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# Habitats Regulations Assessment of the Dee and Western Wales River Basin Management Plans (2015 Updated plans)

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## Contents

1.0	Introduction .....	1
1.1	The Dee and Western Wales River Basin Management Plans.....	1
1.2	Introduction to Habitats Regulations Assessment.....	1
1.3	HRA Process Overview .....	2
1.4	An overview of the Plans .....	4
1.5	Determining whether the plan should be subject to HRA.....	8
1.6	Consideration of European sites in the Plan.....	8
2.0	Habitats Regulations Assessment .....	9
2.1	Initial screening of RBMP measures.....	9
2.2	European Site screening .....	13
2.3	Summary of Screening stage for locally assigned measures .....	17
3.0	Test of Likely Significant Effect .....	18
3.1	Assessment of likely significant in combination effects of the RBMP.....	18
4.0	Conclusion of Test of Likely Significant Effect .....	24
	Annex 1: Maps of Management Catchments.....	28
	Annex 2: (All) Measures Screening Matrix.....	30
	Annex 3: TLSE Screening Matrix.....	31

## 1.0 Introduction

### 1.1 The Dee and Western Wales River Basin Management Plans

This document sets out the strategic Habitat Regulations Assessment (HRA) of the Western Wales and Dee River Basin Management Plans (RBMPs).

The Western Wales River Basin Management Plan (RBMP) has been produced by Natural Resources Wales as the responsible authority for river basin planning in Wales. As part of the Dee River Basin District (RBD) is within England, Natural Resources Wales has worked closely with the Environment Agency to produce the Dee RBMP. The plans are a requirement of the Water Framework Directive (WFD) (2000/60/EC).

The plans describe the pressures facing the water environment and set objectives for rivers, lakes, estuaries, coastal and ground waters to cover the period 2015-2021. The plans outline the priority actions ('Measures') that are needed to improve the environment, the benefits those actions could achieve and who is best placed to deliver them. The measures seek to address the significant water management issues.

The plans are an update to the plans published in 2009 as the WFD legislation requires that they are reviewed in six yearly cycles. The draft 2015 updated plans were consulted on in late 2014 and this Habitat Regulations Assessment (HRA) was developed alongside the final plans.

This HRA is complementary to and informs, the Strategic Environmental Assessments (SEAs) that have been undertaken as the RBMPs are developed.

### 1.2 Introduction to Habitats Regulations Assessment

In England and Wales, the Conservation of Habitats and Species Regulations (SI 490, 2010)<sup>1</sup>, termed the 'Habitats Regulations', implements the EU 'Habitats Directive' (Directive (92/43/EEC) on the Conservation of natural habitats and of wild flora and fauna) and certain elements of the 'Birds Directive' (2009/147/EC)<sup>2</sup>. This legislation provides the legal framework for the protection of habitats and species of European importance in England and Wales.

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<sup>1</sup> SI 490, 2010 consolidates various amendments made to The Conservation (Natural Habitats, &c.) Regulations 1994 (SI 2716, 1994). Amendments: The Conservation of Habitats and Species (Amendment) Regulations 2011 (SI 625, 2011) and The Conservation of Habitats and Species (Amendment) Regulations 2012 (SI 1927, 2012).

<sup>2</sup> Council Directive 2009/147/EC on the conservation of wild birds replaces Council Directive 79/409/EEC; it covers sites classified as the most suitable territories for bird species listed in Annex I of the Directive and regularly occurring migratory birds (termed Special Protection Areas (SPAs)).

The protected sites comprise Special Areas of Conservation (SAC) and Special Protection Areas (SPA), and the Habitats Regulations are also applied to candidate SACs (cSAC), potential Special Protection Areas (pSPA) and Ramsar sites<sup>3</sup> (sites designated under the 1971 Ramsar Convention for their internationally important wetlands). These sites are referred to collectively in this report as European sites.

Regulation 9(5) of the Habitats Regulations requires that a competent authority (Natural Resources Wales for these plans) must consider the requirements of Habitats Directive in exercising any of its functions. Article 6(3) of the Habitats Directive defines the requirements for assessment of plans and projects potentially affecting European sites. This requires that a competent authority, before deciding to undertake, or give any consent, permission or other authorisation for a plan or project which is likely to have a significant effect on a European site, and is not directly connected with or necessary to the management of that site, must make an Appropriate Assessment of the implications for that site in view of that site's conservation objectives.

It is important to note that this HRA is being undertaken at a strategic level across the scale of RBDs. Also, that the plans generally set the strategic framework to influence individual projects, which could potentially result in significant effects on European sites. This plan level HRA therefore identifies where potential effects (positive and negative) could occur, seeks to influence measure selection and also how the measures will be implemented to avoid adverse effects on European sites. The HRA has not tried to make conclusions on significant effect where insufficient information is available. Where it is unclear or cannot be demonstrated that a RBMP measure will not have a significant effect, we have screened it out of the RBMP HRA, but defer it down to the project level HRA.

We have focused the assessment on the measures that Natural Resources Wales or the Environment Agency would undertake and that would lead to physical interventions that could lead to significant effects.

### 1.3 HRA Process Overview

European Commission guidance on the Habitats Directive<sup>4</sup> and guidance on the Habitats Regulations<sup>5</sup> sets out several stages to the carrying out of assessments required under Article 6(3) of the Habitats Directive. We refer to this process as 'Habitats Regulations Assessment' (HRA). Figure 1, below, presents an overview of the HRA process.

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<sup>3</sup> The current Planning Policy and Technical Advice Note (TAN) 5 extends the same protection at a policy level to listed Ramsar sites to that afforded to sites which have been designated under the Birds and Habitats Directives as part of the European Union (EU) Natura 2000 network.

<sup>4</sup> European Commission, 2001. Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. November 2001. Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC. January 2007.

<sup>5</sup> Planning Policy Wales. Technical Advice Note (TAN) 5, Nature Conservation and Planning. Welsh Government, September 2009. Annex 6: The appraisal of development plans in Wales under the provisions of the Habitats Regulations.

