loss or decline in quality of linear features (such as hedgerows and tree lines) which the bats use as flight lines. Connectivity of woodland, hedgerows, linear habitat and field boundary features are important as lesser horseshoe bats tend to feed in wooded areas and use linear features to navigate their way between roosts and foraging habitat. **Blanket bog**: ▪ **Air pollution** - High levels of air pollution are believed to be damaging and there may be combined effects. Increased cover of hare's-tail cottongrass and flat-topped bog-moss may be symptoms, as could increased levels of peat erosion. Blanket bogs are at risk from*: ○ Acidification; ○ Photochemical oxidants; ○ Direct toxicity; and ○ Eutrophication.

* Pollution Information System (APIS). Raised bog and blanket bog. Available from: http://www.apis.ac.uk/cgi_bin/habitat_result.pl?habResult=Raised+bog+and+blanket+bog&choice=allHabs&haborspec=habitat&submit.x=27&submit.y=9

Site Name: Usk Bat Sites Location Grid Ref: SO190145 JNCC Site Code: UK0014784 Size: 1686.4 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	▪ **Hydrological change** - the blanket bog has been subject to hydrological change as a result of past ditch construction to supply water to reservoirs. ▪ **Recreational activities** - Unauthorised vehicle use is a threat to the moorland areas. Bog vegetation is easily damaged and may take a long time to recover. Ground nesting birds may be disturbed during the breeding season. Although the common land within the site is subject to a right of public access on foot, such use does not appear to be so intensive as to cause habitat damage or significant disturbance to birdlife. ▪ **Development** - The ground along the existing pipeline routes, which cross the Llangatwg hill, has been disturbed during the engineering phase. Some habitats naturally recover better than others, whilst some will require specific management to restore it to its natural state. Generally, further pipeline construction or other engineering works affecting sensitive habitats within the site should be avoided. Any future engineering or pipeline works would need to show that the SAC features would not be adversely affected and if any licence was approved then there would be a requirement to restore the vegetation to its original character and quality. **Tilio-Acerion forests of slopes, screes and ravines:** ▪ **Grazing** - In the cliff and woodland areas any more than light grazing may prevent tree regeneration and damage the populations of rare and scarce plants that may be accessible to grazing stock. ▪ **Non-native species** - The ash woodland in units 1 & 2 is vulnerable to the introduction of beech. **Calcareous rocky slopes with chasmophytic vegetation:** ▪ **Invasive plants** - Introduced and invasive species such as cotoneaster can smother large areas of grassland and cliff habitats, displacing native species and would need to be controlled. Cotoneaster has spread on

Site Name: Usk Bat Sites Location Grid Ref: SO190145 JNCC Site Code: UK0014784 Size: 1686.4 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	the south side of Mynydd Llangatwg above the Clydach gorge and some control is desirable to stop it spreading into feature habitats. ▪ **Recreational activities** - Rare plants, and plants in general, on the cliffs and ledges, may be dislodged by climbers and some breeding birds are particularly sensitive to disturbance during the nesting season. Rock climbing at this site should be restricted to suitable areas and be subject to a suitable code of conduct in order to minimise such damage and disturbance. **Degraded raised bogs still capable of natural regeneration:** ▪ **Air Pollution** - See blanket bog above. ▪ **Hydrological Change** - No new drainage ditches should be dug within the bog and outlet and inflow channels must not be deepened or altered in any way. ▪ **Grazing** - This area of bog has been damaged by heavy grazing in the past and current (2008) grazing levels are still too high to enable the re-generation of the bog habitats. Most of the bog is on commonland and therefore it is difficult to control grazing without agreement and fencing. Supplementary stock feeding can lead to damage of the sward and cause poaching and gradual nutrient enrichment. Feeding should not occur on this habitat. **European dry heaths:** ▪ **Grazing** - levels are believed to be lower than they have been historically but they may still be too high in some parts of the common to enable the heathland to regenerate. It may not be possible to address this problem in unit 1 because the adjoining limestone grassland and rocky habitats require a relatively high stocking rate to maintain their interest. Supplementary stock feeding can lead to localised damage of the sward and cause poaching and gradual nutrient enrichment. Feeding should be confined to acceptable

Site Name: Usk Bat Sites Location Grid Ref: SO190145 JNCC Site Code: UK0014784 Size: 1686.4 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	areas off the common, such as agriculturally improved land. ▪ **Bracken and scrub encroachment** - Scrub invasion in the open moorland areas can be controlled by the correct combination of grazing and burning. Bracken however can be more problematical. Grazing may not prevent bracken invasion particularly if sheep rather than heavier animals are the main stock-type and burning can encourage the spread of bracken. Bracken control will be considered if there is significant spread within the drier heathy areas. ▪ **Burning in combination with intense grazing** - can result in the loss of those heathland shrub species that give this habitat its characteristic appearance, and which are so important to the value of these moorland habitats. ▪ **Dumping** - The plateau areas at Mynydd Llangatwg are easily accessible from nearby population centres, so the illegal dumping of domestic and commercial waste and abandoned vehicles is a problem. ▪ **Development** - See blanket bog above.
Landowner/ Management Responsibility	▪ N/A
HRA/AA Studies undertaken that address this site	HRA Screening of the Torfaen Local Development Plan (2006-2021) January 2008. http://www.torfaen.gov.uk/EnvironmentAndPlanning/Planning/ForwardPlanning/Publications/HabitatsRegulationAssessment.pdf ▪ The Screening concludes that whilst the LDP will not have a direct impact on this SAC in terms of land take, there is the potential however for development of residential and employment uses to increase airborne pollution in Torfaen which could have an impact on this SAC. The Strategic Ecological Corridor of the Afon Llywd is present in Torfaen, which is an important river riparian habitat. This corridor could potentially be used by lesser horseshoe bats although details of the foraging areas from the Usk Valley sites are not known.

Site Name: Wye Valley and Forest of Dean Bat Sites **Location Grid Ref: SO605044** **JNCC Site Code: UK0014794** **Size: 142.7** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
Site Description	The Wye Valley and Forest of Dean Bats SAC straddles the Wales-England border and covers an area of 142.7ha. It is underpinned by 4 SSSI in Wales and 9 in England, all of which lie entirely within the SAC. This complex of sites contains by far the greatest concentration of lesser horseshoe bat *Rhinolophus hipposideros* in the UK, totalling about 26% of the national population. It has been selected on the grounds of the exceptional breeding population, and the majority of sites within the complex are maternity roosts. The site also supports the greater horseshoe bat *Rhinolophus ferrumequinum* in the northern part of its range, with about 6% of the UK population. The site contains the main maternity roost for bats in this area, which are believed to hibernate in the many disused mines in the Forest.
Qualifying Features	Annex II Species primary reason for selection: ▪ Lesser horseshoe bat *Rhinolophus hipposideros* ▪ Greater horseshoe bat *Rhinolophus ferrumequinum*
Conservation Objectives	**Conservation Objective for Feature 1:** **Greater Horseshoe Bat *Rhinolophus ferrumequinum*** 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: ▪ The site will support a sustainable population of greater horseshoe bats in the Wye Valley area. ▪ The population will viable in the long term, acknowledging the population fluctuations of the species. ▪ Buildings, structures and habitats on the site will be in optimal condition to support the populations. ▪ Sufficient foraging habitat is available, in which factors such as disturbance, interruption to flight lines, and mortality from predation or vehicle collision, changes in habitat management that would reduce the available food source are not at levels which could cause any decline in population size or range

Site Name: Wye Valley and Forest of Dean Bat Sites Location Grid Ref: SO605044 JNCC Site Code: UK0014794 Size: 142.7 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	▪ Management of the surrounding habitats is of the appropriate type and sufficiently secure to ensure there is likely to be no reduction in population size or range, nor any decline in the extent or quality of breeding, foraging or hibernating habitat. ▪ There will be no loss or decline in quality of linear features (such as hedgerows and tree lines) which the bats use as flight lines - there will be no loss of foraging habitat use by the bats or decline in its quality, such as due to over-intensive woodland management ▪ 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 Wye Valley and Forest of Dean Bat Sites SAC Management Plan. **Conservation Objective for Feature 2:** **Lesser Horseshoe Bat *Rhinolophus hipposideros*** Vision for feature 2 The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: ▪ The site will support a sustainable population of lesser horseshoe bats in the Wye Valley area. ▪ The population will viable in the long term, acknowledging the population fluctuations of the species. ▪ Buildings, structures and habitats on the site will be in optimal condition to support the populations. ▪ Sufficient foraging habitat is available, in which factors such as disturbance, interruption to flight lines, and

Site Name: Wye Valley and Forest of Dean Bat Sites Location Grid Ref: SO605044 JNCC Site Code: UK0014794 Size: 142.7 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	mortality from predation or vehicle collision, changes in habitat management that would reduce the available food source are not at levels which could cause any decline in population size or range. ▪ Management of the surrounding habitats is of the appropriate type and sufficiently secure to ensure there is likely to be no reduction in population size or range, nor any decline in the extent or quality of breeding, foraging or hibernating habitat. ▪ There will be no loss or decline in quality of linear features (such as hedgerows and tree lines) which the bats use as flight lines – there will be no loss of foraging habitat use by the bats or decline in its quality, such as due to over-intensive woodland management. ▪ All factors affecting the achievement of the foregoing conditions are under control. Performance indicators for Feature 2 (see performance indicators for feature 1)
Component SSSIs	▪ Component SSSIs in Wales ○ Llangovan Church ○ Mwyngloddfa Mynydd-bach ○ Newton Court Stable Block ○ Wye Valley Lesser Horseshoe Bat Sites ▪ Component SSSIs in England ○ Blaisdon Hall ○ Buckshraft Mine and Bradley Hill Railway Tunnel ○ Caerwood and Ashberry Goose House ○ Dean Hall Coach House and Cellar ○ Devil's Chapel Scowles ○ Old Bow and Old Ham Mines ○ Sylvan House Barn

Site Name: Wye Valley and Forest of Dean Bat Sites Location Grid Ref: SO605044 JNCC Site Code: UK0014794 Size: 142.7 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	○ Westbury Brook Ironstone Mine ○ Wigpool Ironstone Mine A map of the component SSSIs is available on the CCW website.
Key Environmental Conditions (factors that maintain site integrity	▪ **Site security** - of buildings/structures that bat use should be maintained. ▪ **External condition of the building** - Fabric of building sufficient to maintain roost conditions internally with: ○ Weatherproof roof. ○ No holes allowing excessive heat loss or high light levels in the roost area. ○ Walls sound, rainwater goods in adequate condition. ○ Solar heating sufficient to maintain adequate roost temperature, with no significant shading of the roost. ○ The building is structurally stable. ▪ **Internal condition of building** - The internal fabric of the building is sufficient to maintain the roost location with: ○ No significant water penetration. ○ Low light levels with no through draught. ○ No toxic substances present which would adversely affect the health of the bats. ▪ **Roost access** -The roost access is in a suitable condition to allow emergence by bats with: ○ A greater horseshoe bat entrance a minimum of 400mm x 300mm. ○ An entrance that is unobstructed and allows the bats to fly through unimpeded. ○ No artificial lights shining on access or associated flight paths. ▪ **Minimal disturbance** - Human access to roost controlled and limited. Lesser horseshoe bats are very

Site Name: Wye Valley and Forest of Dean Bat Sites Location Grid Ref: SO605044 JNCC Site Code: UK0014794 Size: 142.7 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	sensitive to disturbance and even the presence of a single person in close proximity can cause problems. ▪ **Temperature of roost area** - Site specific requirements based on site monitoring. ▪ **Flight Lines** - Bats require connectivity of habitat features for commuting and foraging. Active management of the habitats used by bats for these activities may be required. The importance of linear habitat features off site for bat flight lines should be recognised. ▪ **Management of surrounding habitat** - The loss of flight lines in the form of walls, hedges or woodland rides within 1km around the roost should be prevented, as this is where juvenile bats learn to forage and navigate. There should be a similar aim to maintain or improve the quality of woodland and grazed pasture around and between areas identified as being used by the bats. Management of river habitats in the area is also critical due to the diversity of insect life that sustains the bats. The River Wye has also been shown to be an important flight line/feeding habitat for greater horseshoe bats. Increases in the amount of land that is cattle grazed, development of 'less managed' bushier hedgerows and conversion of improved grassland to semi-improved grassland, particularly close to the notified nursery roost, would improve the extent and quality of available greater horseshoe bat feeding habitat. Surrounding habitat management important for all units. ▪ **Hibernaculum access** - These limits cover only the Mwyngloddfa Mynydd-Bach SSSI. Horseshoe bats prefer to fly through an entrance. The site entrance is in suitable condition to allow continued use by bats with: ○ Existing access unobstructed. ○ No unplanned new access causing a change to the ventilation. ○ No change in the size sufficient to affect the airflow and internal temperature. ○ The access used by the bats is stable. ○ No recent falls or signs of geological instability.

Site Name: Wye Valley and Forest of Dean Bat Sites Location Grid Ref: SO605044 JNCC Site Code: UK0014794 Size: 142.7 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	○ Vegetation present close to the access but not obstructing it. ○ No artificial lights shining on access or associated flight paths.
SAC Condition Assessment	**The following condition assessments only account for the component SSSIs that are situated in Wales:** **Conservation Status of Feature 1: Greater Horseshoe Bat *Rhinolophus ferrumequinum*** The greater horseshoe bat numbers of Newton Court Stable Block SSSI are monitored annually in June. The assessment found the SSSI to be in **Favourable** condition. But Favourable Condition Status is **Unfavourable declining**. Newton Court Stable Block SSSI Current assessments are: MU1 Unfavourable declining **Conservation Status of Feature 2: Lesser Horseshoe Bat *Rhinolophus hipposideros*** The lesser horseshoe bat numbers for all component SSSIs are annually monitored. The assessment of all 3 component SSSIs showed lesser horseshoe bats to be favourable in two of the three areas. As all of the three SSSIs units have to be in good condition for the Lesser Horseshoe Bat overall to be favourable the feature is in **unfavourable** condition, and in this case we can give condition information at the unit level. Llangovan Church SSSI Current assessments are: MU1 Favourable maintained Mwyngloddfa Mynydd Bach SSSI Current assessments are: MU1 Favourable maintained Wye Valley Lesser Horseshoe Bats SSSI Current assessments are: MU1 Favourable maintained

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Designation: SAC</td><td colspan="6">Habitats Regulations Assessment: Data Proforma</td></tr>
<tr><td></td><td colspan="6">MU2 Unfavourable declining
MU3 Unfavourable maintained
MU4 Unfavourable declining</td></tr>
<tr><td></td><td colspan="6">The following table containing condition assessments only accounts for the component SSSIs that are situated in England:</td></tr>
<tr><td></td><td>% Area meeting PSA[1] target</td><td>% Area favourable</td><td>% Area unfavourable recovering</td><td>% Area unfavourable no change</td><td>% Area unfavourable declining</td><td>% Area destroyed / part destroyed</td></tr>
<tr><td></td><td colspan="6">Blaisdon Hall SSSI condition summary[2] (compiled 01 August 2008).</td></tr>
<tr><td></td><td>100.00%</td><td>100.00%</td><td>0.00%</td><td>0.00%</td><td>0.00%</td><td>0.00%</td></tr>
<tr><td></td><td colspan="6">Buckshraft Mine and Bradley Hill Railway Tunnel SSSI condition summary[3] (compiled 01 August 2008).</td></tr>
<tr><td></td><td>100.00%</td><td>100.00%</td><td>0.00%</td><td>0.00%</td><td>0.00%</td><td>0.00%</td></tr>
<tr><td></td><td colspan="6">Caerwood and Ashberry Goose House SSSI condition summary[4] (compiled 01 August 2008).</td></tr>
<tr><td></td><td>100.00%</td><td>100.00%</td><td>0.00%</td><td>0.00%</td><td>0.00%</td><td>0.00%</td></tr>
<tr><td></td><td colspan="6">Dean Hall Coach House and Cellar SSSI condition summary[5] (compiled 01 August 2008).</td></tr>
</table>

[1] PSA target - The Government's Public Service Agreement (PSA) target to have 95% of the SSSI area in favourable or recovering condition by 2010.
[2] Natural England SSSI condition summary. Available [online]: http://www.english-nature.org.uk/special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=1007183
[3] Natural England SSSI condition summary. Available [online]: http://www.english-nature.org.uk/special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=2000192
[4] Natural England SSSI condition summary. Available [online]: http://www.english-nature.org.uk/special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=1005562

Site Name: Wye Valley and Forest of Dean Bat Sites Location Grid Ref: SO605044 JNCC Site Code: UK0014794 Size: 142.7 Designation: SAC	Habitats Regulations Assessment: Data Proforma					
	100.00%	100.00%	0.00%	0.00%	0.00%	0.00%
	Devil's Chapel Scowles SSSI condition summary[6] (compiled 01 August 2008).					
	100.00%	100.00%	0.00%	0.00%	0.00%	0.00%
	Old Bow and Old Ham Mines SSSI condition summary[7] (compiled 01 August 2008).					
	100.00%	100.00%	0.00%	0.00%	0.00%	0.00%
	Sylvan House Barn SSSI condition of units[8] (compiled 31 January 2006). **Favourable** Condition summary data for this area is currently unavailable.					
	Westbury Brook Ironstone Mine SSSI condition summary[9] (compiled 01 August 2008).					
	100.00%	100.00%	0.00%	0.00%	0.00%	0.00%
	Wigpool Ironstone Mine SSSI condition summary[10] (compiled 01 August 2008).					

[5] Natural England SSSI condition summary. Available [online]: http://www.english-nature.org.uk/special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=1001562
[6] Natural England SSSI condition summary. Available [online]: http://www.english-nature.org.uk/special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=2000189
[7] Natural England SSSI condition summary. Available [online]: http://www.english-nature.org.uk/special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=2000187
[8] Natural England SSSI condition summary. Available [online]: http://www.english-nature.org.uk/special/sssi/reportAction.cfm?report=sdrt13&category=S&reference=1007184
[9] Natural England SSSI condition summary. Available [online]: http://www.english-nature.org.uk/special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=2000188

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<tr><td>Vulnerabilities (includes existing pressures and trends)</td><td colspan="6">■ Deterioration of buildings used to roost - Alterations/neglect to the structure of the buildings could result in the site becoming unsuitable as a nursery roost by causing changes to the internal conditions of the roost.

■ Disturbance - It is important that access to the mine systems and roosts is managed to protect the bats. Lesser horseshoe bats are very sensitive to disturbance, such as light and noise pollution and even the presence of a single person in close proximity can cause problems. Where there is a risk of disturbance by unauthorised persons, grilling the cave entrances should be considered. Any structures placed at cave entrances to prevent unauthorised access should not hinder the passage of bats.

■ Temperature change - Underground hibernation roosts should be dark, cool and humid with stable temperature (8 -120C) beyond the entrance zone.

■ Habitat fragmentation - Development allocations pressures and transport development could lead to the loss or decline in quality of linear features (such as hedgerows and tree lines) which the bats use as flight lines. Connectivity of woodland, hedgerows, linear habitat and field boundary features are important as lesser horseshoe bats tend to feed in wooded areas and use linear features to navigate their way between roosts and foraging habitat.</td></tr>
<tr><td>Landowner/ Management Responsibility</td><td colspan="6">■ N/A</td></tr>
</table>

[10] Natural England SSSI condition summary. Available [online]: http://www.english-nature.org.uk/special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=2000191

Site Name: Wye Valley and Forest of Dean Bat Sites **Location Grid Ref: SO605044** **JNCC Site Code: UK0014794** **Size: 142.7** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
HRA/AA Studies undertaken that address this site	HRA Screening of the Torfaen Local Development Plan (2006-2021) January 2008. http://www.torfaen.gov.uk/Environm]entAndPlanning/Planning/ForwardPlanning/Publications/HabitatsRegulationAssessment.pdf ▪ Due to the distance between this SAC and Torfaen it is concluded that the LDP is unlikely to have any significant effects on this SAC. HRA of the Draft South West Regional Spatial Strategy Proposed Changs (Land Use Consultants) July 2008. http://gosw.limehouse.co.uk/portal/regional_strategies/drss ▪ There are a number of N2K sites in the South West where development of housing, employment and transport infrastructure has the potential to adversely affect bat foraging and commuting habitat, as it is proposed in close proximity to such areas. Due to the proximity of proposed development to bat foraging and commuting habitats, it is recommended that the supporting text to ENV1 also makes specific reference to the need for bat foraging and commuting habitats to be considered when carrying out development. To ensure that adverse effects to the Wye Valley and Forest of Dean Bat Sites SAC does not occur the site should be specifically identified in the supporting text. HRA & AA of the Wales Spatial Plan Update June 2008. http://wales.gov.uk/about/strategy/spatial/hra/download/?lang=en ▪ The HRA Screening concludes that the WSPU and other plans have the potential to give rise to adverse effects at this site. ▪ The AA states that it is not possible to predict in specific terms whether the WSPU would or would not give rise to significant adverse effects either alone or in combination with other plans/ strategies and projects upon specific European sites. However, it does identify that this site is likely to come under increasing risk of adverse in combination effects from recreation and tourism as a result of the WSPU and English RSSs.

Site Name: Wye Valley Woodlands **Location Grid Ref: ST530957** **JNCC Site Code: UK0012727** **Size: 916.24** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
Site Description	The Wye Valley Woodlands SAC is a large woodland SAC that straddles the Wales–England border. The site covers an area of 914ha and is underpinned by 9 SSSIs in Wales and 7 in England, all of which lie entirely within the SAC. The Wye Valley contains abundant and near-continuous semi-natural woodland along the gorge. Beech stands occur as part of a mosaic with a wide range of other woodland types, and represent the western range of *Asperulo-Fagetum* beech forests. Such a variety of woodland types is rare within the UK. In places lime *Tilia* sp., elm *Ulmus* sp. and oak *Quercus* sp. share dominance with the beech. Structurally the woods include old coppice, pollards and high forest types. Lady Park Wood, one of the component sites, is an outstanding example of near-natural old-growth structure in mixed broad-leaved woodland, and has been the subject of detailed long-term monitoring studies. The woods of the lower Wye Valley on the border of south Wales and England form one of the most important areas for woodland conservation in the UK and provide the most extensive examples of *Tilio-Acerion* forest in the west of its range. A wide range of ecological variation is associated with slope, aspect and landform. The woodland occurs here as a mosaic with other types, including beech *Fagus sylvatica* and pedunculate oak *Quercus robur* stands. Uncommon trees, including large-leaved lime *Tilia platyphyllos* and rare whitebeams such as *Sorbus porrigentiformis* and *S. rupicola* are found here, as well as locally uncommon herbs, including wood barley *Hordelymus europaeus*, stinking hellebore *Helleborus foetidus*, narrow-leaved bitter-cress *Cardamine impatiens* and wood fescue *Festuca altissima*. Wye Valley is representative of yew *Taxus baccata* woods in the south-west of the habitat's range. It lies on the southern Carboniferous limestone, and yew occurs both as an understorey to other woodland trees and as major yew-dominated groves, particularly on the more stony slopes and crags.
Qualifying Features	Annex I habitats primary reason for selection:

Site Name: Wye Valley Woodlands **Location Grid Ref: ST530957** **JNCC Site Code: UK0012727** **Size: 916.24** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
	▪ *Asperulo-Fagetum* beech forests ▪ *Tilio-Acerion* forests of slopes, screes and ravines* Priority feature ▪ *Taxus baccata* woods of the British Isles* Priority feature Annex II species qualifying feature: ▪ Lesser horseshoe bat *Rhinolophus hipposideros*
Conservation Objectives	**Conservation Objective for Feature 1:** ***Tilio–Acerion* forests of slopes, screes and ravines** 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: ▪ Tilio–Acerion woodland is found in all eight of the Welsh SSSIs that contribute to the Wye Valley Woodlands SAC. ▪ The woodland area covers the entire site. ▪ The woodland is maintained as far as possible by natural processes. ▪ The location of open glades varies over time. ▪ Trees and shrubs are mainly locally native broadleaved species. ▪ The abundance and density of individual native species varies across the site. ▪ Trees and shrubs of a wide range of ages and sizes are present. ▪ Tree seedlings are plentiful throughout the site. ▪ Tree seedlings develop into saplings in the open glades.

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	▪ There are abundant dead and dying trees with holes and hollows, rot columns, torn off limbs and rotten branches. ▪ Some dead and dying trees will be partially or completely hollow. ▪ Fallen dead wood is dense enough to obstruct progress by foot across the entire site, except on established maintained paths. ▪ Dead wood dependent species of moss, liverwort, fungi and specialised invertebrates are present, in spatially and temporally variable abundance, throughout the site. ▪ Field and ground layers are well developed with a patchwork of vegetation communities characteristic of local soil and humidity conditions. ▪ 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 Wye Valley Woodlands SAC Management Plan. **Conservation Objective for Feature 2:** ***Asperulo–Fagetum* beech forests** 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: ▪ Asperulo–Fagetum woodland continues to be present in Fiddler's Elbow, Harper's Grove-Lord's Grove, Lower Hael, Cleddon Shoots and Blackcliff Wyndcliff, woods that contribute to the Wye Valley Woodlands

Site Name: Wye Valley Woodlands Location Grid Ref: ST530957 JNCC Site Code: UK0012727 Size: 916.24 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	SAC. ▪ The woodland area covers the entire site. ▪ The woodland is maintained as far as possible by natural processes. ▪ One quarter of the woodland canopy is open at any time. ▪ The location of open glades varies over time. ▪ Trees and shrubs are mainly locally native broadleaved species. ▪ The abundance and density of individual native species varies across the site. ▪ Trees and shrubs of a wide range of ages and sizes are present. ▪ Tree seedlings are plentiful throughout the site. ▪ Tree seedlings develop into saplings in the open glades. ▪ There are abundant dead and dying trees with holes and hollows, rot columns, torn off limbs and rotten branches. ▪ Some dead and dying trees will be partially or completely hollow. ▪ Fallen dead wood is dense enough to obstruct progress by foot across the entire site, except on established maintained paths. ▪ Field and ground layers are a patchwork of vegetation communities characteristic of local soil and humidity conditions. ▪ The woodland supports populations of birds (including pied flycatchers, redstarts, wood warblers) and mammals (including several bat species, otters and badgers). ▪ All factors affecting the achievement of these conditions are under control. Performance indicators for Feature 2 (see performance indicators for feature 1) **Conservation Objective for Feature 3:**

Site Name: Wye Valley Woodlands Location Grid Ref: ST530957 JNCC Site Code: UK0012727 Size: 916.24 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	***Taxus Baccata* woods of the British Isles** Vision for feature 3 ▪ Taxus Baccata woodland continues to be present in Blackcliff Wyndcliff Woods that contribute to the Wye Valley Woodlands SAC. ▪ The woodland area covers the entire site. ▪ The woodland is maintained as far as possible by natural processes. ▪ The location of open glades varies over time. ▪ Trees and shrubs are mainly locally native broadleaved species. ▪ The abundance and density of individual native species varies across the site. ▪ Trees and shrubs of a wide range of ages and sizes are present. ▪ Tree seedlings are plentiful throughout the site. ▪ Tree seedlings develop into saplings in the open glades. ▪ There are abundant dead and dying trees with holes and hollows, rot columns, torn off limbs and rotten branches. ▪ Some dead and dying trees will be partially or completely hollow. ▪ Fallen dead wood is dense enough to obstruct progress by foot across the entire site, except on established maintained paths. ▪ Dead wood dependent species of moss, liverwort, fungi and specialised invertebrates are present, in spatially and temporally variable abundance, throughout the site. ▪ Field and ground layers are a patchwork of vegetation communities characteristic of local soil and humidity conditions. ▪ The woodland supports populations of birds (including pied flycatchers, redstarts, wood warblers) and mammals (including several bat species, otters and badgers).

Site Name: Wye Valley Woodlands Location Grid Ref: ST530957 JNCC Site Code: UK0012727 Size: 916.24 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	▪ All factors affecting the achievement of these conditions are under control. Performance indicators for Feature 3 (see performance indicators for feature 1) **Conservation Objective for Feature 4:** **Lesser horseshoe bat *Rhinolophus hipposideros*** Vision for feature 4 ▪ The woodlands continue to support populations of lesser horseshoe bat. ▪ Sufficient foraging habitat is available, in which factors such as disturbance, interruption to flight lines, mortality from predation or vehicle collision, and changes in habitat management that would reduce the available food source are not at levels, which could cause any decline in population size. ▪ Management of the woodland SAC is of the appropriate type and sufficiently secure to ensure there is likely to be no reduction in population size or range, nor any decline in the extent or quality of breeding, foraging or hibernating habitat, for example due to over-intensive woodland management. ▪ There will be no loss or decline in quality of linear features (such as hedgerows and tree lines), which the bats use as flight lines. ▪ Disturbance to roost sites both within the site and in the surrounding area, especially from human physical presence, noise and lighting, is minimized. ▪ All factors affecting the achievement of these conditions are under control. Performance indicators for Feature 4 (see performance indicators for feature 1)

Component SSSIs	▪ Component SSSIs in Wales
	  ○ Blackcliff-Wyndcliff
	  ○ Cleddon Shoots Woodland

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	○ Fiddlers Elbow ○ Graig Wood ○ Harper's Grove-Lord's Grove ○ Livox Wood ○ Lower Hael Wood ○ Pierce, Alcove and Piercefield Woods ○ Upper Wye Gorge (In Wales but managed by NE) ▪ Component SSSIs in England ○ Astridge Wood ○ Bigsweir Wood ○ Highbury Wood ○ Lower Wye Gorge ○ Shorn Cliff and Caswell Woods ○ Swanpool Wood and Furnace Grove ○ The Hudnalls A map of the component SSSIs is available on the CCW website.
Key Environmental Conditions (factors that maintain site integrity	▪ **Habitat management** - The *Tilio–Acerion* woodland should be maintained through traditional woodland management, a combination of minimum intervention, coppice with standards and managed high forest. The *Asperulo–Fagetum* woodlands should be maintained through minimum intervention, with some areas also using traditional management practices of coppice with standards and managed high forest. The *Taxus baccata* woods should be maintained through minimum intervention. All the habitat management requirements for the lesser horseshoe bat will be met through the appropriate management of the features above.

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	▪ **Grazing management** - Deer management and protection from rabbits or livestock is necessary.
SAC Condition Assessment	**The following condition assessments only account for the component SSSIs that are situated in Wales:** **Conservation Status of Feature 1: *Tilio–Acerion* forests of slopes, screes and ravines** The *Tilio-Acerion* forests and associated non-SAC semi natural broadleaved woodland features were monitored in detail in the summer 2005-6. In this case CCW can give condition information at the unit level. As all of the five areas have to be in good condition for the *Tilio-Acerion* overall to be favourable the feature is in **unfavourable** condition. **Conservation Status of Feature 2: *Asperulo–Fagetum* beech forests** The *Asperulo-Fagetum* forests and associated non-SAC semi natural broadleaved woodland features were monitored in detail in the 2005-6. The assessment on all 5 component SSSIs showed *Asperulo-Fagetum* to be unfavourable in one of the three key areas. As all of the three areas have to be in good condition for the *Asperulo-Fagetum* overall to be favourable the feature is in **unfavourable** condition. **Conservation Status of Feature 3: *Taxus baccata* woods of the British Isles** The *Taxus baccata* woods were monitored in detail in the Winter 2005. The assessment of Blackcliff- Wyndcliff component SSSI was that the feature was in **favourable** condition. **Conservation Status of Feature 4: *Rhinolophus hipposideros* lesser horse shoe bat** CCW need to speak with Natural England to get monitoring results of this feature.

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The following table containing condition assessments only accounts for the component SSSIs that are situated in England:

% Area meeting PSA[11] target	% Area favourable	% Area unfavourable recovering	% Area unfavourable no change	% Area unfavourable declining	% Area destroyed / part destroyed
Astridge Wood SSSI condition summary[12] (compiled 01 July 2008).					
100.00%	100.00%	0.00%	0.00%	0.00%	0.00%
Bigsweir Wood SSSI condition summary[13] (compiled 01 July 2008).					
100.00%	11.90%	88.10%	0.00%	0.00%	0.00%
Highbury Wood SSSI condition summary[14] (compiled 01 July 2008).					
40.20%	40.20%	0.00%	0.00%	59.80%	0.00%
Lower Wye Gorge Wood SSSI condition summary[15] (compiled 01 July 2008).					

[11] PSA target - The Government's Public Service Agreement (PSA) target to have 95% of the SSSI area in favourable or recovering condition by 2010.
[12] Natural England SSSI condition summary. Available [online]: http://www.english-nature.org.uk/special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=1003696
[13] Natural England SSSI condition summary. Available [online]: http://www.english-nature.org.uk/special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=1003764
[14] Natural England SSSI condition summary. Available [online]: http://www.english-nature.org.uk/special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=1000049
[15] Natural England SSSI condition summary. Available [online]: http://www.english-nature.org.uk/special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=1003607

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<tr><td>Site Name: Wye Valley Woodlands
Location Grid Ref: ST530957
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Size: 916.24
Designation: SAC</td><td colspan="6">Habitats Regulations Assessment: Data Proforma</td></tr>
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<tr><td></td><td colspan="6">Shorn Cliff and Caswell Woods SSSI condition summary[16] (compiled 01 July 2008).</td></tr>
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<tr><td></td><td colspan="6">Swanpool Wood and Furnace Grove SSSI condition summary[17] (compiled 01 July 2008).</td></tr>
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<tr><td></td><td colspan="6">The Hudnalls SSSI condition summary[18] (compiled 01 July 2008).</td></tr>
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<tr><td>Vulnerabilities (includes existing pressures and trends)</td><td colspan="6">▪ Inappropriate management - Principal pressures are from lack of management (particularly traditional management, e.g. coppice) and inappropriate management proposals which would alter the recognised woodland stand types.

▪ Grazing - When woodland is grazed for many years it can prevent the natural regeneration of the woodland, since seedlings and coppice stools are given no opportunity to grow into viable trees. There is a serious problem with deer grazing in these woodlands. It is necessary to control the number of animals grazing in the wood using appropriate measures. Fences and gates should be erected and maintained around areas of regeneration in order to prevent damage. In the future, light grazing by stock may be</td></tr>
</table>

[16] Natural England SSSI condition summary. Available [online]: http://www.english-nature.org.uk/special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=1002428
[17] Natural England SSSI condition summary. Available [online]: http://www.english-nature.org.uk/special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=1000840
[18] Natural England SSSI condition summary. Available [online]: http://www.english-nature.org.uk/special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=1001654

Site Name: Wye Valley Woodlands Location Grid Ref: ST530957 JNCC Site Code: UK0012727 Size: 916.24 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	considered to help reduce the competition from other species allowing seedling regeneration to replace older stools. ▪ **Off-site pollution** - The effects of the releases of quarry dust into the atmosphere from the works adjacent to the Blackcliff -Wyndcliff SSSI are not known; these emissions are subject to the authorisation of other competent authorities, particularly the Environment Agency.
Landowner/ Management Responsibility	▪ N/A
HRA/AA Studies undertaken that address this site	HRA Screening of the Torfaen Local Development Plan (2006-2021) January 2008. http://www.torfaen.gov.uk/EnvironmentAndPlanning/Planning/ForwardPlanning/Publications/HabitatsRegulationAssessment.pdf ▪ Due to the distance between this SAC and Torfaen it is concluded that the LDP is unlikely to have any significant effects on this SAC. HRA of the Draft South West Regional Spatial Strategy Proposed Changes (Land Use Consultants) July 2008. http://gosw.limehouse.co.uk/portal/regional_strategies/drss ▪ There are a number of N2K sites in the South West where development of housing, employment and transport infrastructure has the potential to adversely affect bat foraging and commuting habitat, as it is proposed in close proximity to such areas. Due to the proximity of proposed development to bat foraging and commuting habitats, it is recommended that the supporting text to ENV1 also makes specific reference to the need for bat foraging and commuting habitats to be considered when carrying out development. To ensure that adverse effects to the Wye Valley Woodlands SAC does not occur the site should be specifically identified in the supporting text. HRA & AA of the Wales Spatial Plan Update June 2008. http://wales.gov.uk/about/strategy/spatial/hra/download/?lang=en

Site Name: Wye Valley Woodlands Location Grid Ref: ST530957 JNCC Site Code: UK0012727 Size: 916.24 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	▪ The HRA Screening concludes that the WSPU and other plans have the potential to give rise to adverse effects at this site. ▪ The AA states that it is not possible to predict in specific terms whether the WSPU would or would not give rise to significant adverse effects either alone or in combination with other plans/ strategies and projects upon specific European sites.

Special Protection Areas

Site Name: Severn Estuary **Location (Lat & Long):** **51 13 29 N** **03 02 57 W** **JNCC Site Code: UK9015022** **Size: 24662.98** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
Site Description	The Severn Estuary is the largest coastal plain estuary in the UK with extensive mudflats and sandflats, rocky shore platforms, shingle and islands. Saltmarsh fringes the coast, backed by grazing marsh with freshwater and occasional brackish ditches. The estuary's classic funnel shape, unique in the UK, is a factor causing the Severn to have the second highest tidal range in the world (after the Bay of Fundy in Canada) at more than 12 meters. This tidal regime results in plant and animal communities typical of the extreme physical conditions of strong flows, mobile sediments, changing salinity, high turbidity and heavy scouring. The resultant low diversity invertebrate communities, that frequently include populations of ragworms, lugworms and other invertebrates in high densities, form an important food source for passage and wintering birds. The site is important in the spring and autumn migration periods for waders moving along the west coast of Europe, as well as in winter for large numbers of waterbirds including swans, geese, ducks and waders. These bird populations are regarded as internationally important. Glassworts and annual sea-blite colonise the open mud, with beds of all three species of eelgrass *Zostera* occurring on more sheltered mud and sandbanks. Large expanses of common cord-grass also occur on the outer marshes. Heavily grazed saltmarsh fringes the estuary with a range of saltmarsh types present. The middle marsh sward is dominated by common saltmarsh-grass with typical associated species. In the upper marsh, red fescue and saltmarsh rush become more prominent. Areas of saltmarsh fringe the estuary, mostly grazed with a range of vegetation communities. There are gradual and stepped transitions between bare mudflat to upper marsh and grassland. Main vegetation types are: upper saltmarsh with *Festuca rubra* and *Juncus gerardii*; middle marsh dominated by *Puccinellia maritima* with *Glaux maritima* and *Triglochin maritima*; dense monocultures of *Spartina anglica* at the edge of the mudflats-brackish pools and depressions with *Phragmites australis* and *Bolboschoenus maritimus*.

Site Name: Severn Estuary **Location (Lat & Long):** **51 13 29 N** **03 02 57 W** **JNCC Site Code: UK9015022** **Size: 24662.98** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
Qualifying Features	Article 4.1 Qualification Over winter the area regularly supports: ▪ Bewick's Swan *Cygnus columbianus bewickii* 3.9% of the GB population Article 4.2 Qualification Over winter the area regularly supports: ▪ Gadwall *Anas strepera* 0.9% of the population ▪ White-fronted Goose *Anser albifrons albifrons* 0.4% of the population ▪ Dunlin *Calidris alpina alpine* 3.3% of the population ▪ Shelduck *Tadorna tadorna* 1.1% of the population ▪ Redshank *Tringa totanus* 1.3% of the population Article 4.2 Qualification: Internationally Important Assemblage of Birds Over winter the area regularly supports: ▪ 84317 waterfowl
Conservation Objectives	**SPA Interest feature 1: Internationally important population of regularly occurring Annex 1 species: Bewick's swan** The conservation objective is to maintain the Bewick's swan population and its supporting habitats in **favourable condition**, as defined below.

Site Name: Severn Estuary Location (Lat & Long): 51 13 29 N 03 02 57 W JNCC Site Code: UK9015022 Size: 24662.98 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	The interest feature Bewick's swan will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met: i. the 5 year peak mean population size for the Bewick's swan population is no less than 289 individuals (ie the 5 year peak mean between 1988/9 - 1992/3); ii. the extent of saltmarsh at the Dumbles is maintained; iii. the extent of intertidal mudflats and sandflats at Frampton Sands, Waveridge Sands and the Noose is maintained; iv. the extent of vegetation with an effective field size of >6 ha and with unrestricted bird sightlines > 500m at feeding, roosting and refuge sites are maintained; v. greater than 25% cover of suitable soft leaved herbs and grasses in winter season throughout the transitional saltmarsh at the Dumbles is maintained; vi. aggregations of Bewick's swan at feeding, roosting and refuge sites are not subject to significant disturbance. **SPA Interest feature 2: Internationally important population of regularly occurring migratory species: wintering European white-fronted goose** The conservation objective is to maintain the European white-fronted goose population and its supporting habitats in **favourable condition**, as defined below. The interest feature European white-fronted goose will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met: i. the 5 year peak mean population size for the wintering European white fronted goose population is no

Site Name: Severn Estuary Location (Lat & Long): 51 13 29 N 03 02 57 W JNCC Site Code: UK9015022 Size: 24662.98 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	less than 3,002 individuals (ie the 5 year peak mean between 1988/9- ii. 1992/3); iii. the extent of saltmarsh at the Dumbles is maintained; iv. the extent of intertidal mudflats and sandflats at Frampton Sands, Waveridge Sands and the Noose is maintained; v. greater than 25% cover of suitable soft-leaved herbs and grasses is maintained during the winter on saltmarsh areas; vi. unrestricted bird sightlines of >200m at feeding and roosting sites are maintained; vii. aggregations of European white-fronted goose at feeding or roosting sites are not subject to significant disturbance. **SPA Interest feature 3: Internationally important population of regularly occurring migratory species: wintering dunlin** The conservation objective is to maintain the dunlin population and its supporting habitats in **favourable condition**, as defined below. The interest feature dunlin will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met: i. the 5 year peak mean population size for the wintering dunlin population is no less than 41,683 individuals (ie the 5 year peak mean between 1988/9 - 1992/3); ii. the extent of saltmarsh and associated strandlines is maintained; iii. the extent of intertidal mudflats and sandflats is maintained; iv. the extent of hard substrate habitats is maintained; v. the extent of vegetation with a sward height of <10cm is maintained throughout the saltmarsh;

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	vi. the abundance and macro-distribution of suitable invertebrates in intertidal mudflats and sandflats is maintained; vii. the abundance and macro-distribution of suitable invertebrates in hard substrate habitats is maintained; viii. unrestricted bird sightlines of >200m at feeding and roosting sites are maintained; ix. aggregations of dunlin at feeding or roosting sites are not subject to significant disturbance. **SPA Interest feature 4: Internationally important population of regularly occurring migratory species: wintering redshank** The conservation objective is to maintain the redshank population and its supporting habitats in **favourable condition**, as defined below. The interest feature redshank will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met: i. the 5 year peak mean population size for the wintering redshank population is no less than 2,013 individuals (ie the 5 year peak mean between 1988/9 - 1992/3); ii. the extent of saltmarsh and associated strandlines is maintained; iii. the extent of intertidal mudflats and sandflats is maintained; iv. the extent of hard substrate habitats is maintained; v. the extent of vegetation with a sward height of <10cm throughout the saltmarsh is maintained; vi. the abundance and macro-distribution of suitable invertebrates in intertidal mudflats and sandflats is maintained; vii. the abundance and macro-distribution of suitable invertebrates in hard substrate habitats is maintained;

Site Name: Severn Estuary Location (Lat & Long): 51 13 29 N 03 02 57 W JNCC Site Code: UK9015022 Size: 24662.98 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	viii. unrestricted bird sightlines of >200m at feeding and roosting sites are maintained; ix. aggregations of redshank at feeding or roosting sites are not subject to significant disturbance. **SPA Interest feature 5: Internationally important population of regularly occurring migratory species: wintering shelduck** The conservation objective is to maintain the shelduck population and its supporting habitats in **favourable condition**, as defined below. The interest feature shelduck will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met: i. the 5 year peak mean population size for the wintering shelduck population is no less than 2,892 individuals (ie the 5 year peak mean between 1988/9 - 1992/3); ii. the extent of saltmarsh is maintained; iii. the extent of intertidal mudflats and sandflats is maintained; iv. the extent of hard substrate habitats is maintained; v. the abundance and macro-distribution of suitable invertebrates in intertidal mudflats and sandflats is maintained; vi. unrestricted bird sightlines of >200m at feeding and roosting sites are maintained; vii. aggregations of shelduck at feeding or roosting sites are not subject to significant disturbance. **SPA interest feature 6: Internationally important population of regularly occurring migratory species: wintering gadwall** The conservation objective is to maintain the gadwall population and its supporting habitats in favourable

Site Name: Severn Estuary Location (Lat & Long): 51 13 29 N 03 02 57 W JNCC Site Code: UK9015022 Size: 24662.98 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	condition, as defined below: The interest feature gadwall will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met: i. the 5 year peak mean population size for the wintering gadwall population is no less than 330 (ie the 5 year peak mean between 1988/9 - 1992/3); ii. the extent of intertidal mudflats and sandflats (Appendix 8) is maintained; iii. unrestricted bird sightlines of >200m at feeding and roosting sites are maintained; iv. aggregations of gadwall at feeding or roosting sites are not subject to significant disturbance. **SPA Interest feature 7: Internationally important assemblage of waterfowl** The conservation objective is to maintain the waterfowl assemblage and its supporting habitats in **favourable condition**, as defined below. The interest feature waterfowl assemblage will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met: i. the 5 year peak mean population size for the waterfowl assemblage is no less than 68,026 individuals (ie the 5 year peak mean between 1988/9 - 1992/3); ii. the extent of saltmarsh and their associated strandlines is maintained; iii. the extent of intertidal mudflats and sandflats is maintained; iv. the extent of hard substrate habitats is maintained; v. extent of vegetation of <10cm throughout the saltmarsh is maintained; vi. the abundance and macro-distribution of suitable invertebrates in intertidal mudflats and sandflats is

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	maintained; vii. the abundance and macro-distribution of suitable invertebrates in hard substrate habitats is maintained; viii. greater than 25% cover of suitable soft leaved herbs and grasses during the winter on saltmarsh areas is maintained; ix. unrestricted bird sightlines of >500m at feeding and roosting sites are maintained; x. waterfowl aggregations at feeding or roosting sites are not subject to significant disturbance.
Component SSSIs	▪ Severn Estuary SSSI ▪ Flat Holm SSSI ▪ Bridgwater Bay SSSI ▪ Penarth Coast SSSI ▪ Steep Holm SSSI ▪ Sully Island SSSI ▪ Upper Severn Estuary SSSI Maps of the site can be viewed on the CCW website.
Key Environmental Conditions (factors that maintain site integrity	**Key supporting habitats for the Annex I species:** ▪ **Intertidal mudflats and sandflats**: ○ Habitat extent - The focal area for the Bewick's swans is the upper Severn Estuary in the vicinity of the New Grounds, Slimbridge area. The mudflats and sandflats exposed as the tide falls where the estuary widens in the upper reaches of the site at Waveridge Sands, Frampton Sands and The Noose are used as safe refuge areas when the birds are disturbed.

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	○ Unimpeded sightlines at feeding and roosting sites - Bewick's swan require unrestricted views >500m to allow early detection of predators when feeding and roosting. ▪ **Saltmarsh communities**: ○ Habitat extent - The birds feed on the saltmarsh and the transition from saltmarsh to coastal grazing marsh in front of the sea defences in the upper estuary at The Dumbles, where areas of the high marsh are mainly affected only by brackish water during tidal inundation. ○ Vegetation characteristics - Bewick's swan graze on a range of 'soft' meadow grasses such as *Agrostis stolonifera* and *Alopecurus geniculatus* found in wet meadows which are outwith the European marine site boundary. ○ Unimpeded sightlines at feeding and roosting sites - Bewick's swan require unrestricted views >500m to allow early detection of predators when feeding and roosting. **Key supporting habitats for populations of regularly occurring migratory species and assemblage of waterfowl:** ▪ **Intertidal mudflats and sandflats:** ○ Habitat extent - Intertidal mudflats and sandflats and their communities are important habitats as they provide both roosting and feeding areas. The European white-fronted geese roost at night on estuarine sandbanks and usually fly less than 10km to the daytime feeding grounds. Therefore conservation of traditional roosting sites is necessary to enable the population to exploit potential feeding habitats. ○ Food availability - Most of the waders and waterfowl within the assemblage including the internationally important regularly occurring migratory birds feed on invertebrates within and on the sediments. ○ Unimpeded sightlines at feeding and roosting sites - Waterfowl require unrestricted views >500m to allow early detection of predators when feeding and roosting. ▪ **Saltmarsh**:

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	○ Habitat extent - Saltmarsh and their communities are important habitats as they provide both roosting and feeding areas. Upper and lower saltmarsh provide important feeding and roosting areas for the internationally important migratory birds throughout the estuary. ○ Food availability - The saltmarshes provide a rich feeding habitat for redshank and shelduck, which feed on invertebrate species in the sediments, such as the mudsnail Hydrobia. The European white-fronted geese graze on a range of saltmarsh grasses and herbs such as common saltmarsh grass Puccinellia maritime and sea barley Hordeum marinum. The birds feed on the saltmarsh and the transition to coastal grazing marsh in front of the sea defences in the upper estuary and particularly at the The Dumbles. ○ Vegetation characteristics - Vegetation of <10 cm is required throughout areas used by roosting waders. This is managed by grazing. ○ Unimpeded sightlines at feeding and roosting sites - Waterfowl require unrestricted views >500m to allow early detection of predators when feeding and roosting. The saltmarshes also have an important function providing a safe haven from the tides that flood the mudflats twice a day. The low-growing dense vegetation provides a suitable roosting habitat for redshank and dunlin, which prefer to roost on areas of short vegetation ensuring good visibility. ▪ **Shingle and rocky shore:** ○ Habitat extent - the shingle and rocks in the estuary provide feeding areas for dunlin and redshank and some limited foraging at high tide. It is also provides important roost sites at high tide particularly for the dunlin and redshank. Many of the rocks are off shore and are therefore generally free from human disturbance. These include Guscar Rocks in the upper reaches, Blackstone Rocks at Clevedon and Stert Island in Bridgwater Bay. ○ Food availability - see above. ○ Unimpeded sightlines at feeding and roosting sites - Waterfowl require unrestricted views >500m to allow early detection of predators when feeding and roosting.