**Figure 1 Principal Stages in the HRA Process (Article 6(3))**



## 1.4 An overview of the Plans

The WFD requires member states to meet the following objectives:

- Prevent deterioration in the status of surface waters and groundwater
- Achieve Protected Sites objectives and standards by 2021 (Protected Sites in this context include water dependent European sites as well as areas protected for bathing water, drinking water, shellfish areas, nitrate vulnerable zones and sensitive areas ~ areas sensitive to discharge from sewage treatment works)
- Aim to achieve WFD Good Ecological and Chemical Status across all water bodies by 2021
- Aim to achieve good ecological potential and good surface water chemical status for artificial and heavily modified water bodies.

The draft Plans identified that the main significant issues for the water environment in the Dee and Western Wales RBDs were as follows:

- **Physical modifications.** Man made changes to the natural habitat, for example poorly designed or redundant flood defences and weirs, and changes to the natural river channels for land drainage and navigation and shellfisheries on estuaries and in coastal waters. These modifications can cause changes to natural flow levels, excessive build-up of sediment, and the loss of the habitat that wildlife needs to thrive.
- **Pollution from sewage and waste water.** Waste water can contain large amounts of nutrients (such as phosphorus and nitrates), ammonia, bacteria and other damaging substances
- **Pollution from towns, cities and transport.** Rainwater running over manmade surfaces and carrying pollutants into waters, toxic substances from contaminated land, atmospheric pollution causing acidification and sewage from houses 'misconnected' to surface water drains rather than sewers.
- **Pollution from rural areas.** Poor agricultural practice and forestry can result in nutrients and sediments affecting the water environment (also known as 'diffuse rural pollution').
- **Pollution from mines.** Contaminated water draining from mines, most of which are now abandoned.
- **Invasive Non-Native Species.** The presence of invasive non-native plants and animals in our watercourses poses a threat to biodiversity, increases flood risk, affects the state of our water environment and costs the economy billions per annum.

In addition to those listed above, the following issue was included in the Dee:

- **Abstraction and flow.** Taking too much water from rivers lakes and underground causes problems for wildlife and reduces the water available for people to use.

The plans set condition objectives for water bodies (e.g. getting to Good Ecological status, or moving from Poor to Moderate Ecological Status) and then identify the locations where action has been identified as a priority for delivery. In Wales this has been done by identifying 34 priority (Target) water bodies where (affordable) measures can be undertaken to improve water body status by Natural Resources Wales.

Additional sites have been identified where action could be undertaken by Welsh Water as part of the National Environment Programme; a programme of work Natural Resources Wales identifies for the next Water Company Asset Management Plan (AMP). The measures are required to mitigate / remediate point source impacts on receptors from Phosphorous and Ammonia. They are considered to present a relatively low risk to European sites and features, as is the measure to reduce diffuse pollution at source and would generally benefit European Sites. Project level HRA would be required where a European site or sites were identified as potentially being affected by these measures, triggered by the consenting process.

In England, work is organised at the Operational Catchment level and so priority water bodies have not been defined in the same way. All Operational Catchments in the English part of the Dee have been included in the planning process and measures applied more widely than in Wales, and in some cases work would be required by other organisations for the measure to be achieved. Some measures have been assigned a higher levels of confidence for success than others. The lower confidence measures are not being published in the final plans due to a lack of certainty they will deliver an outcome and therefore may not be implemented. However, they are included in the HRA (identified as Not Highly Certain in Annex 3) as the HRA was developed alongside the final Plan for all measures.

Figure 2 below shows the priority water bodies identified in Wales in blue hatching. More detailed maps for each management catchment are included within Annex 1.

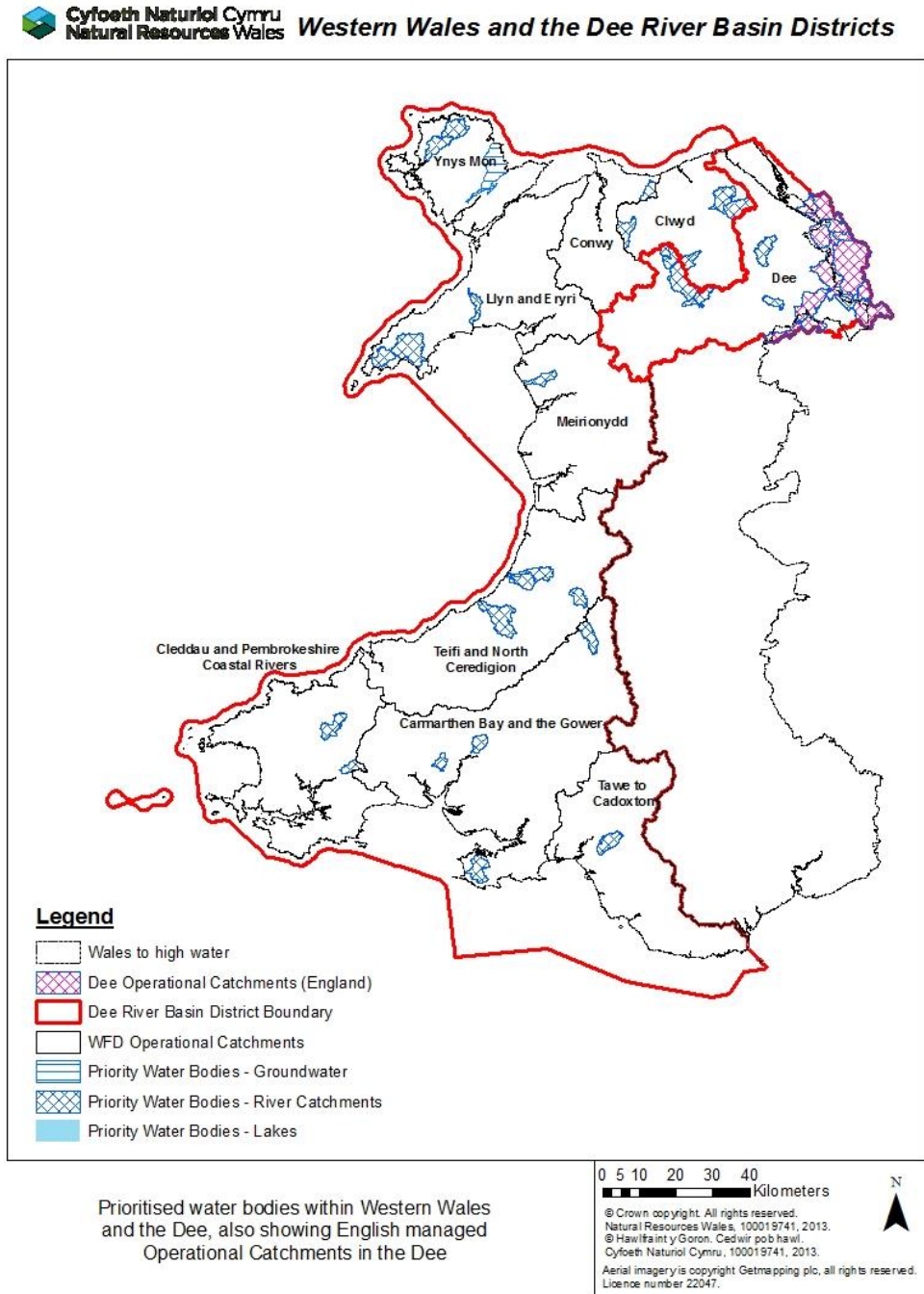
The Dee is both a management catchment and a RBD. Western Wales RBD contains the nine management catchments shown on the map, which are:

**Table 1 Management Catchments in Western Wales RBD**

Carmarthen Bay and the Gower	Meirionnydd
Cleddau and Pembrokeshire Coastal Rivers	Tawe to Cadoxton
Clwyd	Teifi and North Ceredigion
Conwy	Ynys Mon
Llyn and Eryri	



**Figure 2 - Overview map of Management Catchments**



Once the priority water bodies were defined, the plans have then identified specific measures in each water body that seeks to meet the status objective by 2021. Some water

bodies have more than one measure assigned. Measures were selected from a list that is included in Annex 2. This is a list from the Catchment Planning System Tool that is used in River Basin planning. The measures (at Tier 1 level of detail – the least detailed tier) address these themes:

- To control or manage point source inputs
- To control or manage diffuse source inputs
- To control or manage abstraction
- To improve regulated flows
- To improve modified habitat
- To control or manage non-native invasive/alien species

## 1.5 Determining whether the plan should be subject to HRA

The plans, by their nature, are designed to improve our environment and hence should be complementary to the management of European sites. However, the plans include measures that could result in physical interventions in the environment and consequently, there is potential for effects on European sites located on, adjacent to or linked with (e.g. downstream of) measures. Natural Resources Wales have therefore determined that the Dee and Western Wales RBMPs should be subject to a HRA.

This HRA has been produced as one document to cover both the Western Wales and Dee River Basin Management Plans. Within the document it has been identified which plan information relates to.

## 1.6 Consideration of European sites in the Plan

There are a large number of European Sites located within the Western Wales and Dee RBDs. Every Management Catchment contains European sites. Many of these European Sites are dependent on the water environment, and a large number are not in favourable condition (see section 2.2).

In order to address the issues in relation to the condition of European Sites, a number of work streams have been taking place.

### **LIFE programme**

As part of the LIFE Natura 2000 Programme for Wales, Natural Resources Wales is developing Prioritised Improvement Plans (PIPs) for all Natura 2000 sites in Wales (including water dependent sites / features). On cross-border sites with England, a single cross border plan known as a Site Improvement Plan (SIP) is being produced (apart from the River Dee and Bala Lake SAC which has a PIP). PIPs are prioritised, costed action plans which identify issues and risks affecting sites and also identify sources of funding

and delivery timescales. Thematic Plans are also being produced by the LIFE Natura 2000 Programme and they identify key strategic actions to address cross cutting issues identified as affecting Natura 2000 sites in Wales. Thematic Plans will address key strategic issues to European Sites. For example, there will be thematic plans for diffuse water pollution, invasive species and flood and coastal erosion. Natural Resources Wales are also reviewing Core Management Plans for European sites to ensure that the targets are accurate and reflect latest knowledge.

Natural Resources Wales have tried to maximise benefits to European sites to be delivered by the Plans by using the PIPs and Core Management Plans to inform the process of selecting measures. However, as these two work streams have been running in parallel, further links may still be possible between the PIPs and RBMP actions in the future. This will allow further benefits to European sites to be realised. Any new measures that are identified will have to be screened for HRA at a project level.

Where a RBMP measure has been proposed specifically with this overall aim of achieving favourable conservation status for a European Sites in mind, this has been identified within the HRA. Those measures that are not likely to lead to significant adverse effects on that European site, as they were proposed specifically with the European site condition objectives in mind (and as long as they will not affect any other sites) can be screened out. Further information is provided in section 2.1 below on Measures screening.

### **Integrated planning workshops**

The process of getting to a list of prioritised water bodies and measures in Wales was aided by integrated planning workshops. One workshop was held for each management catchment across the RBD's. At these workshops, the relevant Natural Resources Wales technical experts (Natural Resource Management Teams) with knowledge of that area were brought together to discuss the measures. The attendees of the workshops included Conservation experts (Protected Sites Officer, Protected Species Officer, Biodiversity Officer) and, during the water body and measure prioritisation process, they considered and input the potential effects on European sites (positive and negative). This allowed the Habitats Regulations Assessment to inform the prioritisation process and captured expert knowledge on the European sites from the workshops.

Further information on the European sites is presented in section 2.2 and maps showing the distribution of sites is shown in Figures 3 -12 in Annex 1.