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	▪ **Wet coastal grazing marsh, improved grassland and open standing waters** - these supporting habitats lie outside the European marine site boundary but within the SPA. They provide key areas for feeding and roosting for all the migratory species particularly at high tide. **Key environmental conditions for the supporting habitats:** ▪ **Hydrodynamic and sedimentary regime** - the tidal range in the Severn Estuary is the second-highest in the world and the scouring of the seabed and strong tidal streams result in natural erosion of the habitats and the presence of high sediment loads. ▪ **Maintain suitable distance between the site and development** - to allow for managed retreat of intertidal habitats and avoid coastal squeeze. **Other key conditions:** ▪ **Manage/restrict public access** - at certain times of the year. Significant disturbance attributable to human activities can result in reduced food intake and/or increased energy expenditure. ▪ **Maintain levels of prey.** Maps showing supporting habitats of the Severn Estuary SPA can be found on the CCW Website.

<table>
<tr><td>Site Name: Severn Estuary
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51 13 29 N
03 02 57 W
JNCC Site Code: UK9015022
Size: 24662.98
Designation: SPA</td><td colspan="6">Habitats Regulations Assessment: Data Proforma</td></tr>
<tr><td>SPA Condition Assessment</td><td colspan="6">Severn Estuary SSSI condition summary[19] (compiled 09 April 2008).
<table><tr><th>% Area meeting PSA* target</th><th>% Area favourable</th><th>% Area unfavourable recovering</th><th>% Area unfavourable no change</th><th>% Area unfavourable declining</th><th>% Area destroyed / part destroyed</th></tr><tr><td>95.71%</td><td>95.71%</td><td>0.00%</td><td>2.44%</td><td>1.85%</td><td>0.00%</td></tr></table>*PSA target - The Government's Public Service Agreement (PSA) target to have 95% of the SSSI area in favourable or recovering condition by 2010.</td></tr>
<tr><td>Vulnerabilities (includes existing pressures and trends)</td><td colspan="6">Internationally important populations of regularly occurring Annex 1 species:

▪ Physical loss of supporting habitats through removal - The physical loss of areas of intertidal habitats may be caused directly through change of land use or indirectly as a consequence of changes to sedimentation processes (e.g. coastal defences) as well as via the effects of smothering by artificial structures (e.g. jetties) or the disposal of spoils. Activities or developments resulting in physical loss of the intertidal supporting habitats are likely to reduce the availability of feeding and roosting habitat and thus be detrimental to the favourable condition of the SPA interest features including the Annex 1 species, Bewick's swan. The intertidal mudflats and sandflats and the saltmarsh are highly sensitive to removal by land reclamation and barrage construction. Information provided by NE and CCW states that large areas of the European marine site are not currently under threat, however when combined with a high level of sensitivity this leads to a moderate vulnerability.</td></tr>
</table>

[19] Natural England SSSI condition summary. Available [online]: http://www.english-nature.org.uk/special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=1002284

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	▪ **Noise or visual disturbance** - Overwintering birds are disturbed by sudden movements and sudden noises. This can displace the birds from their feeding grounds. Disturbance can prevent the birds from feeding and in response they either a) decrease their energy intake at their present (disturbed) feeding site through displacement activity, or b) move to an alternative less favoured feeding site. Such a response affects energy budgets and thus survival. There is intermittent disturbance from both the landward and seaward side of the site. Bewick's swans are mainly affected by disturbance from the landward side and any increase in disturbance should be avoided. At present NE and CCW assess that the Annex 1 species are moderately vulnerable to noise and visual disturbance on the intertidal mudflats and sandflats and highly vulnerable to this category of operation on the saltmarsh. ▪ **Contamination by synthetic and/or non-synthetic toxic compounds** - Waterfowl are subject to the accumulation of toxins through the food chain or through direct contact with toxic substances when roosting or feeding. Their ability to feed can also be affected by the abundance or change in palatability of their prey caused by toxic contamination. At the moment there is no evidence to show that this is the case, but the estuary is vulnerable to oil spills and there is a continuous discharge of toxins into the estuary, some of which bind to the sediments. NE and CCW identify this is an area which requires further assessment. They also identify Bewick's swans as currently moderately vulnerable to toxic contamination. **Internationally important waterfowl assemblage including populations of regularly occurring migratory species:** ▪ **Physical loss through removal** - The physical loss of areas of intertidal habitats may be caused directly through change of land use or indirectly as a consequence of changes to sedimentation processes (e.g. coastal defences) as well as via the effects of smothering by artificial structures (e.g. jetties) or the disposal of spoils. Eelgrass beds are being affected by siltation due to changes in sediment movement after construction of the Second Severn Crossing which has resulted in smothering. Activities or developments

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	resulting in physical loss of the intertidal supporting habitats are likely to reduce the availability of food and roosting habitat and thus be detrimental to the favourable condition of the SPA interest features including all the migratory species and waterfowl assemblage. All three supporting habitats are highly sensitive to removal by land reclamation and barrage construction. Information provided by NE and CCW states that large areas of the European marine site are not currently under threat, however when combined with a high level of sensitivity this leads to a moderate vulnerability. ▪ **Damage by abrasion or selective extraction** - Saltmarsh may be physically damaged from overgrazing or eroded when boats are moored on it and when paths are worn through it to reach moored boats on foot or via vehicles. Currently all supporting habitats are considered to be moderately vulnerable to abrasion. Intertidal habitats are highly sensitive to damage by direct and indirect effects of aggregate dredging. The intertidal mudflats and sandflats and the shingle and rocky shore are therefore considered by NE and CCW to be highly vulnerable to selective extraction. ▪ **Noise or visual disturbance** - Overwintering birds are disturbed by sudden movements and sudden noises. This can have the effect of displacing the birds from their feeding grounds. Disturbance can prevent the birds from feeding and in response they either a) decrease their energy intake at their present (disturbed) feeding site through displacement activity, or b) move to an alternative less favoured feeding site. Such a response affects energy budgets and thus survival. There is intermittent disturbance to the internationally important migratory species and the waterfowl assemblage from both the landward and seaward side of the site which has increased in recent years, due to the estuary becoming more populated and the development of all weather recreational pursuits. All supporting habitats are currently highly vulnerable to noise and visual disturbance. ▪ **Contamination by synthetic and/or non-synthetic toxic compounds** - Waterfowl are subject to the accumulation of toxins through the food chain or through direct contact with toxic substances when

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	roosting or feeding. Their ability to feed can also be affected by the abundance or change in palatability of their prey caused by toxic contamination. At the moment there is no evidence to show that this is the case on the Severn Estuary, but the estuary is vulnerable to oil spills and there is a continuous discharge of toxins into the estuary, some of which bind to the sediments. NE and CCW identify this is an area which requires further assessment. The intertidal mudflats and sandflats and the saltmarsh are currently highly vulnerable to the introduction of synthetic and non-synthetic compounds. ▪ **Changes in nutrient and/or organic loading** - Changes in organic or nutrient loading can change the species composition of the plants on the saltmarsh and thus the structure of the sward. Increases in nutrients can also cause excessive algal growth on the mudflats, denying the birds access to their invertebrate prey and changing the invertebrate species composition in the sediment. Though the water quality has been improved in recent years there are still local areas of concern and any increase in nutrient loading should be avoided. At present the intertidal mudflats and sandflats are moderately vulnerable to this category of operation. ▪ **Biological disturbance through the selective extraction of species** - Wildfowling is carried out all around the estuary. NE and CCW have not established that it has a detrimental effect on the overall bird populations but state that wildfowling needs to be exercised in a managed and sustainable manner preferably by a British Association of Shooting and Conservation (BASC) affiliated association, applying the BASC wildfowlers code of conduct. Bait digging is also carried out around the estuary. If too large an area is regularly dug over, it can change the availability of prey in the sediment as the area needs a period of recovery and recolonisation. The removal of strandline vegetation by beach cleaning removes an important habitat for invertebrates, as well as many of the invertebrates themselves, reducing the quantity and variety of prey available to the birds. Much of the saltmarsh is managed by grazing and changes in management can alter the availability of prey and suitability of roosting sites. The saltmarsh is currently highly vulnerable to the selective extraction of species.

Site Name: Severn Estuary **Location (Lat & Long):** **51 13 29 N** **03 02 57 W** **JNCC Site Code: UK9015022** **Size: 24662.98** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
Landowner/ Management Responsibility	▪ N/A
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 significance of the potential impacts of the indicative route in the Preferred Strategy (either alone or in-combination with other plans and projects) will be considered when a more detailed scheme is available. An appropriate assessment may be required for the scheme. HRA Screening of the Torfaen Local Development Plan (2006-2021) January 2008. http://www.torfaen.gov.uk/EnvironmentAndPlanning/Planning/ForwardPlanning/Publications/HabitatsRegulationAssessment.pdf ▪ It is likely that an increase of 7000 dwellings in Torfaen and associated development will in some way impact upon the site. It is likely however that the potential impact will be as a result of in-combination effects with other implemented plans and programmes in close proximity to the Severn Estuary. 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 ▪ 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, 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

Site Name: Severn Estuary Location (Lat & Long): 51 13 29 N 03 02 57 W JNCC Site Code: UK9015022 Size: 24662.98 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	Strategy to ascertain and mitigate against any likely significant effects to the SPA, cSAC, RAMSAR. HRA & AA of the Wales Spatial Plan Update June 2008. http://wales.gov.uk/about/strategy/spatial/hra/download/?lang=en ▪ The HRA Screening concludes that the WSPU and other plans have the potential to give rise to adverse effects at this site. ▪ The AA states that it is not possible to predict in specific terms whether the WSPU would or would not give rise to significant adverse effects either alone or in combination with other plans/ strategies and projects upon specific European sites. However, it does identify that this site is likely to come under increasing risk of adverse in combination effects from transport infrastructure, urban and economic development and recreation and tourism as a result of the WSPU and English RSSs. The AA also identifies that in combination with the English RSSs the WSPU has the potential to have negative effects on water levels, flood protection and water quality issues, which could affect this site.

Ramsar Sites

Site Name: Severn Estuary **Location (Lat & Long):** **51 13 29 N** **03 02 57 W** **JNCC Site Code: UK11081** **Size: 24662.98** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
Site Description	The Severn Estuary is the largest coastal plain estuary in the UK with extensive mudflats and sandflats, rocky shore platforms, shingle and islands. Saltmarsh fringes the coast, backed by grazing marsh with freshwater and occasional brackish ditches. The estuary's classic funnel shape, unique in the UK, is a factor causing the Severn to have the second highest tidal range in the world (after the Bay of Fundy in Canada) at more than 12 meters. This tidal regime results in plant and animal communities typical of the extreme physical conditions of strong flows, mobile sediments, changing salinity, high turbidity and heavy scouring. The resultant low diversity invertebrate communities, that frequently include populations of ragworms, lugworms and other invertebrates in high densities, form an important food source for passage and wintering birds. The site is important in the spring and autumn migration periods for waders moving along the west coast of Europe, as well as in winter for large numbers of waterbirds including swans, geese, ducks and waders. These bird populations are regarded as internationally important. Glassworts and annual sea-blite colonise the open mud, with beds of all three species of eelgrass *Zostera* occurring on more sheltered mud and sandbanks. Large expanses of common cord-grass also occur on the outer marshes. Heavily grazed saltmarsh fringes the estuary with a range of saltmarsh types present. The middle marsh sward is dominated by common saltmarsh-grass with typical associated species. In the upper marsh, red fescue and saltmarsh rush become more prominent. Areas of saltmarsh fringe the estuary, mostly grazed with a range of vegetation communities. There are gradual and stepped transitions between bare mudflat to upper marsh and grassland. Main vegetation types are: upper saltmarsh with *Festuca rubra* and *Juncus gerardii*; middle marsh dominated by *Puccinellia maritima* with *Glaux maritima* and *Triglochin maritima*; dense monocultures of *Spartina anglica* at the edge of the mudflats-brackish pools and depressions with *Phragmites australis* and *Bolboschoenus maritimus*.

Site Name: Severn Estuary **Location (Lat & Long):** **51 13 29 N** **03 02 57 W** **JNCC Site Code: UK11081** **Size: 24662.98** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
Qualifying Features	Ramsar criterion 1 ▪ Immense tidal range (second-largest in world) creating diversity of physical environment and biological communities. Ramsar criterion 3 ▪ Due to unusual estuarine communities, reduced diversity and high productivity. Ramsar criterion 4 ▪ This site is important for the run of migratory fish between sea and river via estuary. Species include Salmon *Salmo salar*, sea trout *S. trutta*, sea lamprey *Petromyzon marinus*, river lamprey *Lampetra fluviatilis*, allis shad *Alosa alosa*, twaite shad *A. fallax*, and eel *Anguilla anguilla*. It is also of particular importance for migratory birds during spring and autumn. Ramsar criterion 5 Species with peak counts in winter: ▪ 70919 waterfowl Ramsar criterion 6 Species with peak counts in winter: ▪ Bewick's swan ▪ Greater white-fronted goose ▪ Common shelduck ▪ Gadwall

Site Name: Severn Estuary Location (Lat & Long): 51 13 29 N 03 02 57 W JNCC Site Code: UK11081 Size: 24662.98 Designation: Ramsar	Habitats Regulations Assessment: Data Proforma
	▪ Dunlin ▪ Common redshank Ramsar criterion 8 ▪ The fish of the whole estuarine and river system is one of the most diverse in Britain, with over 110 species recorded. Salmon *Salmo salar*, sea trout *S. trutta*, sea lamprey *Petromyzon marinus*, river lamprey *Lampetra fluviatilis*, allis shad *Alosa alosa*, twaite shad *A. fallax*, and eel *Anguilla Anguilla* use the Severn Estuary as a key migration route to their spawning grounds in the many tributaries that flow into the estuary. The site is important as a feeding and nursery ground for many fish species particularly allis shad Alosa alosa and twaite shad *A. fallax* which feed on mysid shrimps in the salt wedge.
Conservation Objectives	**Ramsar interest feature 1: Estuaries** The conservation objective for the "estuaries" feature of the Severn Estuary Ramsar Site is to maintain the feature in favourable condition, as defined by the conservation objective for the SAC "estuaries" feature", in so far as these objectives are applicable to the area designated as Ramsar Site. **Ramsar interest feature 2: Assemblage of migratory fish species** The conservation objective for the "assemblage of migratory fish species" feature of the Severn Estuary Ramsar Site is to maintain the feature in favourable condition, as defined below: The feature will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met: i. the migratory passage of both adults and juveniles of the assemblage of migratory fish species through

Site Name: Severn Estuary Location (Lat & Long): 51 13 29 N 03 02 57 W JNCC Site Code: UK11081 Size: 24662.98 Designation: Ramsar	Habitats Regulations Assessment: Data Proforma
	the Severn Estuary between the Bristol Channel and any of their spawning rivers is not obstructed or impeded by physical barriers, changes in flows, or poor water quality; ii. the size of the populations of the assemblage species in the Severn Estuary and the rivers which drain into it, is at least maintained and is at a level that is sustainable in the long term; iii. the abundance of prey species forming the principle food resources for the assemblage species within the estuary, is maintained. iv. Toxic contaminants in the water column and sediment are below levels which would pose a risk to the ecological objectives described above. **Ramsar interest feature 3: Internationally important populations of waterfowl : Bewick's swan** The conservation objective for the "Bewick's swan" feature of the Severn Estuary Ramsar Site is to maintain the feature in favourable condition, as defined by the conservation objective for the SPA "Bewick's swan " feature. **Ramsar interest feature 4: Internationally important populations of waterfowl: European white-fronted goose** The conservation objective for the "European white-fronted goose" feature of the Severn Estuary Ramsar Site is to maintain the feature in favourable condition, as defined by the conservation objective for the SPA "wintering European white-fronted goose" feature. **Ramsar interest feature 5: Internationally important populations of waterfowl: dunlin** The conservation objective for the "dunlin" feature of the Severn Estuary Ramsar Site is to maintain the feature in favourable condition, as defined by the conservation objective for the SPA "wintering dunlin" feature.

Site Name: Severn Estuary **Location (Lat & Long):** **51 13 29 N** **03 02 57 W** **JNCC Site Code: UK11081** **Size: 24662.98** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	Ramsar interest feature 6: Internationally important populations of waterfowl: redshank The conservation objective for the "redshank" feature of the Severn Estuary Ramsar Site is to maintain the feature in favourable condition, as defined by the conservation objective for the SPA "wintering redshank" feature. **Ramsar interest feature 7: Internationally important populations of waterfowl: shelduck** The conservation objective for the "shelduck" feature of the Severn Estuary Ramsar Site is to maintain the feature in favourable condition, as defined by the conservation objective for the SPA "wintering shelduck" feature. **Ramsar interest feature 8: Internationally important populations of waterfowl: gadwall** The conservation objective for the "gadwall" feature of the Severn Estuary Ramsar Site is to maintain the feature in favourable condition, as defined by the conservation objective for the SPA "wintering gadwall" feature. **Ramsar interest feature 9: Internationally important assemblage of waterfowl** The conservation objective for the "internationally important assemblage of waterfowl" feature of the Severn Estuary Ramsar Site is to maintain the feature in favourable condition, as defined by the conservation objective for the SPA "internationally important assemblage of waterfowl" feature - with special reference to the individual species listed and their population figures.
Component SSSIs	▪ Sully Island SSSI

Site Name: Severn Estuary **Location (Lat & Long):** **51 13 29 N** **03 02 57 W** **JNCC Site Code: UK11081** **Size: 24662.98** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	▪ Steep Holm SSSI ▪ Bridgwater Bay SSSI ▪ Flat Holm SSSI ▪ Severn Estuary SSSI ▪ Severn Estuary SSSI ▪ Flat Holm SSSI ▪ Upper Severn Estuary SSSI ▪ Bridgwater Bay SSSI ▪ Penarth Coast SSSI ▪ Steep Holm SSSI ▪ Sully Island SSSI ▪ Upper Severn Estuary SSSI
Key Environmental Conditions (factors that maintain site integrity	**Key supporting habitats for the Berwick's swan:** ▪ **Intertidal mudflats and sandflats**: ○ Habitat extent - The focal area for the Bewick's swans is the upper Severn Estuary in the vicinity of the New Grounds, Slimbridge area. The mudflats and sandflats exposed as the tide falls where the estuary widens in the upper reaches of the site at Waveridge Sands, Frampton Sands and The Noose are used as safe refuge areas when the birds are disturbed. ○ Unimpeded sightlines at feeding and roosting sites - Bewick's swan require unrestricted views >500m to allow early detection of predators when feeding and roosting.

Site Name: Severn Estuary Location (Lat & Long): 51 13 29 N 03 02 57 W JNCC Site Code: UK11081 Size: 24662.98 Designation: Ramsar	Habitats Regulations Assessment: Data Proforma
	▪ **Saltmarsh communities**: ○ Habitat extent - The birds feed on the saltmarsh and the transition from saltmarsh to coastal grazing marsh in front of the sea defences in the upper estuary at The Dumbles, where areas of the high marsh are mainly affected only by brackish water during tidal inundation. ○ Vegetation characteristics - Bewick's swan graze on a range of 'soft' meadow grasses such as *Agrostis stolonifera* and *Alopecurus geniculatus* found in wet meadows which are outwith the European marine site boundary. ○ Unimpeded sightlines at feeding and roosting sites - Bewick's swan require unrestricted views >500m to allow early detection of predators when feeding and roosting. **Key supporting habitats for populations of regularly occurring migratory species and assemblage of waterfowl** ▪ **Intertidal mudflats and sandflats:** ○ Habitat extent - Intertidal mudflats and sandflats and their communities are important habitats as they provide both roosting and feeding areas. The European white-fronted geese roost at night on estuarine sandbanks and usually fly less than 10km to the daytime feeding grounds. Therefore conservation of traditional roosting sites is necessary to enable the population to exploit potential feeding habitats. ○ Food availability - Most of the waders and waterfowl within the assemblage including the internationally important regularly occurring migratory birds feed on invertebrates within and on the sediments. ○ Unimpeded sightlines at feeding and roosting sites - Waterfowl require unrestricted views >500m to allow early detection of predators when feeding and roosting. ▪ **Saltmarsh**: ○ Habitat extent - Saltmarsh and their communities are important habitats as they provide both roosting and feeding areas. Upper and lower saltmarsh provide important feeding and roosting areas for the internationally important migratory birds throughout the estuary.

Site Name: Severn Estuary Location (Lat & Long): 51 13 29 N 03 02 57 W JNCC Site Code: UK11081 Size: 24662.98 Designation: Ramsar	Habitats Regulations Assessment: Data Proforma
	○ Food availability - The saltmarshes provide a rich feeding habitat for redshank and shelduck, which feed on invertebrate species in the sediments, such as the mudsnail Hydrobia. The European white-fronted geese graze on a range of saltmarsh grasses and herbs such as common saltmarsh grass Puccinellia maritime and sea barley Hordeum marinum. The birds feed on the saltmarsh and the transition to coastal grazing marsh in front of the sea defences in the upper estuary and particularly at the The Dumbles. ○ Vegetation characteristics - Vegetation of <10 cm is required throughout areas used by roosting waders. This is managed by grazing. ○ Unimpeded sightlines at feeding and roosting sites - Waterfowl require unrestricted views >500m to allow early detection of predators when feeding and roosting. The saltmarshes also have an important function providing a safe haven from the tides that flood the mudflats twice a day. The low-growing dense vegetation provides a suitable roosting habitat for redshank and dunlin, which prefer to roost on areas of short vegetation ensuring good visibility. ▪ **Shingle and rocky shore:** ○ Habitat extent - the shingle and rocks in the estuary provide feeding areas for dunlin and redshank and some limited foraging at high tide. It is also provides important roost sites at high tide particularly for the dunlin and redshank. Many of the rocks are off shore and are therefore generally free from human disturbance. These include Guscar Rocks in the upper reaches, Blackstone Rocks at Clevedon and Stert Island in Bridgwater Bay. ○ Food availability - see above. ○ Unimpeded sightlines at feeding and roosting sites - Waterfowl require unrestricted views >500m to allow early detection of predators when feeding and roosting. ▪ **Wet coastal grazing marsh, improved grassland and open standing waters** - these supporting habitats lie outside the European marine site boundary but within the SPA. They provide key areas for feeding and roosting for all the migratory species particularly at high tide.

Site Name: Severn Estuary **Location (Lat & Long):** **51 13 29 N** **03 02 57 W** **JNCC Site Code: UK11081** **Size: 24662.98** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	Key environmental conditions for the supporting habitats: ▪ **Hydrodynamic and sedimentary regime** - the tidal range in the Severn Estuary is the second-highest in the world and the scouring of the seabed and strong tidal streams result in natural erosion of the habitats and the presence of high sediment loads. ▪ **Maintain suitable distance between the site and development** - to allow for managed retreat of intertidal habitats and avoid coastal squeeze. **Other key conditions:** ▪ **Manage/restrict public access** - at certain times of the year. Significant disturbance attributable to human activities can result in reduced food intake and/or increased energy expenditure. ▪ **Maintain levels of prey.**
Ramsar Condition Assessment	▪ N/A
Vulnerabilities (includes existing pressures and trends)	▪ **Physical loss of supporting habitats through removal** - The physical loss of areas of intertidal habitats may be caused directly through change of land use or indirectly as a consequence of changes to sedimentation processes (e.g. coastal defences) as well as via the effects of smothering by artificial structures (e.g. jetties) or the disposal of spoils. Activities or developments resulting in physical loss of the intertidal supporting habitats are likely to reduce the availability of feeding and roosting habitats. The intertidal mudflats and sandflats and the saltmarsh are highly sensitive to removal by land reclamation and barrage construction.

Site Name: Severn Estuary Location (Lat & Long): 51 13 29 N 03 02 57 W JNCC Site Code: UK11081 Size: 24662.98 Designation: Ramsar	Habitats Regulations Assessment: Data Proforma
	Information provided by NE and CCW states that large areas of the European marine site are not currently under threat, however when combined with a high level of sensitivity this leads to a moderate vulnerability. ▪ **Noise or visual disturbance** - Overwintering birds are disturbed by sudden movements and sudden noises. This can displace the birds from their feeding grounds. Disturbance can prevent the birds from feeding and in response they either a) decrease their energy intake at their present (disturbed) feeding site through displacement activity, or b) move to an alternative less favoured feeding site. Such a response affects energy budgets and thus survival. There is intermittent disturbance to the internationally important migratory species and the waterfowl assemblage from both the landward and seaward side of the site which has increased in recent years, due to the estuary becoming more populated and the development of all weather recreational pursuits. Bewick's swans are mainly affected by disturbance from the landward side and any increase in disturbance should be avoided. All supporting habitats are currently highly vulnerable to noise and visual disturbance. ▪ **Contamination by synthetic and/or non-synthetic toxic compounds** - Waterfowl are subject to the accumulation of toxins through the food chain or through direct contact with toxic substances when roosting or feeding. Their ability to feed can also be affected by the abundance or change in palatability of their prey caused by toxic contamination. At the moment there is no evidence to show that this is the case, but the estuary is vulnerable to oil spills and there is a continuous discharge of toxins into the estuary, some of which bind to the sediments. NE and CCW identify this is an area which requires further assessment. The intertidal mudflats and sandflats and the saltmarsh are currently highly vulnerable to the introduction of synthetic and non-synthetic compounds. ▪ **Damage by abrasion or selective extraction** - Saltmarsh may be physically damaged from overgrazing or eroded when boats are moored on it and when paths are worn through it to reach moored boats on foot or via vehicles. Currently all supporting habitats are considered to be moderately vulnerable to abrasion.

Site Name: Severn Estuary Location (Lat & Long): 51 13 29 N 03 02 57 W JNCC Site Code: UK11081 Size: 24662.98 Designation: Ramsar	Habitats Regulations Assessment: Data Proforma
	Intertidal habitats are highly sensitive to damage by direct and indirect effects of aggregate dredging. The intertidal mudflats and sandflats and the shingle and rocky shore are therefore considered by NE and CCW to be highly vulnerable to selective extraction. ▪ **Changes in nutrient and/or organic loading** - Changes in organic or nutrient loading can change the species composition of the plants on the saltmarsh and thus the structure of the sward. Increases in nutrients can also cause excessive algal growth on the mudflats, denying the birds access to their invertebrate prey and changing the invertebrate species composition in the sediment. Though the water quality has been improved in recent years there are still local areas of concern and any increase in nutrient loading should be avoided. At present the intertidal mudflats and sandflats are moderately vulnerable to this category of operation. ▪ **Biological disturbance through the selective extraction of species** - Wildfowling is carried out all around the estuary. NE and CCW have not established that it has a detrimental effect on the overall bird populations but state that wildfowling needs to be exercised in a managed and sustainable manner preferably by a British Association of Shooting and Conservation (BASC) affiliated association, applying the BASC wildfowlers code of conduct. Bait digging is also carried out around the estuary. If too large an area is regularly dug over, it can change the availability of prey in the sediment as the area needs a period of recovery and recolonisation. The removal of strandline vegetation by beach cleaning removes an important habitat for invertebrates, as well as many of the invertebrates themselves, reducing the quantity and variety of prey available to the birds. Much of the saltmarsh is managed by grazing and changes in management can alter the availability of prey and suitability of roosting sites. The saltmarsh is currently highly vulnerable to the selective extraction of species.
Landowner/ Management Responsibility	▪ N/A

Site Name: Severn Estuary **Location (Lat & Long):** **51 13 29 N** **03 02 57 W** **JNCC Site Code: UK11081** **Size: 24662.98** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
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 significance of the potential impacts of the indicative route in the Preferred Strategy (either alone or in-combination with other plans and projects) will be considered when a more detailed scheme is available. An appropriate assessment may be required for the scheme. HRA Screening of the Torfaen Local Development Plan (2006-2021) January 2008. http://www.torfaen.gov.uk/EnvironmentAndPlanning/Planning/ForwardPlanning/Publications/HabitatsRegulationAssessment.pdf ▪ It is likely that an increase of 7000 dwellings in Torfaen and associated development will in some way impact upon the site. It is likely however that the potential impact will be as a result of in-combination effects with other implemented plans and programmes in close proximity to the Severn Estuary. 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 ▪ 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, 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. HRA & AA of the Wales Spatial Plan Update June 2008.

Site Name: Severn Estuary **Location (Lat & Long):** **51 13 29 N** **03 02 57 W** **JNCC Site Code: UK11081** **Size: 24662.98** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	http://wales.gov.uk/about/strategy/spatial/hra/download/?lang=en ▪ The HRA Screening concludes that the WSPU and other plans have the potential to give rise to adverse effects at this site. ▪ The AA states that it is not possible to predict in specific terms whether the WSPU would or would not give rise to significant adverse effects either alone or in combination with other plans/ strategies and projects upon specific European sites. However, it does identify that this site is likely to come under increasing risk of adverse in combination effects from transport infrastructure, urban and economic development and recreation and tourism as a result of the WSPU and English RSSs. The AA also identifies that in combination with the English RSSs the WSPU has the potential to have negative effects on water levels, flood protection and water quality issues, which could affect this site.

Appendix 2: Plans, Programmes & Projects Review

National

National	
People, Places, Futures: The Wales Spatial Plan (update) 2008	
Plan Type	**Regional Spatial Strategy**
Plan Owner/ Competent Authority	**Welsh Assembly**
Currency	**Adopted 2004**
Region/Geographic Coverage	**Wales**
Sector	**Planning**
Related work HRA/AA	**HRA and AA of the Wales Spatial Plan Update (June 2008)**
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	▪ 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/

National	
People, Places, Futures: The Wales Spatial Plan (update) 2008	
Wales does not undermine this housing market. There should also be a targeted action to secure a supply of affordable 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.	adjacent to Natura 2000 sites. ▪ Atmospheric pollution generated as a result of housing, employment and transport growth.

National	
Property Strategy for Employment in Wales 2004-2008	
Plan Type	**Employment Strategy**
Plan Owner/ Competent Authority	**Welsh Development Agency**
Currency	**2004-2008**
Region/Geographic Coverage	**Wales**
Sector	**Planning**
Related work HRA/AA	**N/A**
Document Details	**Potential impacts that could cause 'in-combination' effects**

National	
Property Strategy for Employment in Wales 2004-2008	

The Property Strategy for Employment in Wales 2004-2008 sets out the Welsh Assembly Government's approach for employment sites and buildings across Wales. The document aims to provide a framework to ensure that Wales can provide high quality employment sites and premises in the right locations for inward investors and indigenous businesses.
 	
Premier Business Park
(1) - focused on M4/capital of Wales
One park is needed for Wales as a whole, with a land requirement of some 100-300 acres (40-121 hectares). The current lack of such a premier business park is a major weakness in Wales' current property armoury and investor offer. Only the "Greater Cardiff" area can in principle meet the criteria set out in the strategy.
 	
Business Parks
(6) - 2/3 on M4 Corridor.
 	
Strategic Sites
(15/20) -concentrated on large centres of population with proximity to the primary road network.
 	
Strategic Mixed Use Sites
(5-10) - to complement the business parks and strategic sites network.
 	
Special Category Sites
(1) - but with other sites having 'key' sector roles
 	
City/Town Centre Office Sites
	▪ Direct loss of habitat through development - There are 4 SACs in close proximity to the M4, these are:
	  ○ River Usk SAC;
	  ○ Cardiff Beech Woods SAC;
	  ○ Cefn Cribwr Grasslands SAC; and
	  ○ Kenfig SAC.
	▪ Employment growth may lead to increased transport movements.
	▪ New development requires 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 businesses has the potential to increase pollution, and introduce land take issues.
	▪ Recreation pressures may result from developments near/ adjacent to Natura 2000 sites.
	▪ Atmospheric pollution generated as a result of employment and transport growth.

National	
Property Strategy for Employment in Wales 2004-2008	
Extensive network based on the main centres of population and existing critical mass, supplemented by smaller scale opportunities The following areas are recommended for early consideration: - major settlements ▪ Cardiff/Cardiff Bay ▪ Swansea ▪ Newport ▪ Wrexham - other settlements ▪ Caerphilly ▪ Cwmbran ▪ Merthyr Tydfil ▪ Carmarthen ▪ Newtown ▪ Bangor ▪ Colwyn Bay **Industrial Estates/Local Sites** 50-70 – to serve essentially sub-regional and local markets.	

National	
One Wales: Connecting the Nation. The Wales Transport Strategy 2008	
Plan Type	**Transport**
Plan Owner/ Competent Authority	**Welsh Assembly Government - Transport Wales**
Currency	**2008**
Region/Geographic Coverage	**Wales**
Sector	**Transport**
Related work HRA/AA	**N/A**
Document Details	**Potential impacts that could cause 'in-combination' effects**
The goal of One Wales: Connecting the nation is to promote sustainable transport= networks that safeguard the environment while strengthening our country's economic and social life. Our transport strategy identifies a series of high-level outcomes and sets out the steps to their delivery. One Wales: Connecting the nation long-term outcomes: **Social** ▪ Improve access to healthcare ▪ Improve access to education, training and lifelong learning ▪ Improve access to shopping and leisure facilities ▪ Encourage healthy lifestyles ▪ Improve the actual and perceived safety of travel **Economic** ▪ Improve access to employment opportunities ▪ Improve connectivity within Wales and internationally ▪ Improve the efficient, reliable and sustainable movement of people ▪ Improve the efficient, reliable and sustainable movement of freight	▪ 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	
One Wales: Connecting the Nation. The Wales Transport Strategy 2008	
▪ Improve access to visitor attractions **Environmental** ▪ Increase the use of more sustainable materials ▪ Reduce the contribution of transport to greenhouse gas emissions ▪ Adapt to the impacts of climate change ▪ Reduce the contribution of transport to air pollution and other harmful emissions ▪ Improve the impact of transport on the local environment ▪ Improve the impact of transport on our heritage ▪ Improve the impact of transport on biodiversity The strategic priorities to focus work cover: ▪ Reducing greenhouse gas emissions and other environmental impacts; ▪ Integrating local transport; ▪ Improving access between key settlements and sites; ▪ Enhancing international connectivity; and ▪ Increasing safety and security.	

National	
National Transport Plan Wales, 2009	
Plan Type	**Regional Spatial Strategy**
Plan Owner/ Competent Authority	**Welsh Assembly**
Currency	**2009**
Region/Geographic Coverage	**Wales**

National	
National Transport Plan Wales, 2009	
Sector	**Planning**
Related work HRA/AA	**Habitats Regulations Assessment Statement to Inform an Appropriate Assessment, 2009**
Document Details	**Potential impacts that could cause 'in-combination' effects**
The plan sets out the detail of how the Wales Transport Strategy One Wales: Connecting the Nation will be delivered over the next five years. Aim is to maximise the positive benefits of all plans and programmes across the One Wales agenda and strengthen the development of our sustainable transport system. **Interventions that will require action at an all-Wales level.** **Sustainable travel towns** Aim - To continue to establish sustainable travel towns across Wales. **Integrating the impact of travel into wider decision making** Aim - To improve the planning and policy development processes to ensure stronger integration between transport and key services/facilities. **Increasing healthy and sustainable travel choices** Aim - To make it easier for people to be less reliant on the private car and to use public transport, walking and cycling more frequently. **Improving local bus services** Aim - To improve the quality and integration of local bus services.	**Overarching Development Pressures** ▪ Potential for habitat fragmentation and disturbance issues. ▪ Potential to impact surface and groundwater. ▪ Potential for an adverse impact on air quality **Policy Q1: Sites of European Importance** Proposals for development which may have an unacceptable impact on a European Site or potential European Site will not be permitted unless: i. the proposed development is directly connected with or necessary for the protection, enhancement and positive management of the site for conservation purposes; ii. the proposed development will not have an unacceptable impact on the conservation objectives associated with the site or the integrity of the site; iii. where the site supports priority habitats and/or species, there are reasons of public health or safety why the development should proceed; iv. where the site supports interests not identified as a priority, there are imperative reasons of overriding public interest why the development should proceed; and v. there is no alternative solution.

National	
National Transport Plan Wales, 2009	
Improving rail services Aim - To improve the provision of, and access to, rail services, including improvements for disabled people and vulnerable users, by 2014. **Improving access to key sites and services** Aim - To enable people to access key sites and services more sustainably, particularly where access is currently difficult. **Managing our road infrastructure** Aim - To operate, improve and maintain the trunk road network to meet our statutory obligations and deliver our strategic objectives. **Improving the safety of the road network** Aim - To continue to improve the safety of the road network, with special emphasis on reducing casualty rates of vulnerable users. **Improving the sustainability of freight transport** Aim - To improve the sustainability of freight movements, including supporting the modal shift of freight from road to rail where environmental, economic and social benefits can be achieved. **Improving the sustainability of transport infrastructure and reducing environmental effects** Aim - Use sustainable construction and maintenance methods to reduce the environmental effects of the transport infrastructure for which we are responsible	

National	
The Trunk Road Forward Programme, November 2009	
Plan Type	**Transport**
Plan Owner/ Competent Authority	**Welsh Assembly Government - Transport Wales**
Currency	**2009**
Region/Geographic Coverage	**Wales**
Sector	**Transport**
Related work HRA/AA	**N/A**
Document Details	**Potential impacts that could cause 'in-combination' effects**
Works identified in the 2008 reprioritisation of the Trunk Road Forward Programme which are brought forward into the 2009 document. **Phase 1 - High ranking and programmed to be ready to start between now and April 2011** ▪ A483 Four Crosses ▪ A470 Penloyn to Tan Lan, Llanrwst ▪ A487 Porthmadog, Minffordd, and Tremadog ▪ A470 Cwmbach to Newbridge ▪ A470 Alltmawr ▪ A470 Gelligemlyn ▪ A470 Maes yr Helmau to Cross Foxes ▪ A470 Pentrefelin to Bodnant West Lodge ▪ A40 Penblewin to Slebech ▪ A40 The Kell **Phase 2 - High ranking and programmed to be ready to start between April 2011 and April 2014** ▪ A470 Plas Maenan and Bodhyfryd ▪ A487 Caernarfon to Bontnewydd ▪ A470 Builth Wells	▪ 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. ▪ 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, November 2009	
▪ A483 Newtown ▪ A470 Rhayader ▪ A477 St Clears to Red Roses ▪ A465 Brynmawr to Tredegar ▪ A465 Gilwern to Brynmawr ▪ Cardiff International Airport Access ▪ New M4 - Magor to Castleton* * (Awaiting Business Case) **Phase 3 - High ranking but studies needed to identify best solutions to problems but unlikely to be ready to start before April 2014** ▪ A483 Llandeilo ▪ A470 Llanrwst ▪ A40 Llanddewi Velfrey to Penblewin ▪ A4042 Llanellen ▪ A465:A470 to Hirwaun ▪ A465 Dowlais Top to A470 ▪ A494 Drome Corner to Ewloe ▪ A55/A494 Ewloe Interchange ▪ A55 Ewloe to Northop ▪ A55 Abergwyngregyn to Tai'r Meibion ▪ A458 Buttington Cross to Wollaston Cross **On Hold - Problem identified but no ranking applied** ▪ A40 Abergavenny ▪ A470 Llandinam ▪ A470 Commins Coch ▪ A470 Llangurig to Wern Villa ▪ A483 Brynsadwrn ▪ A4042 Penperlleni ▪ A55 Climbing Lane Northop to Coed-y-Cra ▪ A458 Sylfaen to Cyfronydd	

National	
The Trunk Road Forward Programme, November 2009	
▪ A44 Llanbadarn Fawr ▪ A494 Ffynnon-y-Berth	

National	
Minerals Planning Policy Wales 2001	
Plan Type	**Minerals & Waste**
Plan Owner/ Competent Authority	**Welsh Assembly Government**
Currency	**2001**
Region/Geographic Coverage	**Wales**
Sector	**Minerals**
Related work 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	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	
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 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	

National	
Minerals Planning Policy Wales 2001	
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 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	
Minerals Planning Policy Wales 2001	

National	
Welsh Coastal Tourism Strategy 2008	
Plan Type	**Coastal Strategy**
Plan Owner/ Competent Authority	**Welsh Assembly Government**
Currency	**2008**
Region/Geographic Coverage	**Wales**
Sector	**Planning**
Related work HRA/AA	**N/A**
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 ▪ To continue to support the waterfront regeneration initiatives ▪ To consider the potential of additional or new berths at	▪ Direct loss of habitat through development - Severn Estuary SPA, Ramsar and SAC 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 2008	
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.	

National	
'Catching the Wave' - A watersports tourism strategy for Wales 2004	
Plan Type	**Tourism Strategy**
Plan Owner/ Competent Authority	**Welsh Assembly Government**
Currency	**2004 - 2010**
Region/Geographic Coverage	**Wales**
Sector	**Planning**
Related work HRA/AA	**N/A**
Document Details	**Potential impacts that could cause 'in-combination' effects**
The strategy is underpinned by a number of targets for 2010 including: ▪ to grow the number of domestic watersports trips and nights by 20% to just over one million trips representing around 5 million bed nights ▪ to grow the value of domestic watersports tourist spending by 40% to over £200 million ▪ to grow the numbers of trips taken by the higher spend overseas market by 50% and to increase overseas visitor spend by 40% to £15 million.	▪ Increased recreational pressure on the Severn Estuary, Ramsar and SAC. ▪ An increased level of watersports has the potential to increase diffuse levels of water pollution. ▪ There is also the potential of increased levels of disturbance on nesting birds.

Regional

Regional	
The South East Wales Regional Waste Plan 1st Revision September 2008	
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 HRA/AA	**N/A**
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 Preferred Options ranges from between 48 hectares to 108 hectares. The analysis of the potentially available land area on existing B2 (and similar) or major industry sites and B2 sites that have already been allocated in development plans has shown that in each Unitary Authority area for which data is available there is, at the current time, a clear surplus of developable land with a B2 (and similar) 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 729 developable hectares of land with a B2 (and similar) 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**	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 Regional Waste Plan 1st Revision September 2008	
areas of constraint, constituting areas that are unsuitable for 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: Regional Transport Plan 2009	
Plan Type	**Regional Transport Plan**
Plan Owner/ Competent Authority	**South East Wales Transport Alliance**
Currency	**2009**
Region/Geographic Coverage	**South East Wales Transport Alliance (SEWTA) region**
Sector	**Transport**
Related work HRA/AA	**N/A**
Document Details	**Potential impacts that could cause 'in-combination' effects**
The aim of this RTP is to improve regional transport in South East Wales and help deliver the social, economic and environmental objectives of the Wales Spatial Plan and the Wales Transport Strategy. The RTP vision is: A modern, accessible, integrated and sustainable transport system for South East Wales which increases opportunity, promotes prosperity for all and protects the environment; where walking, cycling, public transport, and sustainable freight provide real travel alternatives Sewta's priorities build on the RTP's vision. They tackle Sewta's main problems and they set the general direction of the RTP, as follows: 1. To improve access for all to services, facilities and employment, particularly by walking, cycling and public transport; 2. To increase the proportions of trips undertaken by walking, cycling and public transport;	▪ The key focus of the 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: Regional Transport Plan 2009	
3. Minimising demand on the transport system; 4. To develop an efficient, safe and reliable transport system with improved transport links between the 14 key settlements in South-East Wales and between South-East Wales and to the rest of Wales, the UK and Europe. 5. To provide a transport system that encourages healthy and active lifestyles. 6. To reduce significantly the emission of greenhouse gases and the impact of the transport system on local communities. 7. To ensure developments are accessible by sustainable transport and make sustainable transport and travel planning an integral component of regeneration schemes. 8. To make better use of the existing transport system The document identifies a number of specific core activities and interventions that according to SEWTA are absolutely critical to achieving its vision. 1. Developing innovative walking, cycling and Smarter Choices programmes 2. Continuing investment in the regional rail system 3. Improving the quality of bus services across the region. 4. Developing better public transport integration 5. Making better use of the regional road system "Three 'Strategic Opportunity Areas" (SOAs) have been identified. These areas are: ▪ Development linked to the dualling of the Heads of the Valleys Road (A465); ▪ The area around Llantrisant and North West Cardiff; and ▪ The development in the Vale of Glamorgan linked to the	

Regional	
South East Wales Transport Alliance: Regional Transport Plan 2009	
proposed St Athan military training academy. The RTP objectives are: Safety and security ▪ To reduce the number and severity of road traffic casualties. ▪ To improve actual and perceived levels of personal security when travelling. Connectivity and accessibility ▪ To improve access for all to employment opportunities, services, healthcare, education, tourism and leisure facilities ▪ To improve connectivity by sustainable transport between ▪ South-East Wales and the rest of Wales, the UK and Europe. Quality and efficiency ▪ To improve interchange within and between modes of transport. ▪ To improve the quality, efficiency and reliability of the transport system. ▪ To reduce traffic growth, traffic congestion and to make better use of the existing road system. Environment ▪ To achieve a modal shift towards more sustainable forms of transport for moving both people and freight. ▪ To reduce significantly the emission of greenhouse gases from transport. ▪ To reduce the impact of the transport system on the local street scene and the natural, built and historic environment.	

Regional	
South East Wales Transport Alliance: Regional Transport Plan 2009	
▪ To promote sustainable travel and to make the public more aware of the consequences of their travel choices on climate, the environment and health. Land use and regeneration ▪ To ensure developments in South East Wales are accessible by sustainable transport ▪ To make sustainable transport and travel planning an integral component of regeneration schemes.	

Regional	
SEWTA Rail Strategy Study Jan 2006	
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 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	▪ Improvements to the rail network could lead to a reduction in car use and improvements to air quality in the region.

Regional	
SEWTA Rail Strategy Study Jan 2006	
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 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.	

Regional	
Turning Heads... A Strategy for the Heads of the Valleys 2020	
Plan Type	**Regional Spatial Planning and Regeneration Strategy**
Plan Owner/ Competent Authority	**Welsh Assembly Government**
Currency	**June 2006**
Region/Geographic Coverage	**Heads of the Valleys covering parts of the administrative areas of (Rhondda Cynon Taf, Merthyr Tydfil, Caerphilly, Blaenau Gwent)**
Sector	**Planning/ Regeneration**
Related work HRA/AA	**N/A**
Document Details	**Potential impacts that could cause 'in-combination' effects**
Strategy set within context of Wales Spatial Plan - sets a shared vision for planning for the Heads of the Valleys. **Preferred Approach - Option A 'Developing Balanced Communities'** ▪ Mix strong employment opportunities with distinctive communities. ▪ Provide mix of housing, retail, leisure/ tourism. ▪ Exploit internal and external employment opportunities including along M4 corridor. Public Sector Investment for 2006-09 includes: ▪ Environment c£300m, including improvements to Merthyr Tydfil, Ebbw Vale, Bargoed, Abertillery, Blaenavon and Mountain Ash Town Centres. ▪ Economy c£500m incuding the next phase of the A465(T) dualling. ▪ Tourism and leisure - c£50m, including local authority investment in community facilities. ▪ Continued major public investment in the area, including	▪ 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. ▪ Atmospheric pollution generated as a result of housing, employment and transport growth. ▪ The A465 runs in close proximity and across the River Usk SAC and runs directly through Cwm Clydach Woodlands SAC and Usk Bat Sites SAC. There is the potential for direct land take, increased disturbance and increased levels of diffuse air pollution. ▪ A465 dualling, the Brynmawr to Gilwern section – potential for effects relating to Air Quality and Habitat Fragmentation. Project HRA would however be required and should be sufficient to address any potential impacts. ▪ Employment development along the M4 could have implications for Cardiff Beech Woods SAC, River Usk SAC, Kenfig SAC and Cefn Cribwr Grasslands SAC. There is the potential for direct land take, increased disturbance and increased levels of diffuse air pollution.

Regional	
Turning Heads... A Strategy for the Heads of the Valleys 2020	
the regeneration of the former Ebbw Vale Steelworks site. ▪ Housing renewal £0.6billion investment n social housing stock between now and 2012. **Key Strategic Goals include:** **SP2: A Perception Changing Landscape** With stakeholders, we will develop and implement a number of key strategic landscape-scale environmental enhancements, concentrating on key corridors and gateways such as the A465(T) Heads of the Valleys Road, and approaches to the former Ebbw Vale Steelworks and Hirwaun. **SP5: Joined-Up Solutions for Business** Informed by market demand, we will actively encourage developers to improve and expand the range of business premises in the area, including within town centres, to help the Heads of the Valleys become a realistic investment option alongside centres such as Newport and Cardiff. This will be supported by good community and public transport links connecting people with jobs and services - integrated into the wider South East Wales Transport Plan.	