## **2.0 Habitats Regulations Assessment**

### **2.1 Initial screening of RBMP measures**

Measures screening has been undertaken in the following stages:

- 1.0 Screening of National measures
- 2.0 Screening of locally assigned measures
- 3.0 Measures screening where European Site benefit has been established (Measures proposed solely to get a site to Favourable Condition, and nothing else, and where it won't impact any other European features with the site, or other European sites)
- 4.0 Other screening type, e.g. Ongoing measures already assessed.

Further detail is provided below regarding this process. Measures that were not screened out by steps 1-4 above were then taken forward to Stage 2, Test of Likely Significant Effect that is reported in Annex 3.

### **Step 1 Screening measures assigned nationally**

National measures apply to the whole of Wales, England, or the United Kingdom. In general these set the legislative, policy or strategic approach. Local measures are specific to the RBD or part of it. In Wales, the local measures are generally specific to a water body level, whereas in England they relate to Operational Catchments.

A full list of National Measures is included in the draft Plans and a refined list is included in the final Plans. The national measures generally set policy and strategic approach, and do not have location information associated with them. For example, they indicate that programmes such as the National Habitat Creation Programme will take place, the SMP2 (Shoreline Management Plan) will be implemented, SuDS best practice promoted, pesticide protocols followed etc. The national measures are fairly wide ranging in what they seek to achieve, but will all benefit the environment in some way. As a result of these measures not being spatial, and not leading directly to physical works that could impact European sites, they have been screened out from the HRA. Future programmes of works that results from these measures would be screened for HRA in accordance with the Habitats Directive and Natural Resources Wales best practice.

### **Step 2 Measure screening undertaken for locally assigned measures**

We propose to focus the HRA on measures that set the framework for physical interventions that could have a significant adverse effect on a European site at a local level.

Measures are described in three tiers of detail in the plan (Tier 1, 2 and 3 from the Catchment Planning System database). Tier 1 provides a general description of the Measure type e.g. diffuse pollution measure, whereas Tiers 2 and 3 provide more detail about what the measure entails. For example:

Tier 1 Measure - To control or manage diffuse source inputs; leads to:  
 Tier 2 Measure - Reduce diffuse pollution at source; leads to:  
 Tier 3 Measure - Farm Infrastructure

We undertook screening of all local measures at all Tiers (i.e. the full list provided by the Catchment Planning System). We did this before measures were prioritised for affordability (in Wales) as it enabled us to flag any measures that would have an unacceptable impact on European sites and should not be progressed (although none were identified). Also, it identified measures that did not require further consideration in the HRA.

We screened out, with justification, measures that are advisory, management activities or technical desk based work and have no pathways for potential effects on European Sites. We have presented our screening in Annex 2 and have colour coded the spreadsheet as follows:

**Table 2 Procedure for Measures screening in Annex 2**

<b>Screening</b>	<b>Description</b>	<b>Measure assessed further in HRA</b>
Green – OUT	Measure would not, by its nature, lead to actions that could directly impact a European site.	No
Yellow - IN	Measure is unlikely to lead to adverse effects on a European site, but has been screened in on a precautionary basis due to uncertainty.	Yes
Orange – IN	Further consideration of measure will be needed on a case by case basis to identify impacts on European sites.	Yes
Red - IN	Measure likely to have an unacceptable significant effect on a European Site and should be reviewed.	Yes (although none were identified)

After considering the potential impacts of measures on European sites at all tiers, we found that we were able to screen out one measure fully from the HRA. The measures relating to invasive, non-native species are based around preventative measures and education and awareness, and could not give rise to significant interventions on the ground, therefore they are not considered likely to give rise to significant effects. Table 3 below summarises how many measures were taken forward into the HRA for each theme. At Tier two and three, additional measures were screened out (but not all measures from a Tier). This is shown in full in Annex 2.

**Table 3 Measures screening results summary**

<b>Code</b>	<b>Tier 1 Measure</b>	<b>Screening Result summary</b>	<b>Example Measure Screened in and out</b>
1	To control or manage point source inputs	Screened in 12 measures from this heading at Tier 3 Screened out 8 measures from this heading at Tier 3	IN - Sewerage system re-design and rebuild OUT - Prohibit/control uses of certain substances/chemicals
2	To control or manage diffuse source inputs	Screened in 12 measures from this heading at Tier 3 Screened out 11 measures from this heading at Tier 3	IN - Land use change OUT - Improve chemical storage and use
3	To control or manage abstraction	Screened in 8 Tier 3 measures from this heading Screened out 6 measures from this heading at Tier 3	IN - Relocate discharge OUT - Reduction of leakage
4	To improve regulated flows	Screened in 1 measures from this heading at Tier 3 Screened out 2 measures from this heading at Tier 3	IN - Re-engineering of the river where the flow regime cannot be modified OUT None screened out at Tier 3. Tier 2 example - Appropriate management of impoundment
5	To improve modified habitat	Screened in 22 measures from this heading at Tier 2/3 Screened out 8 measures from this heading at Tier 3	IN - Remove structures *OUT - Preserve and restore habitats
6	To control or manage non-native invasive/alien species	All measures screened out	OUT - Use of existing legislative powers to reduce risk

\* Only applies if habitats being restored are European site features (or directly supported European site features), and where it does not affect any other European site features or other European sites.

**Step 3 – Measures screening where European Site benefit has been established (measures proposed to get a site to Favourable Condition, and nothing else, and where it won't impact any other European features within the site, or other European sites)**

This step requires consideration of the plan in respect of whether it is directly connected with or necessary for the management of European Sites.

Although the plan as a whole is not related to the management of European sites, PIPs and SIPs outline the priority actions required to improve the condition of European sites'

qualifying features, and are therefore directly necessary for their management. The measure prioritisation process took these PIP and SIP actions into account where possible, and the draft PIPs will continue to be reviewed to see if links can be established with the Plans.