Regional	
Welsh Water's Consultation Draft Water Resource Management Plan (dWRMP) 2009	
Plan Type	**Water Resource Management Plan**
Plan Owner/ Competent Authority	**Welsh Water**
Currency	**2006/07 to 2034/35**
Region/Geographic Coverage	**Welsh Water's boundary**
Sector	**Water**
Related work HRA/AA	**HRA of the dWRMP, Nov 2008**
Document Details	**Potential impacts that could cause 'in-combination' effects**
This Plan details the strategy for managing water resources across Welsh Water's supply area over the next 2 years. The WRMP describes the following areas: ▪ Welsh Water's water resource zones (WRZ's) and the Level of Service we provide our customers ▪ Our resources, their yield and the future uncertainties which may impact upon them ▪ The forecast change in demand over the next 25 years and the drivers for change ▪ How we plan and manage our resources for the potential impact of climate change ▪ Our leakage strategy and our targets over the next five-year period ▪ The areas in Wales where we envisage the potential for current and future supply issues and how this compares	The HRA of Welsh Water's Draft Water Resource Management Plan (2009) states that "accurate assessment of exposure (and therefore vulnerability)", of a European site "can only be achieved through detailed studies in the RoC process, informed by the site knowledge of the CCW local teams and officers"[1]. Therefore it cannot be concluded that there will be no likely significant effect on the River Usk SAC if the dWRMP is implemented. The HRA suggests that appropriate caveats be included within the existing dWRMP to help ensure that no significant effects are likely as a result of its implementation.

[1] Welsh Water (2008) HRA of the Draft Water Resource Management Plan. Available online: http://www.dwrcymru.com/English/Company/Operations/resources/wrmp/index.asp

against our position five years ago ▪ An analysis of water resource options across Wales, the types of options we have considered and the environmental impact or benefit associated with them ▪ Our investment plan to meet water resource requirements over the next five years and beyond	

Catchment Abstraction Management Strategies	
The Ebbw and Lwyd Catchment Abstraction Management Strategy 2006 and 2007 update	
Plan Type	**Catchment Abstraction Management Strategy**
Plan Owner/ Competent Authority	**Environment Agency Wales**
Currency	**2006-2010**
Region/Geographic Coverage	**Ebbw and Lwyd Catchment**
Sector	**Water**
Related work HRA/AA	**N/A**
Document Details	**Potential impacts that could cause 'in-combination' effects**
The document sets out how the Environment Agency Wales will manage water abstraction from the Ebbw and Lwyd catchment until 2010. The strategy provides the framework for any decision on an abstraction license application. The Ebbw and Lwyd CAMS cover an area of approximately 330 km2 and encompasses the River Ebbw, River Sirhowy and the River Lwyd as well as their respective tributaries. The area extends from the mountainous landscape and steep river channels in the north to the urbanised valley floors in the south. The main urban areas associated with the River Lwyd	Under the Habitats Regulations the Environment Agency Wales has a duty to assess the effects of existing abstraction licences and any new applications to make sure they are not impacting on internationally important nature conservation sites. Water efficiency is also tested by the EA before a new license is granted. If the assessment of a new application shows that it could have an impact on a SAC/SPA the EA will have to follow strict rules in setting a time limit for that license. The catchment has been split into 3 Water Resource Management Units (WRMU). The document states that WRMU 1 (Ebbw and Sirhowy) is over abstracted, WRMU 2 (Lwyd) has no water available and WRMU 3 (Lwyd) is

are Cwmbran and Blaenavon. The main urban areas, which are situated on the Ebbw River are Ebbw Vale and Risca. The River Sirhowy passes through the towns of Tredegar and Blackwood. In this CAMS area water is abstracted from both surface water and groundwater for agriculture, industry, domestic use and public water supply.	over licensed. The River Usk SAC lies outside the boundary of the Ebbw and Lwyd CAMS. The River Lwyd (WRMU 10 & 14) however is a tributary of the River Usk and could therefore have an influence on water flow within the lower reaches of the River Usk SAC. The site is sensitive to changes in water flow and eutrophication, which can both be influenced by levels of abstraction. The Severn Estuary SAC, SPA and Ramsar sites are all sensitive to changes in the hydrological regime. All CAMS in SE Wales drain into the Severn Estuary and therefore have the potential to affect the habitats and species reliant on the estuary.

Catchment Abstraction Management Strategies	
The Usk Catchment Abstraction Management Strategy 2007	
Plan Type	**Catchment Abstraction Management Strategy**
Plan Owner/ Competent Authority	**Environment Agency Wales**
Currency	**2007-2013**
Region/Geographic Coverage	**Usk Catchment**
Sector	**Water**
Related work HRA/AA	**N/A**
Document Details	**Potential impacts that could cause 'in-combination' effects**
The document sets out how the Environment Agency Wales will manage water abstraction from the Rhymney catchment until 2013. The strategy provides the framework for any decision on an abstraction license application.	Under the Habitats Regulations the Environment Agency Wales has a duty to assess the effects of existing abstraction licences and any new applications to make sure they are not impacting on internationally important nature conservation sites. Water efficiency is also tested by the EA before a new license is granted. If the assessment of a new application shows that it could

Catchment Abstraction Management Strategies	
The Usk Catchment Abstraction Management Strategy 2007	
The Usk CAMS covers an area of approximately 1169 km2 and encompasses the River Usk and its tributaries, but not the Usk Estuary. The main settlements within the catchment are Abergavenny, Brecon, Brynmawr, Crickhowell, Gilwern, Llanelly Hill, Llanfoist, Newport, Raglan, Sennybridge and Usk. In this CAMS area water is taken from both surface water and groundwater resources. Water is abstracted for public water supply, navigation, agriculture, commerce/industry, domestic use, spray irrigation, horticultural watering, lake/pond maintenance, fish farming and hydropower generation. The River Usk is a sandstone river of considerable ecological diversity, which provides an important wildlife corridor, an essential migration route and a key breeding area for many nationally and internationally important species. The ecology of the River Usk SAC is currently affected by, or at risk of being affected by, a number of factors including abstraction. As a competent and relevant authority, the Environment Agency has a statutory duty, under the Habitats Regulations, to ensure that the integrity of the riverine ecosystem is maintained or restored through sustainable water resources management.	have an impact on a SAC/SPA the EA will have to follow strict rules in setting a time limit for that license. The catchment has been split into 3 Water Resource Management Units (WRMU). The document states that WRMU 1 (Sor Brook) has water available, WRMU 2 (River Usk) is over licensed and WRMU 18 (Bettws/Malpas Brook) is over licensed. The River Usk SAC, Usk Bat Sites SAC and Coed y Cerrig SAC are situated within WRMU 2, which according to the CAMS is over licensed. The River Usk SAC is sensitive to any changes in the hydrological regime, more specifically any changes to water flow and quality. Usk Bat Sites SAC are primarily designated for the population of Lesser Horseshoe Bats. Abstraction levels are unlikely to have a direct effect on the bat population but could have issues for the habitats the bats use for feeding. The Blanket Bog protected as a qualifying feature is sensitive to hydrological change. Coed y Cerrig SACs naturally high, largely spring-fed water table is essential to the Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*.

Catchment Abstraction Management Strategies	
The Wye Catchment Abstraction Management Strategy March 2008	
Plan Type	**Catchment Abstraction Management Strategy**
Plan Owner/ Competent Authority	**Environment Agency Wales**
Currency	**2008 - 2014**
Region/Geographic Coverage	**Wye Catchment**
Sector	**Water**
Related work SA/SEA HRA/AA	**N/A**
Document Details	**Potential impacts that could cause 'in-combination' effects**
The document sets out how the Environment Agency Wales will manage water abstraction from Wye catchment until 2014. The strategy provides the framework for any decision on an abstraction license application. The Wye CAMS covers an area of 4171 km2, encompasses the Rivers Wye, Lugg and their tributaries, and spans the border of England and Wales. The main urban areas within the catchment are Hereford, Monmouth, Leominster, Ross-on-Wye and Hay-on-Wye.	Under the Habitats Regulations the Environment Agency Wales has a duty to assess the effects of existing abstraction licences and any new applications to make sure they are not impacting on internationally important nature conservation sites. Water efficiency is also tested by the EA before a new license is granted. If the assessment of a new application shows that it could have an impact on a SAC/SPA the EA will have to follow strict rules in setting a time limit for that license. The Environment Agency has a statutory duty, to ensure that the integrity of the riverine SAC ecosystem is maintained or restored through sustainable water resources management. As part of this duty, they have to ensure that permissions (abstraction licences, discharge consents, radioactive substance authorisations, waste management licences and integrated pollution control (IPC) authorisations) do not have an adverse effect on the integrity of the designated SAC species. The catchment has been split into 4 Water Resource Management Units (WRMU). The document states that all 4 WRMUs are assessed to have 'no water available'. The River Wye ultimately flows into the Severn Estuary. Therefore any impact to the Severn Estuary caused by changes to the water resource management of

	the catchment needs is considered as part of the CAMS process.

Local Development Plans

Local Development Plans	
Blaenau Gwent County Borough Council Deposit Local Development Plan, March 2011	
Plan Type	**Local Development Plan**
Plan Owner/ Competent Authority	**Blaenau Gwent County Borough Council**
Currency	**2011-2021**
Region/Geographic Coverage	**Blaenau Gwent County Borough Council administrative boundaries**
Sector	**Planning**
Related work HRA/AA	**AA Report, April 2011**
Document Details	**Potential impacts that could cause 'in-combination' effects**
Vision 'Through collaborative working, by 2021, Blaenau Gwent will become a network of sustainable, vibrant valley communities, where people have the skills, knowledge and opportunities to achieve a better quality of life and residents will live in safe, healthy and thriving communities, with access to a range of good quality affordable homes and thriving town centres. Its unique environment, cultural and historic identity will be protected and enhanced to create a place where people want to live, work and visit.' To deliver the vision 16 objectives are set out for the Plan to meet. **Spatial Strategy** The Strategy is based on regenerating the area through building a network of district hubs around the principal hub of Ebbw Vale, whilst recognising that there is a north/south	**Overarching Development Pressures** ▪ Enhanced growth implies potential land take and habitat fragmentation issues (the SA/SEA identified enhanced growth as resulting in higher environmental impacts on biodiversity and landscape). Land without statutory designation can act as corridors and linkages for protected habitats and species. ▪ Housing and employment growth - increased transport movements and associated air pollutants. ▪ Water abstraction for new development - potential to impact surface and groundwater. ▪ Recreational pressures from housing/ development that is close to European sites.

Local Development Plans	
Blaenau Gwent County Borough Council Deposit Local Development Plan, March 2011	
divide in terms of opportunities for growth. **Mixed Use Sites** The LDP proposes the following key areas to deliver major mixed-use developments: Ebbw Vale Northern Corridor: • Employment opportunities, road side services, a commercial leisure hub and housing The Works Ebbw Vale: • A local hospital, business park, learning zone, leisure centre, arts centre and housing NMC Factory and Bus Depot at Brynmawr: • Housing, commercial/leisure opportunities/community facility and an opportunity to provide a link with the town centre **Housing** In order to stem out-migration and ensure that local housing need is met and sustainable linked communities created: • The plan aims to deliver 3,666 dwellings, 800 of which will be affordable. • 20 new housing sites are identified to meet the housing requirement figure • An extension to the existing site at Cwmcrachen is proposed to provide 6 long-term pitches for Gypsy and Travellers **Employment** In order to increase economic activity, diversify the economy and ensure that economic potential is maximised the Plan:	

Local Development Plans	
Blaenau Gwent County Borough Council Deposit Local Development Plan, March 2011	
• Identifies 50ha of land to meet employment and economic development needs, which has resulted in 10 sites being allocated • Protects existing employment sites **Transport** To improve accessibility, the Plan identifies the following transport improvements; • Dualling of the Heads of the Valleys road between Tredegar and Brynmawr • Upgrading the existing bus interchanges at Ebbw Vale and Brynmawr and improvements along the Brynmawr to Newport bus corridor • Extend the rail line to the general office at The Works, and Abertillery: and provision of new rail stations at Ebbw Vale, Cwm and Abertillery • Improve community cycle routes across the Borough • Construction of a peripheral distributor road (PDR) through the Works and online improvements between the PDR and the A465 • Improvement to the southern areas of the A4046, A4048 and the A467 to improve links to the south **Tourism and Leisure** To help diversify the economy and help create healthy and active communities the plan allocates the following 7 sites. For tourism related activities; • Eastern Valley Slopes, Ebbw Vale • Garden Festival, Ebbw Vale • Blue Lakes, Ebbw Vale • Bedwellty House and Park, Tredegar	

Local Development Plans	
Blaenau Gwent County Borough Council Deposit Local Development Plan, March 2011	
• Parc Bryn Bach (including a hotel), Tredegar • Nantyglo Roundhouse Towers, Upper Ebbw Fach • Cwmtillery Lakes, Lower Ebbw Fach **Minerals** The Plan aims to secure an adequate supply of minerals, it achieves this by: • Safeguarding sandstone, limestone and local coal resources from being sterilised. • Identifying where coal working will not be allowed • Identifying the following areas where future extraction would be directed o Extension to Trefil Quarry o Tir Pentwys Tip o Land South East of Cwm **Waste and Recycling** The Plan aims to deliver sustainable waste management and allocates: • Waun y pound, Ebbw Vale for a regional waste management site (Anaerobic Digestion or In-vessel composting) • Silent Valley, Cwm (for a bulking waste transfer facility)	

Local Development Plans	
Brecon Beacons National Park Authority Deposit Local Development Plan September 2010	
Plan Type	**Unitary Development Plan**

Local Development Plans	
Brecon Beacons National Park Authority Deposit Local Development Plan September 2010	
Plan Owner/ Competent Authority	**Brecon Beacons National Park Authority**
Currency	**2010 - 2016**
Region/Geographic Coverage	**Brecon Beacons National Park Authority administrative boundaries**
Sector	**Planning**
Related work HRA/AA	**HRA Screening Report 2010**
Document Details	**Potential impacts that could cause 'in-combination' effects**
SP5 Housing The Local Development Plan Settlement Assessment Process has identified land to provide an estimated 841 dwellings over the plan period. ▪ Bwlch - Land adjacent to Bwlch Woods – 15 houses ▪ Libanus - Land adjacent Pen y Fan Close – 3 houses ▪ Libanus - Land adjacent to Caer-af-Allen – 10 houses ▪ Llanspyddid - Land off Heol St Cattwg – 10 houses ▪ Pennorth - Land adjacent to Ambelside – 6 houses ▪ Brecon - Cwmfalldau Fields – 72 houses ▪ Brecon - Cwmfalldau fields extension – 66 houses ▪ Brecon - Slwch House Field – 23 houses ▪ Brecon - Site located to the North of Camden Crescent and to the East of the Breconshire War Memorial Hospital – 58 houses ▪ Brecon - Site located the north of Cradoc Close and west of Maen-du Well – 42 houses ▪ Hay-on-Wye - Land opposite The Meadows – 20 houses ▪ Hay-on-Wye - Land adjacent to Fire Station – 13 houses ▪ Hay-on-Wye - Land adjacent to Caemawr Cottages – 6 houses ▪ Crickhowell - Land above Televillage – 40 houses	**Overarching Development Pressures** ▪ Enhanced growth implies potential land take and habitat fragmentation issues (the SA/SEA identified enhanced growth as resulting in higher environmental impacts on biodiversity and landscape). Land without statutory designation can act as corridors and linkages for protected habitats and species. ▪ Housing and employment growth - increased transport movements and associated air pollutants - e.g. as a result of development in the Heads of the Valleys Regeneration Area which may lead to commuting across administrative boundaries. ▪ Water abstraction for new development - potential to impact surface and groundwater. ▪ Recreational pressures from housing/ development that is close to European sites.

Local Development Plans	
Brecon Beacons National Park Authority Deposit Local Development Plan September 2010	
▪ Crai - Land SW of Gwalia – 6 houses ▪ Crai – Land at Crai – 9 houses ▪ Llangors - UDP allocation LGS1 Bwlch Road – 11 houses ▪ Llanbedr - Land adjacent to St Peter's Close – 9 houses ▪ Llanigon - Land opposite Llanigon County Primary School- 10 houses ▪ Pencelli - Land south of Ty Melys – 6 houses ▪ Pencelli - Land adjacent Pen-y-Bont – 15 houses ▪ Talybont-on-Usk - Land at Maesmawr Farm – 57 houses ▪ Clydach - Land adjacent to Dan Y Coed – 5 houses ▪ Pontsticill - Land to the West of Pontsicill House, Pontsticill – 8 houses ▪ Pontsticill - Land adjacent to Penygarn – 6 houses ▪ Pontsticill - Land at end of Dan-y-coed – 3 houses ▪ Pontsticill - UDP allocation PST1 adj. to Pontsticill House – 22 houses ▪ Llanfihangel Crucorney - Land opposite Pen-y-Dre Farm – 22 houses ▪ Talgarth - UDP allocation Land North of Doctors Surgery – 36 houses ▪ Gilwern - Lancaster Drive (Former UDP allocation GW2) – 112 houses ▪ Govilon - Land at Ty Clyd – 93 houses ▪ Talgarth – Hay road – 27 houses **Employment** ▪ UDP allocation B17 Opposite High School, North of Hospital, Brecon - 5.0455 ha ▪ Land adjacent to Football Field, Hay-on-Wye - 0.6 ha ▪ UDP allocation H6 Former Health Centre, Hay on Wye - 0.7303ha	

Local Development Plans	
Brecon Beacons National Park Authority Deposit Local Development Plan September 2010	
▪ Land adjacent Caemawr Cottages, Hay-on-Wye - 0.2173ha ▪ UDP allocation T6/10 Hay Road (DSO and Wireguards), Talgarth - 0.9099ha	

Local Development Plans	
Newport City Council Local Development Plan Preferred Strategy 2010	
Plan Type	**Local Development Plan**
Plan Owner/ Competent Authority	**Newport City Council**
Currency	**2010 onwards**
Region/Geographic Coverage	**Newport City Council administrative boundary**
Sector	**Planning**
Related work HRA/AA	**HRA Initial Screening Report. Consultation completed March 2010.**
Document Details	**Potential impacts that could cause 'in-combination' effects**
The main emphasis of the plan is a "Brownfield" strategy. Newport has a considerable quantity of regeneration sites, and their redevelopment is a key aim of the plan. As well as conserving land, this also helps to achieve the objective of reducing the need to travel, and thereby contributes to sustainability. **Housing** **SP8 House Building Requirement** Sufficient land will be made available to provide For additional dwellings as follows: 2011 – 2016: 3,200 2016 – 2021 3,200	**Overarching Development Pressures** ▪ Housing and employment growth - increased transport movements and associated air pollutants - e.g. as a result of development in the Heads of the Valleys Regeneration Area which may lead to commuting across administrative boundaries. ▪ Water abstraction for new development – potential to impact surface and groundwater. ▪ Recreational pressures from housing/ development that is close to European sites. **SAC Specific Issues**

Local Development Plans	
Newport City Council Local Development Plan Preferred Strategy 2010	
2021 – 2026 3,200 Each period is to be regarded as self-contained, With excesses or deficits of house building not Being carried over into the next period. The land Will be provided primarily on previously Developed land in the following ways: I) sites with planning permission, including sites Under construction; Ii) new allocations set out in policy h1; and Iii) infill and windfall sites. Further major housing development outside existing settlement boundaries will not be Permitted. **Employment** **SP14 Employment Land** Provision will be made for approximately 150 hectares of employment land for the period 2011-2026 **SP15 Employment Sites** New industrial and business development will be located mainly in the following areas within the Urban boundary: I) west Newport at Coed Kernew; Ii) south east Newport within the eastern expansion area; Iii) urban area, river Usk corridor, and docks.	▪ Development of sites in close proximity to the River Usk SAC could have the potential to significantly affect water quality as a result of construction activities. This also has implications for the River Severn SPA/ Ramsar/ SAC as the River Usk flows into the Severn Estuary. Any development that would involve the building of a bridge across the River Usk SAC has the potential to have significant effects on migratory fish populations.

Local Development Plans	
Torfaen County Borough Council Local Development Deposit LDP	
Plan Type	**Local Development Plan**

Local Development Plans	
Torfaen County Borough Council Local Development Deposit LDP	
Plan Owner/ Competent Authority	**Torfaen County Borough Council**
Currency	**2021**
Region/Geographic Coverage	**Torfaen County Borough Council administrative boundaries**
Sector	**Planning**
Related work HRA/AA	**AA Report February 2011**
Document Details	**Potential impacts that could cause 'in-combination' effects**
The Vision Statement At the eastern edge of the South Wales valleys, Torfaen will be part of a Networked City Region supporting thriving communities and a diverse economy in an outstanding historical, cultural and natural environment. **To achieve this:** By 2021, through collaborative working, the development strategy for the Torfaen Local Development Plan will deliver planned, sustainable growth reflecting the specific role and function of settlements. It will provide a distinctive, vibrant and prosperous area where people have the skills, knowledge and opportunities to achieve a better quality of life in safe, healthy and thriving communities with accessible local facilities. It will promote the sustainable regeneration of our town centres ensuring they are a focus for social, commercial and community life, whilst also protecting and enhancing Torfaen's unique natural heritage and cultural and historic identity. **S5 Housing**	**Overarching Development Pressures** ▪ Housing and employment growth - increased transport movements and associated air pollutants - e.g. as a result of development in the Heads of the Valleys Regeneration Area which may lead to commuting across administrative boundaries. ▪ Water abstraction for new development – potential to impact surface and groundwater. ▪ Recreational pressures from housing/ development that is close to European sites. The AA Report concluded that the Deposit LDP would not have adverse effects on the integrity of the River Usk SAC either alone or in combination with development in surrounding areas through reduced water quality and increased water resource demand.

Local Development Plans	
Torfaen County Borough Council Local Development Deposit LDP	
Provision is made for the development of 5,000 dwellings in Torfaen (by identifying sites for approximately 6,000 dwellings) during the Plan Period 2006-2021 broken down within the following Housing Sub-Market Areas (HSMAs): - a) North Torfaen - approximately 675 dwellings; b) Pontypool - approximately 1,925 dwellings; and c) Cwmbran (south & east and north & west combined) - approximately 2,400 dwellings. These figures include an allowance of 300 dwellings on 'small sites' (9 or less dwellings) and 289 dwellings on 'windfall' sites' (10 or more dwellings) over the Plan Period 2010-2021 remaining; with net demolitions being added to the dwelling requirement. **S6 Employment and Economy** The employment and economic development needs of Torfaen will be met by the identification of 43ha of land for employment and business purposes (use classes B1, B2 and B8) and 35ha for strategic regional employment opportunities during the Plan Period 2006-2021. The employment role of important industrial and business areas will be enhanced and protected. A range and choice of accessible employment sites will be delivered throughout Torfaen to enable opportunities for business and local employment needs to be met. This will include provision to enhance town centre based employment and economic uses and to increase the tourism, leisure and retail offer in Torfaen.	

Local Development Plans	
Forest of Dean District Council Core Strategy Pre Publication Draft (September 2010)	
Plan Type	**Local Development Framework**
Plan Owner/ Competent Authority	**Forest of Dean District Council**
Currency	**Pre Publication Draft Sept (2010)**
Region/Geographic Coverage	**Forest of Dean District Council administrative boundaries**
Sector	**Planning**
Related work HRA/AA	**N/A (HRA Screening undertaken for Cinderford AAP, Oct 2009)**
Document Details	**Potential impacts that could cause in combination effects**
Vision The Forest of Dean will be a thriving sustainable community with a high quality environment, a developing local economy including tourism, housing which meets the needs of residents (including affordable homes) and safer communities. CS proposes development (housing) to be focused in main settlements: ▪ Lydney (1900 dwellings) ▪ Cinderford (1050 dwellings) ▪ Coleford (650 dwellings) ▪ Newent (350 dwellings)	**Overarching Development Pressures** ▪ Housing and employment growth - direct land take and increased transport movements and associated air pollutants. ▪ Water abstraction for expanding communities - potential to impact surface and groundwater. ▪ Recreational pressures from housing/ development that is close to European sites. **Cinderford AAP HRA Screening notes:** ▪ Potential disturbance from traffic to Walmore Common and Severn Estuary including in-combination effects; ▪ Potential pollution effects from traffic on Walmore Common and Severn Estuary including in-combination effects; ▪ Potential nutrient enrichment from proposed energy centre (assuming it is bio-fuelled) on all identified designated sites; and ▪ Potential disturbance to bat flight lines, potentially supporting Northern United Roost and woodland and smothering effects during construction in relation to the Wye Valley and Forest of Dean Bat sites and the Wye Valley Woodlands.

Local Development Plans	
Forest of Dean District Council Core Strategy Pre Publication Draft (September 2010)	
	SAC Specific Issues ▪ The River Wye SAC, Wye Valley Woodlands SAC, Wye Valley and Forest of Dean Bat Sites SAC and the Severn Estuary SPA, Ramsar & SAC are all within the district boundary. ▪ Coleford lies in close proximity to the River Wye, Wye Valley Woodlands and Wye Valley and Forest of Dean Bat Sites. There is the potential for disturbance as a result of the construction of new development and increased levels of recreational activity. Horseshoe bats are very sensitive to disturbance and even the presence of a single person in close proximity can cause problems. ▪ Lydney lies in close proximity to the Severn Eastuary SPA, Ramsar and SAC. There is the potential for increased levels of disturbance as a result of new development and increased recreational activity.

Local Development Plans	
Powys Unitary Development Plan Deposit (Adopted March 2010 but unavailable online at present, website recommends using previous version which is detailed below)	
Plan Type	**Unitary Development Plan**
Plan Owner/ Competent Authority	**Powys**
Currency	**2010 (Consultation on the LDP Draft Delivery Agreement completed July-August 2010)**
Region/Geographic Coverage	**Powys administrative boundaries**
Sector	**Planning**
Related work HRA/AA	**HRA Screening of the Powys UDP Nov 2007**

Local Development Plans	
Powys Unitary Development Plan Deposit (Adopted March 2010 but unavailable online at present, website recommends using previous version which is detailed below)	
Document Details	**Potential impacts that could cause 'in-combination' effects**
Policy SP4 - Economic and Employment Developments Up to 55 hectares of land is allocated for employment related developments during the plan period, 2001-2016 and developments For these purposes on such allocated sites will be acceptable. **Policy SP5 - Housing Developments** Sufficient land is allocated, including appropriate existing allocations and commitments, to accommodate up to approximately 6140 additional dwellings (410 per annum) during the plan period mid 2001 - mid 2016, in accordance with the Council's strategic settlement hierarchy. **Policy HP1 - Shire Housing Allocations** Sufficient land is allocated to the three shires to accommodate 6750 new dwellings in the Powys UDP area between 2001-2016 as: ▪ Brecknockshire (ex BBNP)1240 ▪ Montgomeryshire 4100 ▪ Radnorshire 1410 **Policy T1 - Highway Improvement Schemes** The council will protect programmed routes from development that would obstruct the undertaking of the planned highway improvement scheme, **Highway Improvement Schemes** The following major improvements to the County Highway	The HRA Screening of the Powys UDP (Oct 2007) concludes that the policies and proposals contained in the Powys UDP are not likely to give rise to any significant effects either alone or in-combination on any European site in Powys. It is therefore considered that a detailed appropriate assessment of the Powys UDP, or of any part of it, is not necessary.

Local Development Plans	
Powys Unitary Development Plan Deposit (Adopted March 2010 but unavailable online at present, website recommends using previous version which is detailed below)	
Network are proposed by the Council: Canal Road / Llanllwchaiarn Road, Newtown; Waterloo Road Link, Llandrindod. In addition to these, the Welsh Assembly Government in their Trunk Road Forward Programme 2002 has identified the following Trunk Road improvement schemes: ▪ Repair & Upgrade Schemes (£1M+): A483 Esgairdraenllwyn Bends; A470 Christmas Pitch; A470 Ysgiog; A487 Pont ar Ddyfi; A458 Nant y Dugoed; A458 Garreg Bank – Middletown. ▪ Technically ready for delivery before March 2005: Talgarth Relief Road. ▪ Could be ready to proceed by March 2008: A470 Cwmbach – Newbridge, A470 Alltmawr, and A483 Four Crosses Relief Road. ▪ Unlikely to proceed before April 2008: A470 Builth Wells; A470 Rhayader; A470 Llandinam; A483/A489 Newtown; A458 Buttington Cross – Middletown; A458 Sylfaen – Cyfronydd. ▪ No ranking applied: A470 Commins Coch; A470 Llangurig – Wern Villa; A483 Brynsadwrn improvement	

Local Development Plans	
Herefordshire County Council Core Strategy Preferred Option: Hereford Consultation, September 2010	
Plan Type	**Unitary Development Plan**
Plan Owner/ Competent Authority	**Herefordshire County Council**
Currency	**2010-2026**
Region/Geographic Coverage	**Herefordshire County Council administrative boundaries**
Sector	**Planning**
Related work HRA/AA	**Core Strategy: Developing Options Paper, Habitat Regulation Assessment Screening Report 2008**
Document Details	**Potential impacts that could cause 'in-combination' effects**
Vision By 2026, Hereford will consist of healthy, sustainable communities with a wide range of homes and employment opportunities for all, which are well serviced by a range of community facilities and public transport. The imbalance of housing types and income levels across Hereford, particularly within South Wye, will be addressed by providing a greater balance and mix of properties and employment opportunities across the city. **Housing** ▪ Indicative number of new homes on strategic sites between 2006-2026 - 5,300 ▪ For the purposes of the Core Strategy, a strategic location has been defined as around 500 homes in Hereford and around 5 hectares of employment land. **Policy H1 – Hereford City Centre Policy** ▪ The development of 800 highly energy efficient homes in a new urban village to the north of the city centre area	**Overarching Development Pressures** ▪ Housing and employment growth - increased transport movements and associated air pollutants. ▪ Water abstraction for expanding communities - potential to impact surface and groundwater. **NC2 Sites of international importance** Development which may affect a European Site, a proposed or candidate European Site or a Ramsar site will be subject to the most rigorous examination. Development that is not directly connected with or necessary to the management of the site for nature conservation, which is likely to have significant effects on the site (either individually or in combination with other plans or projects) and where it cannot be ascertained that the proposal would not adversely affect the integrity of the site, will not be permitted unless: 1. there is no alternative solution; and 2. there are imperative reasons of over-riding public interest for the development.

Local Development Plans	
Herefordshire County Council Core Strategy Preferred Option: Hereford Consultation, September 2010	
▪ Up to 40,000 sq m (gross) of additional retail floorspace **Policy H3 Growth expansion** Northern expansion; ▪ Developing circa 1000 new homes at Holmer west ▪ Developing 5 hectares of employment land at Holmer east Southern expansion; ▪ Developing circa 1000 new homes at land at Lower Bullingham ▪ Continue to promote and enable the provision of employment land at Rotherwas Western expansion; ▪ Developing circa 1000 new homes and 10 hectares of employment land at Three Elms ▪ Developing circa 1500 new homes at Whitecross.	Where the site concerned hosts a priority natural habitat type and/or a priority species, development or land use change will not be permitted unless the authority is satisfied that it is necessary for reasons of human health or public safety or for beneficial consequences of primary importance for nature conservation.

Minerals and Waste Strategies

Minerals & Waste	
Blaenau Gwent County Borough Council Waste Strategy 2004	
Plan Type	**Municipal Waste Strategy**
Plan Owner/ Competent Authority	**Blaenau Gwent County Borough Council**
Currency	**2004**
Region/Geographic Coverage	**Blaenau Gwent County Borough Council administrative boundaries**
Sector	**Waste**
Related work HRA/AA	**N/A**
Document Details	**Potential impacts that could cause 'in-combination' effects**
Vision Statement The Council's vision statement is "to provide economic, efficient and effective public services which seek to enhance the quality of life of the people of Blaenau Gwent". Objective Blaenau Gwent undertakes to provide all waste management services in line with Best Available Technology, having evaluated each process for Best Practicable Environmental Option, Proximity Principle and Environmental Impact Assessment. Furthermore, any such technologies employed shall comply with the principle of value for money delivery of services and take into account the wishes of the authority's stakeholders. Future Options for Waste Management Diversion of wastes will play a key role in our future waste	**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

Minerals & Waste	
Blaenau Gwent County Borough Council Waste Strategy 2004	
management activities under the Landfill Directive, Article 5. Blaenau Gwent will need to achieve diversion rates of biodegradable municipal wastes (BMW), as a percentage, based on total 1995 municipal waste figures. This equates to a diversion from landfill of 2,606 tonnes (assuming BMW composition at 30%) in 2010. Simultaneously, they will need to achieve a 40% recycling/composting rate (with at least 15% composting) by 2009/10. The public consultation exercise carried out under the Technical Advice Note (TAN) Group, has identified the preferred option as Mechanical Biological Treatment (MBT) with more Recycling and Composting. This is, therefore, likely to be the option selected under partnership arrangements.	**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 ▪ 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	
Blaenau Gwent County Borough Council Waste Strategy 2004	
	SAC Specific Issues ▪ Specific potential in-combination impacts cannot be explored in absence of specific waste locations.

Minerals & Waste Strategies	
Gloucestershire County Council Minerals Core Strategy, Preferred Options 2008	
Plan Type	**Minerals Core Strategy**
Plan Owner/ Competent Authority	**Gloucestershire County Council**
Currency	**2008- 2026**
Region/Geographic Coverage	**Gloucestershire County Council administrative boundary**
Sector	**Minerals**
Related work HRA/AA	**Gloucestershire County Council Minerals Core Strategy Appropriate Assessment Report, January 2008.**
Document Details	**Potential impacts that could cause 'in-combination' effects**
The Mineral Core Strategy (MCS) provides the overarching framework for managing the Gloucestershire County's mineral resources. The MCS does not provide specific sites, the evolution of its preferred options provides the parameters for how future working opportunities will be allocated in a later mineral site allocations development plan document. There are 7 Strategic Objectives which are based around the following themes: ▪ **Provision & Supply** ▪ **Reuse & Recycling**	The MCS identifies the potential outward supply opportunity of crushed rock into Wales and the West Midlands. This could have the potential to have in-combination effects through increased transport and associated impacts/ pollution incidents. Acid and nitrogen deposition currently exceed vegetation thresholds at Bredon Hill SAC. The MCS also identifies the provision potential of the Severn Vale Corridor resource area to provide potential new site allocations for sand and gravel working. A new site to the north of Tewkesbury would be in close proximity to the Bredon Hill SAC and could again have the potential for increased transport and associated impacts/ pollution incidents.

Minerals & Waste Strategies	
Gloucestershire County Council Minerals Core Strategy, Preferred Options 2008	
▪ **The Environment** ▪ **People** ▪ **Reclamation** ▪ **Resource Management** ▪ **Transport** The MCS identifies the following resource areas, which are of relevance: ▪ **The Cotswolds** - provides limestone used as a crushed rock and building stone and clay for brick-making; ▪ **The Severn Vale Corridor** - also encompasses sand & gravel for aggregate use; and clay for engineering projects. The MCS identifies the potential outward supply opportunity of crushed rock into Wales and the West Midlands. However, ensuring that proposed transport routes are carefully assessed against the capacity of the local environment, highway network and amenity of local communities. Preferred option **MPO5a** proposes a more dispersed strategy for future sand & gravel working. Whilst recognising the strategic significance of the Upper Thames Valley resource area, it seeks to acknowledge the provision potential of the Severn Vale Corridor resource area. Where the spatial strategy indicates that new site allocations should be identified, the relative merits of potential sites within each resource area will be considered. The Appropriate Assessment Screening states that there is likely to be no significant effect on Bredon Hill SAC as a result of the Minerals Core Strategy Preferred Options.	

Minerals & Waste Strategies	
Gloucestershire County Council Minerals Core Strategy, Preferred Options 2008	

Minerals & Waste Strategies	
Gloucestershire County Council Waste Core Strategy, Preferred Options 2008	
Plan Type	**Waste Core Strategy**
Plan Owner/ Competent Authority	**Gloucestershire County Council**
Currency	**2008- 2026**
Region/Geographic Coverage	**Gloucestershire County Council administrative boundary**
Sector	**Waste**
Related work HRA/AA	**Gloucestershire County Council Waste Core Strategy Appropriate Assessment Report, January 2008.** **Gloucestershire County Council Waste Core Strategy Preferred Options Sustainability Appraisal Report, January 2008.**
Document Details	**Potential impacts that could cause 'in-combination' effects**
The Waste Core Strategy (WCS) will provide the framework for sustainable waste management in the County. Consultation has taken place on a centralised and dispersed spatial strategy for waste locations. Policies to avoid internationally designated sites are proposed. There are five strategic objectives: a. To influence Gloucestershire's residents to reduce the amount of waste they produce through raising awareness of waste issues. And then subsequently to encourage them to view any waste they do generate as a resource for which they must take communal responsibility. b. To make the best use of Gloucestershire's waste by	The Gloucestershire approach mirrors neighbouring counties in focusing waste near source and making use of existing facilities. Screening has not identified likely significant effects from Waste facilities.

Minerals & Waste Strategies	
Gloucestershire County Council Waste Core Strategy, Preferred Options 2008	
encouraging competitive markets for goods made from recycled materials and obtaining a benefit (value) from left over (residual) waste materials. c. To preserve and enhance the quality of Gloucestershire's environment and to avoid undesirable environmental effects, including risks to human health and unacceptable impacts on designated landscapes / nature conservation sites. d. To reduce the environmental impacts of transporting waste by managing the majority of Gloucestershire's waste within a reasonable distance from its source of arising, and to encourage the use of sustainable means of transporting waste. e. To co-locate similar or related facilities on existing waste sites or previously developed sites in preference to undesignated Greenfield locations (where appropriate) and to safeguard such land from development that may prevent this use. An Appropriate Assessment Screening of the Preferred Options identified **no likely significant effects** of the policies of the N2K sites. Uncertainties were identified for ten of the preferred options. The AA noted that this may require dropping the option, modifying the option or modifying/mitigating the option at the site allocations stage of the DPD. The AA Screening states that there is likely to be no significant effect on Bredon Hill SAC as a result of the Minerals Core Strategy Preferred Options. However the assessment was uncertain of the potential for significant effects in regard to Waste Preferred Option 4a, 7a, 7b, 7c, 7d and 8b.	

Minerals & Waste Strategies	
Gloucestershire County Council Waste Core Strategy, Preferred Options 2008	

Minerals & Waste Strategies	
The Joint Municipal Waste Management Strategy for Herefordshire & Worcestershire 2004-2034	
Plan Type	**Municipal Waste Management Strategy**
Plan Owner/ Competent Authority	**Herefordshire Council and Worcestershire County Council**
Currency	**2004 - 2034**
Region/Geographic Coverage	**Herefordshire Council and Worcestershire County Council administrative boundary**
Sector	**Waste**
Related work HRA/AA	**N/A**
Document Details	**Potential impacts that could cause 'in-combination' effects**
This Strategy will form a framework for the management of municipal waste in the counties of Herefordshire and Worcestershire for the next 30 years until 2034. It has been prepared jointly by all of the Local Authorities who have responsibility for managing waste across the two counties. The Practical Vision for Herefordshire and Worcestershire's Waste Management is based upon Herefordshire and Worcestershire's Waste Hierarchy. Key principles have been agreed by the Joint Members Waste Forum for Herefordshire and Worcestershire, these are: ▪ **Principle One - Commitment to the Waste Hierarchy of which Waste Minimisation is the top** o The key principle upon which the Strategy is built is that of	**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)**

Minerals & Waste Strategies	
The Joint Municipal Waste Management Strategy for Herefordshire & Worcestershire 2004-2034	
waste minimisation, the top of the Waste Hierarchy. Through making opportunities available and through awareness raising, everyone has a critical role to play in ensuring that the amount of waste is reduced before it enters the waste stream. ○ Local Authorities within Herefordshire and Worcestershire will continue to promote waste minimisation through a variety of campaigns and initiatives such as the 'Waste Challenge' (see chapter 5 for further details). ▪ **Principle Two - Affordability, Mix of Method and External Funding** ○ Options for dealing with waste must be affordable. The Local Authorities will seek to use a mix of collection and waste processing techniques as they become available to ensure that the targets can be achieved, balancing cost against environmental impact. We will also seek to obtain external funding wherever possible in order to implement the Strategy, carrying out research to support the applications where necessary and ensuring that they are economically sustainable. ▪ **Principle Three - Partnership** ○ The Local Authorities cannot carry out the Strategy alone. Partnerships with commerce and industry, Parish Councils, the voluntary and community sectors and the public will continue to be developed. As part of the development of this Strategy, Best Value and service improvement, we will continue to consult with local people and other partners about the way in which waste is managed in Herefordshire and Worcestershire. ▪ **Principle Four - Promote Sustainable Waste Management** ○ Through the Strategy the Local Authorities will encourage	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 ▪ Methane and carbon monoxide emissions ▪ Leachate, salts, heavy metals, biodegradable and persistent organics ▪ Accumulation of hazardous substances in soil ▪ Topography alteration, visual intrusion

Minerals & Waste Strategies	
The Joint Municipal Waste Management Strategy for Herefordshire & Worcestershire 2004-2034	
the efficient use of resources, cut down on the amount of waste we produce, and where waste is generated, deal with it in a way which reduces its impact on the environment. Waste will be treated by adopting the Best Practicable Environmental Option (BPEO) and by using the Proximity Principle - i.e. waste will be managed as close to where it is produced as is practicable. ▪ **Principle Five - Active Management in a Changing World** ○ The Local Authorities will ensure that they keep up-to-date and ahead in implementing the best possible management systems that are needed to deliver this Strategy, using a flexible and integrated approach to the waste treatment methods used. ▪ **Principle Six - Review** ○ The Strategy will be subject to a minimum of a three yearly review to determine progress and update it in the light of new legislation, new technology or other significant developments. Regular communication with partners and the public will take place to ensure that all stakeholders are aware of progress and changes made.	▪ 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.

Other Plans and Programmes

Development Plan	
Brecon Beacons National Park Management Plan 2010-2015	
Plan Type	**National Park Management Plan**
Plan Owner/ Competent Authority	**Brecon Beacons National Park Authority**
Currency	**2010 - 2015**
Region/Geographic Coverage	**Brecon Beacons National Park Authority administrative boundary**
Sector	**Planning**
Related work HRA/AA	**N/A**
Document Details	**Potential impacts that could cause 'in-combination' effects**
The Plan sets a vision for the future of the Park and specifies actions and outcomes to pursue in the next five years to bring the Park closer to this shared vision. The Plan promotes coordinated implementation, monitoring, and evaluation of these activities collectively across a wide range of partners and stakeholders. In essence, it creates a framework for Park management, guiding decision-making and developing priorities. **Vision** ▪ Recognised internationally and nationally for its value as a protected area, whose character continues to be shaped by the long-standing interactions between people and the processes of nature. ▪ Widely acclaimed for its natural beauty, geodiversity, biodiversity and cultural heritage which are being conserved and enhanced by its stakeholders through traditional and innovative means. ▪ A sought-after destination providing an outstanding variety of sustainable opportunities for all to understand	**Overarching Development Pressures** ▪ Housing and employment growth - direct land take and increased transport movements and associated air pollutants. ▪ Water abstraction for expanding communities - potential to impact surface and groundwater. ▪ Recreational pressures from housing/ development that is close to European sites. **SAC Specific Issues** ▪ Specific potential in-combination impacts cannot be explored in absence of specific development locations.

Development Plan	
Brecon Beacons National Park Management Plan 2010-2015	
and enjoy its tranquillity, rural character, Welsh way of life, sense of remoteness and other special qualities. ▪ Resilient, open and responsive to change – particularly climate change - and its stakeholders proactive in mitigating and adapting to the effects of undesirable change through local action. ▪ Less dependent upon external supply chains leading to increased food and energy security locally, improved quality of life, community cohesion and conservation of natural capital. ▪ A living landscape where people can earn a living from the land in an innovative and sustainable manner, for example through farming, but also in new ways such as through renewable energy production, for the benefit of the environment, economy and local communities. ▪ Managed sustainably11 through active partnerships among the Park's stakeholders so that it continues to be a source of inspiration and enjoyment for future generations. ▪ Monitored over the long term to improve future policy and management practice. **Aims.** ▪ Conserving and Enhancing the Natural and Cultural Heritage of the Park. ▪ Understanding and Enjoying the Special Qualities of the Park ▪ Economic and Social-well-being of the Local Communities	

Transport Plans	
Gloucestershire County Council Draft third Local Transport Plan 2011-2026	
Plan Type	**Local Transport Plan**
Plan Owner/ Competent Authority	**Gloucestershire County Council**
Currency	**2011-2026**
Region/Geographic Coverage	**Gloucestershire County Council administrative boundary**
Sector	**Transport**
Related work HRA/AA	**N/A**
Document Details	**Potential impacts that could cause 'in-combination' effects**
Vision "Providing a safe and sustainable transport network within Gloucestershire" Four main themes to deliver: ▪ A greener, healthier Gloucestershire; ▪ Sustainable Economic Growth; ▪ A safer, securer transport system; ▪ Good access to services. It is proposed that LTP3 focuses on improving public transport, the promotion of walking and cycling and other low carbon modes, underpinned by maintaining the highway network and safety and ensuring appropriate measures are in place to make new development work.	**Overarching Development Pressures** ▪ Potential for habitat fragmentation and disturbance issues. ▪ Potential to impact surface and groundwater. ▪ Potential for an adverse impact on air quality **Policy Q1: Sites of European Importance** Proposals for development which may have an unacceptable impact on a European Site or potential European Site will not be permitted unless: vi. the proposed development is directly connected with or necessary for the protection, enhancement and positive management of the site for conservation purposes; vii. the proposed development will not have an unacceptable impact on the conservation objectives associated with the site or the integrity of the site; viii. where the site supports priority habitats and/or species, there are reasons of public health or safety why the development should proceed; ix. where the site supports interests not identified as a priority, there are imperative reasons of overriding public interest why the development should proceed; and x. there is no alternative solution.

Transport Plans	
Gloucestershire County Council Draft third Local Transport Plan 2011-2026	

Transport Plans	
Herefordshire Council Second Local Transport Plan 2006/07-2010/11	
Plan Type	**Local Transport Plan**
Plan Owner/ Competent Authority	**Herefordshire Council**
Currency	**2006/07- 2010/11**
Region/Geographic Coverage	**Herefordshire Council administrative boundary**
Sector	**Transport**
Related work HRA/AA	**N/A**
Document Details	**Potential impacts that could cause 'in-combination' effects**
Our vision for improving access is: 'A sustainable and integrated transport system which recognises the distinctive characteristics of Herefordshire's rural and urban areas and provides for the transport needs of residents, visitors and the business community' Key LTP Outcomes for Herefordshire: ▪ Better access to jobs & services ▪ Increased use of sustainable modes of travel ▪ Assets maintained well ▪ Reduced congestion ▪ Assets maintained well ▪ Supported and enabled economic development ▪ Increased use of sustainable modes of travel ▪ Improved safety ▪ Assets maintained well	**Overarching Development Pressures** ▪ The Plan will improve access to the north east of Monmouthshire and could lead to increased recreation levels on European sites in close proximity to the south of Herefordshire. **SAC Specific Issues** ▪ Improvements to the A465, A466, A49 and A40 would lead to improved access and could therefore lead to increased recreational pressure on Coed y Cerrig SAC, River Usk SAC, River Wye SAC, Sugar Loaf Woodlands SAC, and the Wye Valley Woodlands SAC.

Transport Plans	
Herefordshire Council Second Local Transport Plan 2006/07-2010/11	
▪ Increased use of sustainable modes of travel ▪ Safeguarded environment ▪ Reduced congestion ▪ Increased use of sustainable modes of travel We will seek to deliver the above outcomes by implementing a comprehensive programme of Transport Improvements set out in 4 investment strategies: ▪ Accessibility Strategy ▪ Integrated Transport Improvements in Hereford ▪ Safer Roads ▪ Maintaining the Network The Major Scheme priorities are: ▪ Implement the Rotherwas Access Road scheme by 2007/8; ▪ To develop proposals and submit a major scheme bid for the A49 Ross Road to A465 Abergavenny Road link 2008 - 2011. This scheme will incorporate further assessment of proposals for a Hereford Outer Distributor Road including a river crossing and will need to be coordinated with a review of the County's land use planning policies for the period after the current Unitary Development Plan; ▪ Continue to monitor traffic levels and HGV movements through the North West Herefordshire communities (Eardisley, Pembridge, Lyonshall and Shobdon) to ascertain if a road scheme would be justified for the period beyond LTP2; and ▪ To support an extension to the Ledbury Bypass to be funded through private developer contributions and linked to the Unitary Development Plan's proposals for employment land	

Transport Plans	
Herefordshire Council Second Local Transport Plan 2006/07-2010/11	
allocations.	