It was considered that any measure that was proposed to meet PIP or SIP actions could therefore be screened out if they would not impact another European site. One measure was screened out on this basis (Llyn Eiddew-mawr), although a number of other measures will contribute to favourable condition, they have not been proposed solely for this purpose. This information has been cross-referenced with the PIPs and included in Annex 3.

#### **Step 4 Other reasons for screening out**

Measures that are ongoing and already subject to approved HRA could be screened out, but none were identified.

Some water bodies were prioritised, but no measure was required, so these could be screened out.

Where there was any uncertainty, measures were screened into the next stage of the assessment (Test of Likely Significant Effect).

#### **2.2 European Site screening**

The Western Wales plan area has 59 water dependent SACs, 13 water dependent SPAs and 10 Ramsars. The Dee plan area has 6 water dependent SACs, 3 water dependent SPAs and 6 Ramsars. The condition of the features within these sites is shown in Tables 4 and 5 below

**Table 4: European Site water protected areas current condition and objectives in Western Wales RBD**

<b>Current condition Number of European Sites designated habitats and species</b>	
Favourable: Maintained	28
Favourable: Recovered	4
Favourable: Un-classified	22
Unfavourable: Recovering	21

Unfavourable: No change	38
Unfavourable: Declining	29
Unfavourable: Un-classified	86
Destroyed: Partially	0
Destroyed: Completely	0
Not assessed	124
<b>Total</b>	<b>352</b>

**Table 5 European Site water protected areas current condition and objectives in Dee RBD**

<b>Current condition Number of European Sites designated habitats and species</b>	
Favourable: Maintained	0
Favourable: Recovered	1
Favourable: Un-classified	5
Unfavourable: Recovering	1
Unfavourable: No change	10
Unfavourable: Declining	3



Unfavourable: Un-classified	16
Destroyed: Partially	0
Destroyed: Completely	0
Not assessed	20
Total	56

The HRA needs to consider not just water dependent features, as terrestrial features could also be impacted. Annex 1 contains figures showing all of the European sites located within each of the Management Catchments, overlaid with the priority water bodies. The total number of European sites within each area is shown below:

**Table 6 European sites relevant to the HRA**

Management Catchment	Number of each site			
	Ramsar	SAC	SPA	Grand Total
Carmarthen Bay and the Gower	1	11	3	15
Cleddau and Pembrokeshire Coastal Rivers		12	5	17
Clwyd	2	7	4	13
Conwy		6	3	9

Llyn and Eryri	2	16	5	23
Meirionnydd	1	11	6	18
Tawe to Cadoxton	2	12	1	15
Teifi and North Ceredigion	1	9	1	11
Ynys Mon	1	9	4	14
Dee	6	12	4	22

To ensure the HRA is focussed on the sites that are likely to be affected by the plan, a European Site screening exercise was then undertaken to identify:

- Sites with a direct link - a site within or crossing the priority water body
- Sites with an indirect link - this was generally extended to site within the next adjacent catchment, unless a broader link was known.

This site identification was carried out using GIS and the results cross-checked with databases. Local knowledge was also used to cross-check the data.

**Table 7 European sites screened into the HRA for Western Wales RBD**

SACs	SPAs	Ramsar Sites
<b>Sites where a Direct Link has been identified to a priority water body</b>		
Gower Commons	Elenydd	Cors Caron
Teifi	Seacliffs of Lleyn	
Cwm Doethie	Mynydd Cilan, Trwyn y Wylfa ac Ynysoedd Sant Tudwal	
Cleddau Rivers	Liverpool Bay	
Lleyn Peninsula and the Sarnau		
Meirionnydd Oakwoods and Bat Sites		
Morfa Harlech a Morfa Dyffryn		
Rhinog		
Halkyn Mountain		
Seacliffs of Lleyn		
Angelsey Fens		
<b>Sites where an indirect link has been identified to a priority water body</b>		
Carmarthen Bay & Estuaries	None	None
Twyi		

SACs	SPAs	Ramsar Sites
Lleyn Peninsula and the Sarnau		
Cardigan Bay		

**Table 8 European sites screened into the HRA for Dee RBD**

SAC	SPAs	Ramsar
<b>Sites where an direct link has been identified to a priority water body</b>		
Berwyn and South Clwyd Mountains	None	Midland Meres and Mosses Phase 1 and 2
River Dee and Bala Lake		
Brown Moss SAC		
Fenn's, Whixhall, Bettisfield, Wem and Cadney Mosses SAC		
<b>Sites where an indirect link has been identified to a priority water body</b>		
River Dee and Bala Lake	None	Midland Meres and Mosses Phase 1 and 2

### 2.3 Summary of Screening stage for locally assigned measures

- Following Step 2, 38 measures were screened out based on the measure not leading to a physical interventions that could impact a European site (Annex 3).
- Following Step 3, one measure at Llyn Eiddew-mawr was screened out as it was proposed in order to get a European site to favourable condition (Annex 3) and would not affect any other European sites.
- Following Step 4, no measures were screened out as ongoing and subject to an existing agreed HRA (Annex 3). Some measures were identified as ongoing, but they were already screened out for other reasons.
- Following European site screening 14 SACs, 4 SPAs and 3 Ramsar sites were screened in for potential direct impacts, and 5 SACs and one Ramsar site for potential indirect impacts (Annex 3 and Tables 7 and 8).

Approximately 79 measures were taken forward to the next stage, Test of Likely Significant Effect.

## 3.0 Test of Likely Significant Effect

The Test of Likely Significance focussed on the potential effects of screened in measures on the European sites screened in during the site screening process. The results are documented in Annex 3 (Colum R). This was undertaken based on the specific water bodies in Wales and all Operational Catchments in England to allow ease of reference when the measures are taken forward at project or lower tier plan level. The results below (section 4) show a summary of the findings on a European Site basis to allow consideration of in combination effects.