Appendix 3: Justification for European Sites Scoped Out at Screening Stage

Aberbargoed Grasslands SAC and Llangorse Lake SAC were scoped out of the HRA screening stage (May 2009) as the Screening report did not identify the potential for significant effects. In response to the HRA Screening report consultation and in further discussions with regard to the scope of the AA, CCW requested to see further rationale as to why these two European sites were scoped out. In response to this the rationale for these screening decisions is provided below.

Aberbargoed Grassland SAC

Aberbargoed Grasslands is situated in the Rhymney Valley, adjacent to the A4049 and is approximately 12.87 km from the plan area. A large and relatively isolated population of marsh fritillary butterfly (*Euphydryas aurinia*) is present on a series of damp pastures and heaths, representing the species on the eastern edge of its range in Wales. Given the distance of the site from the plan area (11.73km), there are no identified pathways for the impacts of development proposed in the Deposit LDP to directly affect the European site. However, given the sensitivities of the site there is the potential for the Deposit LDP to act in combination with surrounding plans and programmes to have significant effects on the European site through increased atmospheric pollution.

The Core Management Plan[1] (CMP) for the SAC shows that the main vulnerabilities at this site relate to 'urban effects' (illegal off-roading, tipping and arson) and the presence of parasitic wasp that can threaten the butterfly population. The recently implemented grazing regime is a key element in maintaining the site integrity. The CMP for the SAC and the Joint Nature Conservation Committee habitat information sheet do not identify atmospheric pollution as an issue at this site. It is recognised that the eutrophication of sensitive habitats from atmospheric deposition is a threat. The Air Pollution Information System (APIS) identifies that nitrogen deposition currently exceeds critical loads at this site.[2] The main sources of nitrogen deposition on site are from livestock and imported emissions; only 15 per cent of the total nitrogen deposition originates from road transport.

Overall data suggests that the trend for NOx gases (one of the main contributors to nitrogen deposition) is improving across Caerphilly County Borough in which the SAC is located (UK Air Quality Archive). Importantly this site is also subject to local nutrients (direct fertilisation from grazing) and the recently implemented grazing regime may counteract the effects of air borne sources of eutrophication (through the removal of vegetation). Given the improvements to the site following the introduction of a managed grazing regime, the evidence indicates that these

[1] Countryside Council for Wales (CCW). 2008. Core Management Plan including conservation objectives for AberbargoedGrasslands Special Area of Conservation (SAC). March 2008.
[2] APIS (3 year average 2003-2005) The critical load is based on the dominant soil type in the 1km square in which the European site occurs

actions are currently of greater significance to the maintenance of site integrity than the impacts of airborne pollutants.

As noted above the pollutants of most concern are nitrogen oxides the impacts of which are most relevant close to source. Therefore, the contribution of NOx beyond the areas where development is located is likely to be negligible. The most acute impacts of NOx take place close to where they are emitted (generally within 200m of the roadside) but also have the potential to contribute to background pollution levels. Development proposed in the Deposit LDP and surrounding plans and programmes is unlikely to lead to a significant increase in traffic levels along the A4049.

Given the distance of the site from Monmouthshire and that site level management is identified as the most important factor in maintaining site integrity, **it is assessed that the Deposit Plan will not have likely significant in combination effects on Aberbargoed Grasslands SAC through increased atmospheric pollution.**

Llangorse Lake SAC

Llangorse Lake is a large shallow lake which is one of the few natural eutrophic lakes in Europe. The aquatic plant community and the wildlife that it supports is especially vulnerable to recreational pressure & disturbance both on the lake itself and around the margins. Given the distance of the site from the plan area (11.73km), there are no identified pathways for the impacts of development proposed in the Deposit LDP to directly affect the European site. However, given the sensitivities of the site there is the potential for the Deposit LDP to act in combination with surrounding plans and programmes to have significant effects on the European site through increased disturbance and reduced water quality.

Disturbance

Increases in population typically lead to increased recreational pressures on accessible sites, although survey data indicates that residential populations typically make recreational choices that are close to home (within 3 miles). Modest levels of development are proposed within 10km of the SAC. Llangorse Lake Advisory Group has drawn up guidelines that put in place a set of voluntary restrictions, which seek to manage recreational use of the lake. Zoning arrangements[3] are in place that permanently restrict access to certain areas of the lake and also include summer and winter exclusion zones. Given these management arrangements and the modest levels of development proposed within 10km of the SAC, it is assessed that **the Deposit LDP will not have likely significant in combination effects on Llangorse Lake SAC through increased disturbance.**

Water Quality

[3] Llangorse Lak Advisory Group (Dec 2007) Zoning Arrangements at Llangorse Lake. Available online: http://www.llangorselake.co.uk/0391-Llangorse%20Leaflet%205%20Dec%202007.pdf

The quality of the water at Llangorse Lake is very important to the maintenance of its plants and animals. The lake sits within a small, predominantly lowland catchment and so receives its water from a very limited area. As the small Afon Llynfi is the main outlet for water from the lake, the water flows through the lake very slowly and any pollutants entering the lake will potentially remain there for long periods. Much of the current pollution is in the form of nutrients from the air and from agricultural sources within the catchment. Extra nutrients in a naturally nutrient rich lake dramatically change the types of plants growing in the lake and the number and type of insects that are able to live among the plants. This has a knock-on effect on the fish, birds and mammals of the lake. Since the diversion directly to the Afon Llynfi of water that was causing eutrophication of the lake, the lake has been slowly recovering from a polluted state and it is vital that this recovery continues. Given the small size of the catchment along with mitigation provided by Deposit LDP policies (which seek to protect biodiversity and minimise the impact of development on the environment), it is assessed that **the Deposit LDP will not have likely significant in combination effects on Llangorse Lake SAC through reduced water quality.**

Appendix 4: Deposit LDP Policy Screening

Policy Screening: Categorising the Potential Effects of the Plan[1]	
Criteria Category	**Rationale**
Category A: No negative effect	
A1	Options/ policies that will not themselves lead to development e.g. because they relate to design or other qualitative criteria for development, or they are not a land use planning policy.
A2	Options/ policies intended to protect the natural environment, including biodiversity.
A3	Options/ policies intended to conserve or enhance the natural, built or historic environment, where enhancement measures will not be likely to have any negative effect on a European site.
A4	Options/ policies that positively steer development away from European sites and associated sensitive areas.
A5	General policy statements or policies which only express general information or political aspirations.
Category B: No significant effect	
B	Options/ policies that could have an effect but would not be likely to have a significant (negative) effect on a European site (alone or in-combination with other plans or projects) because the effects are trivial or 'de minimis' even if combined with other effects.
Category C: Likely significant effect alone	
C1	The option, policy could **directly affect** a European site because it provides for, or steers, a quantity or type of development onto a European site, or adjacent to it.
C2	The option, policy could **indirectly affect** a European site e.g. because it provides for, or steers, a quantity or type of development that may be very close to it, or ecologically, hydrologically or physically connected to it or it may increase disturbance as a result of increased recreational pressure.
C3	Proposals for a **magnitude of development** that, no matter where it is located, the development would be likely to have a significant effect on a European site.
C4	An option, or policy that makes provision for a quantity/ type of development, generally, (and may indicate a broad scale and / or one or more broad locations e.g. a particular part of the plan area) so a likelihood of a significant effect cannot be ruled out, but more precise scale and / or detailed location of the development is to be selected following **consideration of options in a later, more specific, lower tier plan**, subject to Habitats Regulations Appraisal.
C5	Options, policies or proposals for developments or infrastructure projects that **could block options or alternatives** for the provision of other development or projects in the future, which will be required in the public interest, that may lead to adverse effects on European sites, which would otherwise be avoided.

[1] Tyldesley, D., 2009, *Draft Guidance for Plan Making Authorities in Wales: The Appraisal of Plans under the Habitats Regulations* for Countryside Council for Wales CCW Bangor

Policy Screening: Categorising the Potential Effects of the Plan[1]	
Criteria Category	**Rationale**
C6	Options, policies or proposals which **depend on how the policies etc are implemented** in due course, for example, through the development management process. There is a theoretical possibility that if implemented in one or more particular ways, the proposal could possibly have a significant effect on a European site, and is not merely a general statement of policy.
C7	Any other options, policies or proposals that would be **vulnerable to failure** under the Habitats Regulations at project assessment stage; to include them in the plan would be regarded by the EC as 'faulty planning'.
C8	Any other proposal that may have an adverse effect on a European site, which might try to pass the tests of the Habitats Regulations at project assessment stage by arguing that the **plan provides the imperative reasons** of overriding public interest to justify its consent despite a negative assessment.
Category D: Likely significant effects in combination	
D1	The option, policy or proposal alone would not be likely to have significant effects but if its effects are combined with the effects of other policies or proposals **provided for or coordinated** by the Local Development Document (internally) the **cumulative** effects would be likely to be significant.
D2	Options, policies or proposals that alone would not be likely to have significant effects but if their effects are **combined with the effects of other plans and projects** and possibly the effects of other developments provided for in the Local Development Document as well, the combined effects are likely to be significant.
D3	Options or proposals that are, or could be, part of a **programme or sequence of development** delivered over a period, where the implementation of the early stages would not have a significant effect on European sites, but which would dictate the nature, scale, duration, location, timing of the whole project, the later stages of which could have adverse effects on such sites.

Deposit LDP Policy	Assessment Category	Can the element be changed at screening stage to avoid likely significant effect (LSE)	Likely Significant Effect (LSE) No X Yes ✓ Uncertain ?
Strategic Policies			
S1 - The Spatial Distribution of New Housing Provision	**D2**	The potential for the Deposit LDP to act in combination with other plans, programmes and projects to have significant effects on European sites is considered in Section 4 of the AA Report.	**?**
S2 - Housing Provision	**C2 & D2**	The site allocations screening (Appendix 5) assessed that development proposed at the locations identified in the policy will not have likely significant effects on European sites alone. The potential for the Deposit LDP to act in combination with other plans, programmes and projects to have significant effects on European sites is considered in Section 4 of the AA Report.	**?**
S3 - Strategic Housing Sites	**C2 & D2**	Refer above to Strategic Policy S2.	**?**
S4 - Affordable Housing	**D2**	Refer to Strategic Policy S1.	**?**
S5 - Community and Recreation Facilities	**A1**	Policy will not lead to development itself.	**X**
S6 - Retail Hierarchy	**A1**	Policy will not lead to development itself.	**X**
S7 - Infrastructure Provision	**A1**	Policy will not lead to development itself.	**X**
S8 - Enterprise and Economy	**D2**	Refer above to Strategic Policy S2.	**?**
S9 - Employment Sites Provision	**D2**	Refer to Strategic Policy S1.	**?**
S10 - Rural Enterprise	**D2**	Refer to Strategic Policy S1.	**?**
S11 - Visitor Economy	**D2**	Refer to Strategic Policy S1.	**?**
S12 - Sustainable Development	**A1 & A2**	Policy will not lead to development itself and also seeks to protect the natural environment.	**X**

S13 - Landscape, Green Infrastructure and the Natural Environment	**A3**	Policy intends to conserve or enhance the natural, built or historic environment.	**X**
S14 - Waste	**D2**	Refer to Strategic Policy S1.	**?**
S15 - Minerals	**D2**	Refer to Strategic Policy S1.	**?**
S16 - Transport	**D2**	Refer to Strategic Policy S1.	**?**
S17 - Place Making and Design	**A1**	Policy will not lead to development itself.	**X**
Development Management Policies			
H1 - Residential Development in Main Towns, Severnside Settlements and Primary Rural Settlements	**D2**	The potential for the Deposit LDP to act in combination with other plans, programmes and projects to have significant effects on European sites is considered in Section 4 of the AA Report.	**?**
H2 - Residential Development in Main Villages	**D2**	Refer to Development Management Policy H1.	**?**
H3 - Residential Development in Minor Villages	**D2**	Refer to Development Management Policy H1.	**?**
H4 - Conversion / Rehabilitation of Buildings in the Open Countryside for Residential Use	**C2**	Building conversion/ rehabilitation can be a significant issue where old/ disused buildings are valuable for bat habitats (Usk Bat Sites SAC & Wye Valley and Forest of Dean Bat Sites SAC). The Deposit LDP (Policy DES5 - Design for Wildlife) ensures that development proposals relating to barns, old or redundant buildings and buildings to be demolished are accompanied by a properly conducted ecological survey for protected species and, where necessary, should make appropriate provision for safeguarding any identified protected species and their habitats. It also requires that all proposals for the conversion or rehabilitation of buildings in the open countryside will be expected to provide a suitable nesting box for barn owls or bat roost within their design. Given the mitigation provided by Deposit LDP Policies, it is assessed that this policy will not have significant effects on European sites either alone or in combination.	**X**
H5 - Replacement Dwellings in the Open	**C2**	Refer to Development Management Policy H4.	**X**

Countryside			
H6 - Extension of Rural Dwellings	**D2**	Refer to Development Management Policy H1.	**?**
H7 - Affordable Housing Rural Exceptions	**D2**	Refer to Development Management Policy H1.	**?**
H8 - Gypsy, Traveller and Travelling Show People Sites	**D2**	Refer to Development Management Policy H1.	**?**
H9 - Flat Conversions	**D2**	Refer to Development Management Policy H1.	**?**
CRF1 - Retention of Existing Community Facilities	**A1**	Policy will not lead to development itself.	**X**
CRF2 - Outdoor Recreation /Public Open Space and Allotment Standards	**A1**	Policy will not lead to development itself.	**X**
CRF3 - Safeguarding Existing Recreational Facilities and Public Open Space	**A1**	Policy will not lead to development itself.	**X**
RET1 - Primary Shopping Frontages	**A1**	Policy will not lead to development itself.	**X**
RET2 - Central Shopping Areas	**A1**	Policy will not lead to development itself.	**X**
RET3 - Neighbourhood Centres	**D2**	Refer to Development Management Policy H1.	**?**
RET4 - New Retail Proposals	**D2**	Refer to Development Management Policy H1.	**?**
E1 - Protection of Existing Employment Land	**A1**	Policy will not lead to development itself.	**X**
E2 - Non-allocated Employment Sites	**D2**	Refer to Development Management Policy H1.	**?**
E3 - Working from Home	**D2**	Refer to Development Management Policy H1.	**?**
RE1 - Employment within Villages	**D2**	Refer to Development Management Policy H1.	**?**
RE2 - The Conversion or Rehabilitation of Buildings in the Open Countryside for Employment Use	**C2**	Refer to Development Management Policy H4.	**X**
RE3 - Agricultural Diversification	**D2**	Refer to Development Management Policy H1.	**?**
RE4 - New Agricultural and Forestry Buildings	**D2**	Refer to Development Management Policy H1.	**?**
RE5 - Intensive Livestock and Free Range Poultry Units	**D2**	Refer to Development Management Policy H1.	**?**
RE6 - Provision of Recreation, Tourism and Leisure Facilities in the Open Countryside	**D2**	Refer to Development Management Policy H1.	**?**
Policy T1 - Touring Caravan and Tented Camping Sites	**D2**	Refer to Development Management Policy H1.	**?**
Policy T2 - Visitor Accommodation	**D2**	Refer to Development Management Policy H1.	**?**

outside Settlements			
Policy T3 - Golf Courses	**C4**	The policy permits the development of golf courses subject to a number of criteria and detailed planning considerations. The potential impacts of proposals would be more appropriately addressed at the site level, when the size and location of the proposal is known.	**?**
SD1- Renewable Energy	**D2**	Refer to Development Management Policy H1.	**?**
SD2 - Sustainable Construction and Energy Efficiency	**A1**	Policy will not lead to development itself.	**X**
SD3 - Flood Risk	**D2**	Refer to Development Management Policy H1.	**?**
SD4 - Sustainable Drainage	**D2**	Refer to Development Management Policy H1.	**?**
LC1 - New Buildings in the Open Countryside	**D2**	Refer to Development Management Policy H1.	**?**
LC2 - Blaenavon Industrial Landscape World Heritage Site	**D2**	Refer to Development Management Policy H1.	**?**
LC3 - Brecon Beacons National Park	**D2**	Refer to Development Management Policy H1.	**?**
LC4 - Wye Valley AONB	**A1**	Policy will not lead to development itself.	**X**
LC5 - Protection and Enhancement of Landscape Character	**A1**	Policy will not lead to development itself.	**X**
LC6 - Green Wedges	**A3**	Policy intends to conserve or enhance the natural, built or historic environment.	**X**
GI1 - Green Infrastructure	**A3**	Policy intends to conserve or enhance the natural, built or historic environment.	**X**
NE1 - Nature Conservation and Development	**A2**	Policy intends to protect the natural environment.	**X**
EP1 - Amenity and Environmental Protection	**A2**	Policy intends to protect the natural environment.	**X**
EP2 - Protection of Water Sources and the Water Environment	**A2**	Policy intends to protect the natural environment.	**X**
EP3 - Lighting	**A3**	Policy intends to conserve or enhance the natural, built or historic environment.	**X**
EP4 - Telecommunications	**D2**		
EP5 - Foul Sewage Disposal	**A1**	Policy will not lead to development itself.	**X**
W1 - Waste Reduction	**A1**	Policy will not lead to development itself.	**X**
W2 - Waste Recovery Facilities:	**D2**		

Household			
W3 - Waste Management Facilities	**D2**	Refer to Development Management Policy H1.	**?**
W4 - Rural Composting	**D2**	Refer to Development Management Policy H1.	**?**
W5 - Waste Disposal by Landfill or Landraising	**D2**	Refer to Development Management Policy H1.	**?**
W6 - Waste Deposition on Agricultural Land for Agricultural Improvement Purposes	**D2**	Refer to Development Management Policy H1.	**?**
M1 - Local Building and Walling Stone	**D2**	Refer to Development Management Policy H1.	**?**
M2 - Minerals Safeguarding Areas	**A1**	Policy will not lead to development itself.	**X**
M3 - Mineral Site Buffer Zones	**A1**	Policy will not lead to development itself.	**X**
MV1 - Proposed Developments and Highway Considerations	**A1**	Policy will not lead to development itself.	**X**
MV2 - Sustainable Transport Access	**D2**	Refer to Development Management Policy H1.	**?**
MV3 - Public Rights of Way	**A1**	Policy will not lead to development itself.	**X**
MV4 - Cycleways	**D2**	Refer to Development Management Policy H1.	**?**
MV5 - Improvements to Public Transport Interchanges and Facilities	**D2**	Refer to Development Management Policy H1.	**?**
MV6 - Canals and Redundant Rail Routes	**A1**	Policy will not lead to development itself.	**X**
MV7 - Rear Access / Service Areas	**B**	Policy may have an effect but would not be likely to have a significant effect on a European site (alone or in combination) because the effects are trivial or 'de minimis' even if combined with other effects.	**X**
MV8 - Rail Freight	**D2**	Refer to Development Management Policy H1.	**?**
MV9 - Road Hierarchy	**A1**	Policy will not lead to development itself.	**X**
MV10 - Transport Routes and Schemes	**A1**	Policy will not lead to development itself.	**X**
DES1 - General Design Considerations	**A1**	Policy will not lead to development itself.	**X**
DES2 - Areas of Amenity Importance	**A1**	Policy will not lead to development itself.	**X**
DES3 - Advertisements	**B**	Refer to Development Management Policy MV7.	**X**
DES4 - Advance Tourism Signs	**B**	Refer to Development Management Policy MV7.	**X**
HE1 - Development in Conservation Areas	**A3**	Policy intends to conserve or enhance the natural, built or historic environment.	**X**
HE2 - Alterations to Unlisted Buildings in Conservation Areas	**A1**	Policy will not lead to development itself.	**X**
HE3 - Design of Shop Fronts in	**A3**	Policy intends to conserve or enhance the natural, built or	**X**

Conservation Areas		historic environment.	
HE4 - Roman Town of Caerwent	**A3**	Policy intends to conserve or enhance the natural, built or historic environment.	**X**
Site Allocation Policies			
SAH1 - Deri Farm, Abergavenny	**D2**	The site allocations screening (Appendix 5) assessed that development at this location will not have likely significant effects on European sites alone. The potential for the Deposit LDP to act in combination with other plans, programmes and projects to have significant effects on European sites is considered in Section 4 of the AA Report.	**?**
SAH2 - Crick Road, Portskewett	**D2**	Refer above to Site Allocation Policy SAH1.	**?**
SAH3 - Fairfield Mabey, Chepstow	**D2**	Refer above to Site Allocation Policy SAH1.	**?**
SAH4 - Wonastow Road, Monmouth	**D2**	Refer above to Site Allocation Policy SAH1.	**?**
SAH5 - Rockfield Farm, Undy	**D2**	Refer above to Site Allocation Policy SAH1.	**?**
SAH6 - Tudor Road, Wyesham	**D2**	Refer above to Site Allocation Policy SAH1.	**?**
SAH7 - Rural Secondary Settlements	**D2**	Refer above to Site Allocation Policy SAH1.	**?**
SAH8 - Main Villages	**D2**	Refer above to Site Allocation Policy SAH1.	**?**
AE1 - Identified Industrial and Business Sites	**C2 & D2**	Refer above to Site Allocation Policy SAH1.	**?**
SAE2 - Identified Mixed Use Sites	**D2**	Refer above to Site Allocation Policy SAH1.	**?**
SAE3 - Protected Employment Sites	**D2**	Refer above to Site Allocation Policy SAH1.	**?**
SAT1 - Tourism Sites	**D2**	Refer above to Site Allocation Policy SAH1.	**?**
SAW1 - Identified Potential Waste Management Sites	**D2**	Refer above to Site Allocation Policy SAH1.	**?**

Appendix 5: Site Allocations Screening Matrix

The screening undertaken in the following matrix considers the potential for site allocations identified in the Monmouthshire Deposit LDP to have likely significant effects on European sites. A variety of information sources were used to carry out the screening in the matrix below, including information from the European site characterisations and strategic site studies. The screening matrix below has taken a precautionary approach when identifying possible European sites at risk, as recommended by WAG and good practice guidance.

Site Code/ Name	Area (Ha)	Capacity (dwellings)	Potential of Likely Significant Effect (LSE) *European Site Characterisations (qualifying features and vulnerabilities provided in Appendix 1)*	Potential to Mitigate through Avoidance Measures and Policy Measures/ Safeguards?	Residual Effect Yes/No
Strategic Sites					

SAH1 - Deri Farm, Abergavenny	8.5	300	Given the distance of European sites from this allocation, there are no pathways for development to have direct impacts on European sites.
			
			Sugar Loaf Woodlands SAC
			There is however, the potential for indirect impacts on the Sugar Loaf Woodlands SAC through increased recreation and atmospheric pollution. The site is approximately 600m away from the Sugar Loaf Woodlands SAC and is separated by existing residential and industrial development.
			
			The 300 dwellings proposed for the site will be phased over the life of the plan and any proposal is required to comply with LDP policies that seek to protect biodiversity and minimise the impact of development on the
				Policy mitigation/ safeguards in the Draft Deposit LDP:
				
				▪ Policy S5 - Community and recreation Facilities
				  ○ Policy CRF2 - Outdoor Recreation/ Public Open Space and Allotment Standards
				▪ Policy S7 - Infrastructure Provision
				▪ Policy S12 - Sustainable Development
				  ○ Policy SD3 - Flood Risk
				  ○ Policy SD4 - Sustainable Drainage
				▪ Policy S13 - Landscape, Green Infrastructure and the Natural Environment
				  ○ Policy LC6 - Green Wedges
					No

Site Code/ Name	Area (Ha)	Capacity (dwellings)	Potential of Likely Significant Effect (LSE) *European Site Characterisations (qualifying features and vulnerabilities provided in Appendix 1)*	Potential to Mitigate through Avoidance Measures and Policy Measures/ Safeguards?	Residual Effect Yes/No
			environment. According to the Core Management Plan[1] (CMP), site level management issues (grazing and habitat management) are the most important factor in returning the SAC to a favourable condition status. The SAC is not situated within 200m of any major roads that would see a significant increase in traffic as a result of the development proposed. The most acute impacts of NOx take place close to where they are emitted (generally within 200m of the roadside) but also have the potential to contribute to background pollution levels. Given this along with the mitigation provided by Deposit LDP policies (which seek to protect biodiversity and minimise the impact of development on the environment), it is assessed that development at this location will not have likely significant effects on the Sugar Loaf Woodlands SAC alone. Potential in combination effects on European sites are considered in Section 4 of the AA Report. **River Usk SAC** Site is approximately 2.6 km from the River Usk SAC and is within 100m of the Afon Gafenni, which is a tributary of the River Usk. There is the potential for indirect impacts on the SAC through reduced water quality of the Afon Gafenni. The 300 dwellings proposed for the site will be phased over the life of the plan and any proposal is required to	○ Policy NE1 - Nature Conservation and Development ○ Policy EP1 - Amenity and Environmental Protection ○ Policy EP2 - Protection of Water Sources and the Water Environment ○ Policy EP3 - Lighting ■ Policy S16 - Transport ○ Policy MV1 - Proposed Developments and Highway Considerations ■ Policy S17 - Place Making and Design	

[1] Countryside Council for Wales (CCW). 2008. Core Management Plan including conservation objectives for Sugar Loaf Woodlands Special Area of Conservation (SAC). Version 3, Feb 2008.

Site Code/ Name	Area (Ha)	Capacity (dwellings)	Potential of Likely Significant Effect (LSE) *European Site Characterisations (qualifying features and vulnerabilities provided in Appendix 1)*	Potential to Mitigate through Avoidance Measures and Policy Measures/ Safeguards?	Residual Effect Yes/No
			comply with LDP policies that seek to protect biodiversity and minimise the impact of development on the water environment. Given the size and capacity of the site along with the mitigation provided by Deposit LDP policies (which seek to protect biodiversity and minimise the impact of development on the environment), it is assessed that this allocation will not have likely significant effects alone on the River Usk SAC. Potential in combination effects on European sites are considered in Section 4 of the AA Report.		
SAH2 - Crick Road, Portskewett	9.5	250	Given the distance of European sites from this allocation, there are no pathways for development to have direct impacts on European sites. **Severn Estuary SAC, SPA & Ramsar** There is however, the potential for indirect impacts on the Severn Estuary SAC, SPA and Ramsar through increased recreation, increased atmospheric pollution and increased pressure on sewerage capacity. The site is approximately 850m from the Severn Estuary SAC, SPA and Ramsar and is separated by existing residential and industrial development. The 250 dwellings proposed for the site will be phased over the life of the plan and the mitigation provided by Deposit LDP policies that seek to protect biodiversity and minimise the impact of development on the environment. Given this, it is assessed that development at this location will not have likely significant effects on the Severn Estuary SAC, SPA and Ramsar alone.	Refer to the Deposit LDP Policy mitigation outlined for SAH1 - Deri Farm, Abergavenny.	No

Site Code/ Name	Area (Ha)	Capacity (dwellings)	Potential of Likely Significant Effect (LSE) *European Site Characterisations (qualifying features and vulnerabilities provided in Appendix 1)*	Potential to Mitigate through Avoidance Measures and Policy Measures/ Safeguards?	Residual Effect Yes/No
			Potential in combination effects on European sites are considered in Section 4 of the AA Report.		
SAH3 - Fairfield Mabey, Chepstow	16.1	300 (3 ha industrial)	**River Wye SAC** The site is an existing industrial estate adjacent to the River Wye SAC. There is potential for development at this site to have direct impacts on the River Wye SAC through habitats loss and fragmentation (loss of vegetation adjacent to river corridor), disturbance (noise, light and vibration) and changes to the water environment (reduced water quality through pollution/contamination impacts and changes to water regimes). An ecological appraisal of the site was undertaken in 2010[2] as part of further assessments needed for the evidence base of strategic sites. CCW was consulted during the preparation of the ecological appraisal report where it was determined that the SAC site boundary may be considered to extend between 5 and 25m into the proposed development site. As a result, the scheme for the site has been developed to avoid any construction within the SAC itself with the intention that the development will respect the SAC and provide a sympathetic interface with the river. The appraisal states that assuming proposals will avoid adverse changes to sewerage/ drainage systems feeding into the River Wye, or loss of suitable areas important for protected species or habitats, it is anticipated that reasonable mitigation measures could be agreed to protect and enhance any	It is recommended that the wording in Policy SAH3 is amended to read: *i) project level HRA can satisfactorily demonstrate that appropriate mitigation and compensatory measures (if required) can be taken during construction and operation of the scheme to avoid adverse effects (either direct or indirect) on the integrity of the River Wye SAC.* The findings of this HRA/AA, including the site analysis and the assessment of in-combination effects in the AA Report, should support future assessment work. Refer to the Deposit LDP Policy mitigation outlined for SAH1 - Deri Farm, Abergavenny.	No

[2] Ecological Appraisal (June 2010) Fairfield Mabey Site, Station Road, Chepstow. Prepared by CSa Environmental Planning on behalf of Beachley (Chepstow) Ltd.

Site Code/ Name	Area (Ha)	Capacity (dwellings)	Potential of Likely Significant Effect (LSE) *European Site Characterisations (qualifying features and vulnerabilities provided in Appendix 1)*	Potential to Mitigate through Avoidance Measures and Policy Measures/ Safeguards?	Residual Effect Yes/No
			ecological interests of the protected sites. The ecological appraisal concludes by stating that, "whilst the results of detailed surveys are required to fully assess the impacts from redevelopment and the nature of any mitigation that may be required, it is considered that given the current nature of this largely industrial site, there is good potential for development to come forwards which avoids unacceptable residual nature conservation impacts[3]". Any proposal for the site must comply with LDP policies that seek to protect biodiversity and minimise the impact of development on the environment and Policy SAH3 (Fairfield Mabey, Chepstow) requires that for planning permission to be granted it must be satisfactorily demonstrated that appropriate mitigation and compensatory measures can be taken in relation to the adjoining River Wye SAC. Given that any proposal must demonstrate appropriate mitigation measures and compensatory measures can be taken with regard to the River Wye SAC, it is assessed that development at this location will not have likely significant effects on the River Wye SAC alone. **Severn Estuary SAC, SPA & Ramsar** The River Wye flows into the Severn Estuary, therefore any impacts on the River Wye SAC have the potential to indirectly impact the Severn Estuary SAC, SPA and Ramsar. Based on the findings above for the River Wye		

[3] Ibid.

Site Code/ Name	Area (Ha)	Capacity (dwellings)	Potential of Likely Significant Effect (LSE) *European Site Characterisations (qualifying features and vulnerabilities provided in Appendix 1)*	Potential to Mitigate through Avoidance Measures and Policy Measures/ Safeguards?	Residual Effect Yes/No
			SAC, it is assessed that development at this location will not have likely significant effects on the Severn Estuary SAC, SPA & Ramsar alone. **Wye Valley Woodlands SAC** The site is also approximately 600m from the Wye Valley Woodlands SAC. It is separated from the European site by existing residential and industrial development. Alone development at this site is not likely to have significant effects on the SAC as the CMP[4] identifies that site level management issues, particularly the control of deer grazing, are the most important factor to maintain the integrity of designated features. The unit of the SAC (18) closest to the allocation (600m away) is identified by the CMP as currently having no conservation management issues. Lesser Horseshoe Bats also form part of the qualifying interest of this SAC, with one of the conservation objectives relating to ensuring '*no loss or decline in quality of linear features (such as hedgerows and tree lines), which the bats use as flight lines'*. Given the physical separation between the site and the closest SAC unit and the mitigation provided by Deposit LDP policies (which seek to protect biodiversity and minimise the impact of development on the environment), it is assessed that development at this location will not have likely significant effects on the Wye Valley Woodlands SAC or the qualifying interests alone.		

[4] Countryside Council for Wales (CCW). 2008. Core Management Plan including conservation objectives for Wye Valley Woodlands Special Area of Conservation (SAC). 14th April 2008.

Site Code/ Name	Area (Ha)	Capacity (dwellings)	Potential of Likely Significant Effect (LSE) *European Site Characterisations (qualifying features and vulnerabilities provided in Appendix 1)*	Potential to Mitigate through Avoidance Measures and Policy Measures/ Safeguards?	Residual Effect Yes/No
			Potential in combination effects on European sites are considered in Section 4 of the AA Report.		
SAH4 - Wonastow Road, Monmouth	26.9	400 (6.5 ha industrial)	Given the distance of European sites from this allocation, there are no pathways for development to have direct impacts on European sites. The site is separated from the nearest European site - the River Wye SAC approximately 1.3km away - by the settlement of Monmouth. Parcels of the Wye Valley Woodlands SAC are located to the east of the River Wye around Monmouth, with the closest parcel approximately 2 km from the Wonastow Road site. Undesignated woodland parcels border the Wonastow Road site to the south and north west and could potentially be used by foraging Lesser Horseshoe bats, which form part of the qualifying interest of the SAC. However, the risk of indirect effects such as interruption of bat flight lines associated with the development is considered minimal based on its physical separation from the nearest woodland SAC parcel and the protection measures within policy SAH4 which preclude development in part of the site locally designated as a Site of Importance for Nature Conservation (SINC) – effectively the southern part of the site. Any proposal for the site must comply with LDP policies that seek to protect biodiversity and minimise the impact of development on the environment. This along with the phasing of development over the plan period will ensure that development at this site alone will not have likely	Refer to the Deposit LDP Policy mitigation outlined for SAH1 - Deri Farm, Abergavenny.	No

Site Code/ Name	Area (Ha)	Capacity (dwellings)	Potential of Likely Significant Effect (LSE) *European Site Characterisations (qualifying features and vulnerabilities provided in Appendix 1)*	Potential to Mitigate through Avoidance Measures and Policy Measures/ Safeguards?	Residual Effect Yes/No
			significant effects on European sites. Potential in combination effects on European sites are considered in Section 4 of the AA Report.		
SAH5 - Rockfield Farm, Undy	10.4	200 (4 ha industrial)	Given the distance of European sites from this allocation, there are no pathways for development to have direct impacts on European sites. The site is situated alongside the M4 and existing residential development and is approximately 2km from the nearest European site (Severn Estuary SAC, SPA and Ramsar). Any proposal for the site must comply with LDP policies that seek to protect biodiversity and minimise the impact of development on the environment, it is therefore assessed that development at this site will not have likely significant effects on European sites alone. Potential in combination effects on European sites are considered in Section 4 of the AA Report.	Refer to the Deposit LDP Policy mitigation outlined for SAH1 - Deri Farm, Abergavenny.	No

Site Code/ Name	Area (Ha)	Capacity (dwellings)	Potential of Likely Significant Effect (LSE) *European Site Characterisations (qualifying features and vulnerabilities provided in Appendix 1)*	Potential to Mitigate through Avoidance Measures and Policy Measures/ Safeguards?	Residual Effect Yes/No
Urban Sites & Rural Secondary Settlements - Residential					
SAH6 - Tudor Road, Wyesham	2.05	35	Given that the site is not within or adjacent to a European site there are no pathways for development to have direct impacts. The site is approximately 350m from the Wye Valley Woodlands SAC, however, given the size and capacity of the site along with the mitigation provided by Deposit LDP policies (which seek to protect biodiversity and minimise the impact of development on the environment), it is assessed that development at this location will not have likely significant effects on the Wye Valley Woodlands SAC alone. Potential in combination effects on European sites are considered in Section 4 of the AA Report.	Policy mitigation/ safeguards in the Draft Deposit LDP: ■ Policy S5 - Community and recreation Facilities ○ Policy CRF2 - Outdoor Recreation/ Public Open Space and Allotment Standards ■ Policy S7 - Infrastructure Provision ■ Policy S12 - Sustainable Development ○ Policy SD3 - Flood Risk ○ Policy SD4 - Sustainable Drainage ■ Policy S13 - Landscape, Green Infrastructure and the Natural Environment ○ Policy LC6 - Green Wedges ○ Policy NE1 - Nature Conservation and Development ○ Policy EP1 - Amenity and Environmental Protection ○ Policy EP2 - Protection of Water Sources and the Water Environment ○ Policy EP3 - Lighting ■ Policy S16 - Transport ○ Policy MV1 - Proposed Developments and Highway Considerations ■ Policy S17 - Place Making and Design	No

Site Code/ Name	Area (Ha)	Capacity (dwellings)	Potential of Likely Significant Effect (LSE) *European Site Characterisations (qualifying features and vulnerabilities provided in Appendix 1)*	Potential to Mitigate through Avoidance Measures and Policy Measures/ Safeguards?	Residual Effect Yes/No
H7(i) Cwrt Burrium, Monmouth Road, Usk	0.66	20	Given the size and capacity of the site, along with the mitigation provided by Deposit LDP policies (which seek to protect biodiversity and minimise the impact of development on the environment), it is assessed that development at this site will not have likely significant effects on European sites alone. Potential in combination effects on European sites are considered in Section 4 of the AA Report.	Refer to the Deposit LDP Policy mitigation outlined for SAH6 - Tudor Road, Wyesham.	No
H7(ii) Chepstow Road, Raglan	1.5	45	Refer to the assessment for H7(i) Cwrt Burrium, Monmouth Road, Usk.		No
H7(iii) Land to south of School Lane, Penperlleni	1.34	40	Refer to the assessment for H7(i) Cwrt Burrium, Monmouth Road, Usk.		No

Site Code/ Name	Area (Ha)	Capacity (dwellings)	Potential of Likely Significant Effect (LSE) *European Site Characterisations (qualifying features and vulnerabilities provided in Appendix 1)*	Potential to Mitigate through Avoidance Measures and Policy Measures/ Safeguards?	Residual Effect Yes/No
Main Villages - Residential					
H8(i) (a) Land adjacent to village hall, Cross Ash	0.4	10	Taking into account the size and capacity (5 to 15 dwellings) of the sites, none of the rural main village allocations are within, adjacent to, or at a distance that are likely to result in significant effects on European sites. Given this, along with the mitigation provided by Deposit LDP policies (which seek to protect biodiversity and minimise the impact of development on the environment), it is assessed that development at these sites will not have likely significant effects on European sites alone. Potential in combination effects on European sites are considered in Section 4 of the AA Report.	Policy mitigation/ safeguards in the Draft Deposit LDP: ■ Policy S5 - Community and recreation Facilities ○ Policy CRF2 - Outdoor Recreation/ Public Open Space and Allotment Standards ■ Policy S7 - Infrastructure Provision ■ Policy S12 - Sustainable Development ○ Policy SD3 - Flood Risk ○ Policy SD4 - Sustainable Drainage ■ Policy S13 - Landscape, Green Infrastructure and the Natural Environment ○ Policy LC6 - Green Wedges ○ Policy NE1 - Nature Conservation and Development ○ Policy EP1 - Amenity and Environmental Protection ○ Policy EP2 - Protection of Water Sources and the Water Environment ○ Policy EP3 - Lighting ■ Policy S16 - Transport ○ Policy MV1 - Proposed Developments and Highway	No
H8(i)(b) Land adjacent to Cross Ash Garage	0.19	5			
H8(ii) Land at Well Lane, Devauden	0.46	15			
H8(iii) Land to south east of Dingestow	0.50	15			
H8(iv) Land to west of Grosmont	0.6	15			
H8(v) Land to the north of Little Mill	0.52	15			
H8(vi) Land to rear of village hall, Llandewi Rhydderch	0.17	5			
H8(vii) Land to the east of Llandogo	0.62	15			
H8(viii) Land to the north west of Llanellen	0.54	15			
H8(ix) Land at Ton Road, Llangybi	0.33	10			
H8(x)(a) Land to the rear of the Carpenter's Arms,	0.22	5			

Site Code/ Name	Area (Ha)	Capacity (dwellings)	Potential of Likely Significant Effect (LSE) *European Site Characterisations (qualifying features and vulnerabilities provided in Appendix 1)*	Potential to Mitigate through Avoidance Measures and Policy Measures/ Safeguards?	Residual Effect Yes/No
Llanishen				Considerations ▪ Policy S17 - Place Making and Design	
H8(x)(b) Land adjacent Church Road, Llanishen	0.17	5			
H8(xi) Land to the north of Llanvair Kilgeddin	0.17	5			
H8(xii) Land to west of Mathern	0.50	15			
H8(xiii) Land to the south west of Penallt	0.34	10			
H8(xiv) Hill Farm, Pwyllmeyric	0.55	15			
H8(xv)(a) Land to east of Shirenewton (south of minor road)	0.17	5			
H8(xv)(b) Land to east of Shirenewton (north of minor road)	0.16	5			
H8(xvi) Land adjacent Trellech School	1.68	15			
H8(xvii) Land adjacent Wern Gifford, Pandy.	0.49	15			

Site Code/ Name	Area (Ha)	Capacity (job potential)	Potential of Likely Significant Effect (LSE) [In Combination] *European Site Characterisations (qualifying features and vulnerabilities provided in Appendix 1)*	Potential to Mitigate through Avoidance Measures and Policy Measures/ Safeguards?	Residual Effect Yes/No
Industrial and Business Sites					
E1a Wales One, Magor (West)	4	1,289	The site is identified as being a flagship site suitable for business park developments and is approximately 3.8km from the nearest European site (Severn Estuary SAC, SPA & Ramsar). Given the distance of European sites from this allocation and the type of development proposed, there are no impact pathways for development to have significant effects on European sites. It is assessed that development at this site will not have likely significant effects on European sites alone, given the mitigation provided by LDP policies that seek to protect biodiversity and minimise the impact of development on the wider environment, Potential in combination effects on European sites are considered in Section 4 of the AA Report.	Policy mitigation/ safeguards in the Draft Deposit LDP: ■ Policy S5 - Community and recreation Facilities ○ Policy CRF2 - Outdoor Recreation/ Public Open Space and Allotment Standards ■ Policy S7 - Infrastructure Provision ■ Policy S12 - Sustainable Development ○ Policy SD3 - Flood Risk ○ Policy SD4 - Sustainable Drainage ■ Policy S13 - Landscape, Green Infrastructure and the Natural Environment ○ Policy LC6 - Green Wedges ○ Policy NE1 - Nature Conservation and Development ○ Policy EP1 - Amenity and Environmental Protection ○ Policy EP2 - Protection of Water Sources and the Water Environment ○ Policy EP3 - Lighting ■ Policy S16 - Transport ○ Policy MV1 - Proposed Developments and Highway Considerations ■ Policy S17 - Place Making and Design	No

Site Code/ Name	Area (Ha)	Capacity (job potential)	Potential of Likely Significant Effect (LSE) [In Combination] *European Site Characterisations (qualifying features and vulnerabilities provided in Appendix 1)*	Potential to Mitigate through Avoidance Measures and Policy Measures/ Safeguards?	Residual Effect Yes/No
E1b Quay Point, Magor	19.6	1,962	The site is identified as being a flagship site suitable for business park developments and is approximately 3.2km from the nearest European site (Severn Estuary SAC, SPA & Ramsar). Given the distance of European sites from this allocation and the type of development proposed, there are no impact pathways for development to have significant effects on European sites. It is assessed that development at this site will not have likely significant effects on European sites alone, given the mitigation provided by LDP policies that seek to protect biodiversity and minimise the impact of development on the wider environment, Potential in combination effects on European sites are considered in Section 4 of the AA Report.	Refer to the Deposit LDP Policy mitigation outlined for E1a Wales One, Magor (West).	No
E1c Gwent Europark, Magor	13.3	581	Considering the size and capacity of the allocation, distance from European sites as well the mitigation provided by Deposit LDP policies that seek to protect biodiversity and minimise the impact of development on the wider environment, it is assessed that development at this site will not have likely significant effects on European sites alone. Potential in combination effects on European sites are considered in Section 4 of the AA Report.	Refer to the Deposit LDP Policy mitigation outlined for E1a Wales One, Magor (West).	No
E1d Westgate Business Park, Llanfoist	5	576	Refer to the assessment E1c Gwent Europark, Magor.		No
E1e Ross Road,	1.5	158	Refer to the assessment E1c Gwent Europark, Magor.		No

Site Code/ Name	Area (Ha)	Capacity (job potential)	Potential of Likely Significant Effect (LSE) [In Combination] *European Site Characterisations (qualifying features and vulnerabilities provided in Appendix 1)*	Potential to Mitigate through Avoidance Measures and Policy Measures/ Safeguards?	Residual Effect Yes/No
Abergavenny					
E1f Newhouse Farm, Chepstow	4	200	Refer to the assessment E1c Gwent Europark, Magor.		No
E1g South Woodside, Usk	1.3	142	The site is approximately 30m from the River Usk SAC and lies between an existing industrial estate and playing field. It is considered suitable for B1uses, with the potential for 142 jobs. There is potential for development at this site to have direct impacts on the River Usk SAC through disturbance (noise, light and vibration) and changes to the water environment (reduced water quality through pollution/contamination impacts and changes to water regimes). The potential impacts of proposed development on the designated features would most appropriately be addressed at the project level. Project level HRA would provide a detailed site level analysis and consideration of effects on water quality from site drainage and from inappropriate construction methods/timing that could create acoustic barriers to fish movement. Potential in combination effects on European sites are considered in Section 4 of the AA Report.	It is recommended that the supporting text of Policy SAE1 incorporates the following text: *Any proposals for site E1g South Woodside, Usk must be accompanied by a project level HRA that can satisfactorily demonstrate that appropriate mitigation and compensatory measures (if required) can be taken during construction and operation of the scheme to avoid adverse effects (either direct or indirect) on the integrity of the River Usk SAC.* Refer to the Deposit LDP Policy mitigation outlined for E1a Wales One, Magor (West).	No
E1h Pill Row, Severnbridge Ind. Est., Caldicot	1	106	Refer to the assessment E1c Gwent Europark, Magor.		No
E1i Severnbridge Central, Caldicot	0.58	67	Refer to the assessment E1c Gwent Europark, Magor.		No
E1j Beaufort Park, Chepstow	0.42	50	Refer to the assessment E1c Gwent Europark, Magor.		No

Site Code/ Name	Area (Ha)	Capacity	Potential of Likely Significant Effect (LSE) [In Combination] *European Site Characterisations (qualifying features and vulnerabilities provided in Appendix 1)*	Potential to Mitigate through Avoidance Measures and Policy Measures/ Safeguards?	Residual Effect Yes/No
Mixed Use					
E2a Wonastow Road, Monmouth	6.5	651	This allocation was assessed as part of strategic allocation SAH4. Please refer to the assessment for Policy SAH4 - Wonastow Road, Monmouth.		No
E2b Fairfield Mabey, Chepstow	2.8	401	This allocation was assessed as part of strategic allocation SAH3. Please refer to the assessment for Policy SAH3 - Fairfield Mabey, Chepstow.		No
E2c Rockfield Farm, Undy	4	516	This allocation was assessed as part of strategic allocation SAH5. Please refer to the assessment for Policy SAH5 - Rockfield Farm, Undy.		No

Site Code/ Name	Proposal	Potential of Likely Significant Effect (LSE) [In Combination] *European Site Characterisations (qualifying features and vulnerabilities provided in Appendix 1)*	Potential to Mitigate through Avoidance Measures and Policy Measures/ Safeguards?	Residual Effect Yes/No
Tourism				
Hendre Mansion, Monmouth	Suitable for a new build hotel or conversion to hotel or other services accommodation and new build self-catering accommodation	None of the proposed tourism developments are at a distance or size that is likely to result in significant impacts on European sites. It is assessed that development at these sites will not have likely significant effects on European sites alone. Potential in combination effects on European sites are considered in Section 4 of the AA Report.		No
Piercefield House, Chepstow	Suitable for conversion to hotel and other serviced accommodation			
Croft-y-Bwla, Monmouth	Suitable for new build hotel accommodation			
Portal Road, Monmouth	Suitable for new build hotel accommodation			

Site Code/ Name	Area (Ha)	Capacity	Potential of Likely Significant Effect (LSE) [In Combination] *European Site Characterisations (qualifying features and vulnerabilities provided in Appendix 1)*	Potential to Mitigate through Avoidance Measures and Policy Measures/ Safeguards?	Residual Effect Yes/No
Waste					
W1b Quay Point, Magor	19.2	N/A	These sites are identified as being suitable for in-building waste management facilities, subject to detailed planning considerations. The allocations are either part of existing waste disposal or management sites (W1m, W1(i) & W1(ii))or form part of proposed B2 employment/ industrial allocations (W1b, W1d, W1e & W1f). Given that the proposed waste allocations are part of larger employment/ industrial allocations and/ or existing waste disposal and management sites it is not likely that development would lead to direct impacts on European sites. It is considered that appropriate site level mitigation (robust site level management plan) is available to address the potential impacts of waste management facilities on European sites. Further consideration will need to given to any proposals once the size and type of waste management facility is known. It is assessed that the development of in-building waste management facilities at these sites will not have likely significant effects on European sites alone, given the mitigation available at the site level and provided by Deposit LDP policies that seek to protect biodiversity and minimise the impact of development on the wider environment. Potential in combination effects on European sites are considered in Section 4 of the AA Report.		No
W1d Westgate Business Park, Llanfoist	5	N/A			
W1e Ross Road (including Junction Yard), Abergavenny	2.5	N/A			
W1f Newhouse Farm, Chepstow	4	N/A			
W1(i) Five Lanes, Caerwent	2.57	N/A			
W1(ii) Llanfoist Civic and Transfer Station	2.09	N/A			