### 3.1 Assessment of likely significant in combination effects of the RBMP

The Habitats Regulations require that the HRA examines the potential for the RBMP to have a significant effect either alone or in combination with other plans or projects. The HRA has not been able to make conclusions regarding significance of effect for the 19 European Sites as project level detail is not sufficient to undertake an assessment. Therefore, it is also not possible to assess in-combination effects in a meaningful way at a Plan level, when the individual effect is not known. Where HRA has been deferred to the project level, the assessment of in-combination effects will also be considered in the project level assessment.

Table 9 considers which plans may potentially contribute to effects on European Sites in combination with the Dee and Western Wales RBMPs.

**Table 9 In combination effects**

Name of Plan	Links between plans and potential in combination effects on European Sites	Mitigation and control measures
<p>Western Wales and Dee Flood Risk Management Plans (FRMPs)</p>	<p>These Plans aim to deliver the “National flood and coastal erosion risk management strategy for Wales, 2011” by setting out measures to manage flood risk from 2015 to 2021 and beyond. Works are proposed on the ground and therefore there are potential for in combination effects with the RBMPs.</p> <p>European Sites that were identified in the FRMP HRAs as requiring project level HRA, that also require project level HRA for this Plan are:</p> <ul style="list-style-type: none"> <li>• River Dee and Bala Lake SAC</li> <li>• Cors Caron Ramsar</li> <li>• Cardigan Bay SAC</li> <li>• Carmarthen Bay and Estuaries SAC</li> <li>• Seacliffs of Lleyl SAC</li> <li>• Anglesey Fens SAC</li> <li>• Lleyl Peninsula and the Sarnau SAC</li> </ul> <p>The Floods Directive identifies that FRMPs and RBMPs are elements of integrated river basin management and that “the two processes should therefore use the mutual potential for common synergies and benefits”. The FRMP therefore includes measures to demonstrate Natural Resources Wales commitment to integrated river basin management and integrated natural resource management.</p> <p>Through the planning processes we have identified potential conflicts and synergies between RBMP and FRMP measures. To ensure this is carried through operationally, we are adding this</p>	<p>Project level EIA and HRA will be undertaken for projects emerging from the RBMP and FRMP. This will identify potential effects on European sites alone and in combination at a project level, as more detail emerges. This will focus on the 7 European sites identified as needing project level assessment within both the FRMP and the RBMP (see column on left). EIA and HRA input to the options appraisal process will seek to avoid, reduce or mitigate potential effects.</p>

	<p>data to the Communities at Risk Register that is associated with the FRMP to ensure that at the project stage early consideration is given to the RBMP issues. This will promote delivery of multiple environmental outcomes through flood risk management operations and promote early dialogue and consideration of potential conflicts.</p>	
North West and Severn Flood Risk Management Plans	<p>These are adjoining plans, so impacts will be similar to the Dee and Western Wales FRMP, but to a lesser extent.</p>	<p>Project level HRA will consider possible in combination effects.</p>
North West and Severn River Basin Management Plans	<p>The North West and Severn RBMPs will set out the measures required to achieve Good Ecological Status or Potential in Water bodies in the North West and Severn RBDs, which adjoin the Dee and Western Wales Plan areas. The Environment Agency has been working with Natural England and Natural Resources Wales to agree the approach to the Habitats Regulations Assessment which will be published with the plan.</p>	<p>Project level HRA will consider possible in combination effects.</p>
Environment Agency (2013) River Dee Catchment Abstraction Management Strategies (CAMS)	<p>The Dee is a heavily regulated river with releases from four major lakes/reservoirs controlling the flow. There are approximately 30 Public Water Supply abstraction licenses in the Dee CAMS area accounting for approximately 93% of all water abstracted in the Dee CAMS area. Another significant abstractor is the Rivers and Canals Trust.</p>	<p>Project level HRA to be undertaken and consider the most up to date information available for CAMS.</p>
Water Resource Management Plans Welsh Water United Utilities Dee Valley Water	<p>Provides details of how Water Companies will ensure that adequate water is available to meet the planned growth in population, housing and economic activity in its supply area, while taking account of climate change and minimising impacts on customers' bills and the environment. Options to address a deficit in water supply include: encouraging water efficiency, reducing leakages and seeking water resource through new or existing sources.</p>	<p>Projects delivered from the WRMP will undergo EIA and HRA at a project level where necessary. This will identify any potential effects on European sites alone and in combination at a project level, as more detail emerges. EIA and HRA input to the options appraisal process will seek to avoid, reduce or mitigate potential effects.</p>

	<p>The HRAs of the WRMPs concluded that they will have no significant or adverse effects on any European Site as a result of their implementation.</p> <p>There are links with the RBMPs as certain infrastructure such as reservoirs have a shared function of providing water resource but also allowing control of releases during periods of high flows. However, the main potential for in combination effects on European Sites will come from project delivery arising from the two plans, particularly if location and timing are close. There is insufficient detail on the timing and design of these projects and so in combination effects will need to be considered through the project level HRA's.</p>	
<p>Welsh National Marine Plan</p>	<p>The Welsh National Marine Plan is under development by Welsh Government and is unlikely to be published prior to the RBMP. It is therefore not possible or appropriate to consider in combination effects of the plans. However, there will clearly be links between the 2 plans in terms of management of the coast of Wales and Flood Risk Management will be an important factor in determining appropriate planning policies for the Welsh Coast.</p>	<p>Natural Resources Wales are engaged with the Marine Planning process and are consultees on the plan. As projects emerge from the RBMP, they will be assessed for in-combination effects at the project level as appropriate.</p>
<p>Wales Spatial Plan 2004 (Updated 2008)</p>	<p>The WSP set out cross cutting national spatial priorities. It encompasses the elements required to deliver sustainable development: services, land use and investment and provides a framework for developing national and regional perspectives, reflecting the distinctive needs of various communities across Wales. The HRA could not conclude that European sites would not be affected and so an appropriate assessment was undertaken. The WSP sets the framework for lower tier plans and the mitigation outlined in the appropriate assessment included the need for the lower tier plans to be subject to HRA and to provide training in undertaking HRA. As a result of the proposed avoidance and mitigation measures, the WSP HRA concluded no adverse effect on the integrity of European sites. The high level nature of the WSP and the RBMP makes it impractical to</p>	<p>EIA and HRA will identify any potential effects on European sites alone and in combination at a project level, as more detail emerges. EIA and HRA input to the options appraisal process will seek to avoid, reduce or mitigate potential effects.</p>

	determine potential in combination effects. However to WSP HRA does recognise the possible indirect effects of flood protection measures changing coastlines, riverbanks as well as the movement of water and sediment.	
Wales Rural Development Plan 2014-2020	The RDP aims to improve competitiveness and resilience of the agriculture and forestry sectors; safeguard and enhance the rural environment by encouraging sustainable land management practices; and promote strong, sustainable rural economic growth. The SEA of the RDP concluded that there is potential to protect and enhance ecosystem services and biodiversity values etc., but that it would be dependent upon funding availability. It also recommended that schemes emerging from the plan should consider biodiversity outcomes. No HRA of the RDP was available for comparison of in combination effects. There is potential for links between the plans, but in combination effects on European sites will need to be considered at a project level for schemes that emerge from this plan.	RBMP projects can consider the aims of the RDP, and seek to deliver similar benefits for biodiversity. Consideration of in combination effects is not possible at the strategic level as the RDP does not have a HRA. In combination effects on European sites will need to be considered at a project level for schemes that emerge from this plan.
Local / Unitary Development Plans (including National Park Authority Plans)	Promotion of growth within local development plans, depending on location, may place pressure on European sites. Development activities arising from local development plans could result in impacts on European sites through disturbance during construction, adverse effects from encroachment on habitats or species displacement, or indirect effects such as alterations to drainage, increased surface water run-off and diffuse / point source pollution. Significant interactions with the RBMPs are unlikely, given that RBMP measures screened into this assessment are mainly based on drainage issues.	Proposed developments and will be required to undergo EIA and HRA. This will identify any potential effects on European sites alone and in combination at a project level, as more detail emerges. EIA and HRA input to the options appraisal process will seek to avoid, reduce or mitigate potential effects.
Site Improvement Plans and Prioritised Improvement Plans	As part of the LIFE Natura 2000 Programme for Wales, Natural Resources Wales is developing Prioritised Improvement Plans (PIPs) for all Natura 2000 sites that are not currently in favourable condition (including water dependent sites / features). Thematic Plans will address key strategic issues to European Sites. On cross-border sites with England, a single cross border plan (known as a Site Improvement Plan – SIP) is being produced.	Ongoing work to strengthen linkages between plans



	<p>The link with RBMP is expected to be wholly positive as the RBMP is seeking to deliver PIP actions.</p> <p>For European sites screened into the HRA, we have cross referenced to the PIPs to indicate if the measure will help meet site condition objectives.</p>	
European site Core Management Plans	The link with RBMP is expected to be wholly positive as the RBMP is seeking to deliver Core Management Plan actions.	The Core Management Plans are screened for the need for HRA and SEA as they are reviewed.

## 4.0 Conclusion of Test of Likely Significant Effect

There were some limitations to undertaking the Tests of Likely Significance on a plan where the outcome of implementation of the measures is in some cases uncertain and will be subject to more detailed levels of assessment and project development. Whilst the location of the measures are broadly defined in the plan (the water bodies are identified, but the specific project locations are not), the specific activities that are likely to take place are not always known. For some measures, only details at Tier 1 were known, whereas for others, detail at level 3 was known.

Of the 20 European sites screened into the Test of Likely Significant Effect, 19 were assessed as requiring further assessment at the project level for one or more measure. The sites are listed in Table 10. Lyn Idwal Ramsar site was screened out from needing project level HRA for all measures. Four Operational catchments in England, (Alford Brooke, Henlake Brook, Wych Brook and Shotwick Brook) were screened out from requiring project level HRA. All other water bodies or Operational Catchments screened in project level HRA for at least one measure.

The proposals in a plan which make provision for a type of change, but not magnitude or specific location, is more appropriately assessed in a lower tier plan or projects. Deferring the HRA down to lower tier plan or project is subject to the following criteria:

- a. the higher tier plan appraisal cannot reasonably predict the effects on a European Site in a meaningful way; whereas
- b. the lower tier, which will identify more precisely the nature/scale/location of the development, and thus its potential effects, retains sufficient flexibility over the exact location, scale or nature of the proposals to enable an adverse effect on integrity to be ruled out (even if that would mean deleting the proposal); and
- c. the lower tier appraisal is required as a matter of law or Policy, so it can be relied upon

Natural Resources Wales and the Environment Agency undertake Environmental Assessment and HRA at a project level to ensure environmental impacts are prevented, reduced or mitigated and to maximise delivery of multiple environmental benefits. For capital projects that require construction, this is undertaken from inception of the project, through the initial assessment stage, options appraisal, outline design, detailed design and construction to ensure integration of environmental considerations with technical and economic considerations. This integration of environmental considerations ensures that the programme, design and location of the project can take into account the sensitivities of European Sites to avoid effects where possible. This is undertaken under legacy body policy and / or as a legal requirement. Non – capital projects are also subject to environmental assessment and HRA where necessary under Natural Resources Wales or legacy body policy, at a level proportionate to their size, nature and location.

The assessment above demonstrates that at a strategic-plan level, the measures can be screened as being not likely to have a significant effect on any European Sites, alone or in combination with other plans or projects. This is concluded in light of the range of avoidance and mitigation measures available.

Given this conclusion, there is no requirement to progress to the next stage of the Habitats Regulations assessment (an 'appropriate assessment' to examine the question of adverse effect on the integrity of European sites). Lower-tier assessments will be required and will be assisted by the information gathered in this high-level assessment, but their conclusions will not be influenced by this HRA, and each individual plan or project must be assessed as necessary in order to meet the requirements of the Habitats Regulations. Regulatory controls are in place to identify any risks to European sites when the actions required to implement the measures are developed.

**Table 10: Key**

	Measure results in no likely significant effect on site
D	Measure requires project level HRA for Direct impact (site within same water body)
I	Measure requires project level HRA for Indirect impact (site up or downstream of water body)

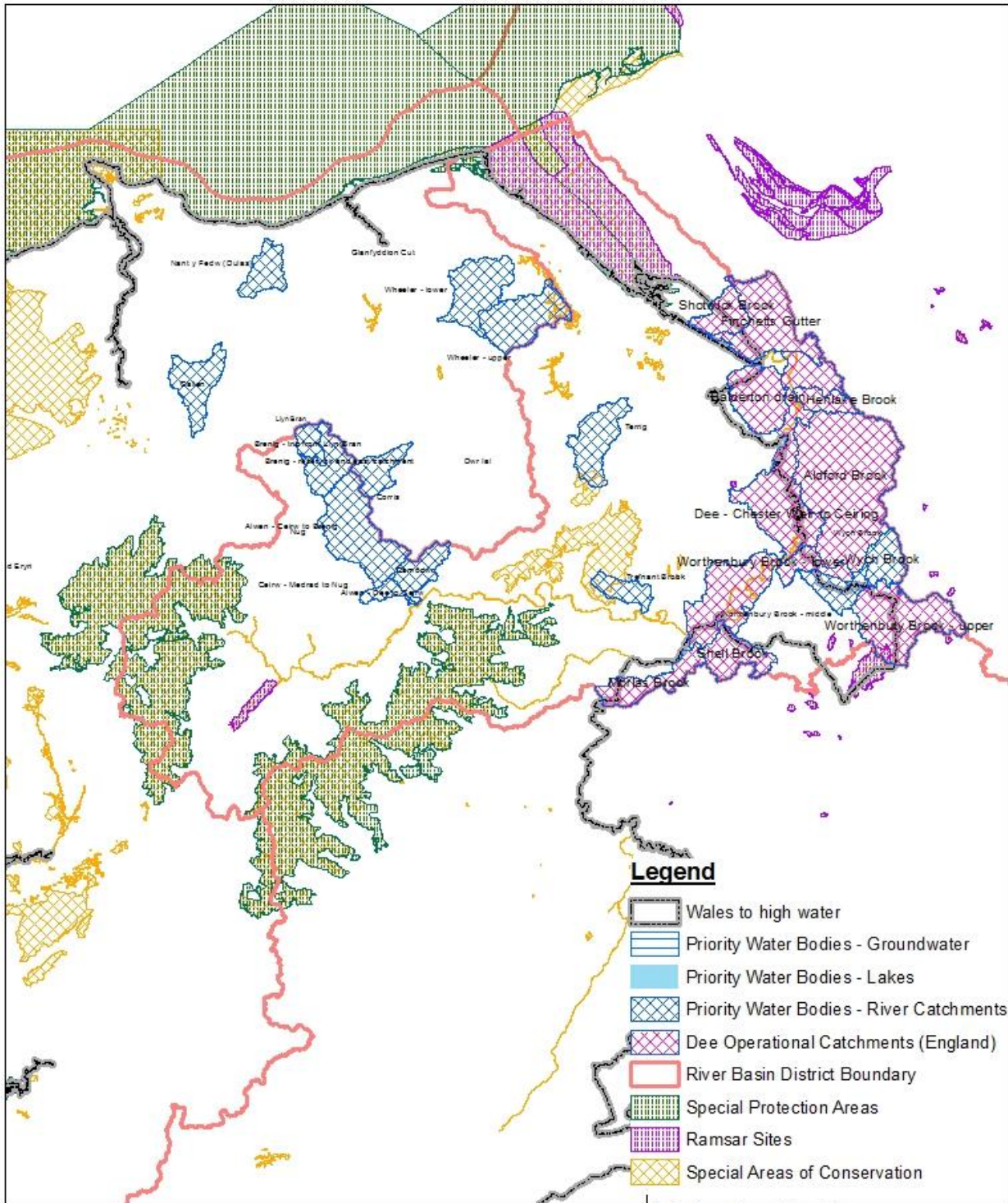
Table 10: Summary results of the Assessment of Likely Significant Effects		Western Wales								Dee (Wales)		Dee (England)									
		Burry Pill - headwaters to	Fflur - headwaters to confluence with	Doethie - headwaters to	Aeron - confluence with	Longford Brook - HW to conf with E.	Syfnwy - headwaters to	Soch	Wheeler - Upper	Ynys Mon Central Carboniferous	Trefnant Brook	Terrig	Worthenbury Lower	Alford Brook	Henlake Brook	Worthenbury Upper	Wych Brook	Finchetts Gutter	Balderton Drain	Shotwick Brook	Dee (Chester Weir to Ceirog)
Ramsars	Cors Caron		D																		
	Llyn Idwal																				
	Midland Meres and Mosses											D			D						I
SPAs	Elenydd			D																	
	Sea cliffs of Lleyn						D														
	Mynydd Cilan, Trwyn y Wylfa ac Ynysoedd Sant Tudwal						D														
SACs	Sea cliffs of Lleyn						D														
	Gower Commons	D																			

Carmarthen Bay and Estuaries	I																			
Teifi		D																		
Cwm Doethie			D																	
Cardigan Bay				I																
Cleddau Rivers					D	D														
Lleyn Peninsula and the Sarnau							D													
Halkyn Mountain								D												
Angelsey Fens									D											
Berwyn and South Clwyd Mountains										D	D									
Dee and Bala Lake										I		I					I	I		D
Brown Moss																D				
Fenn's, Whixall, Bettisfield, Wern and Cadney Mosses SAC																D				

Green highlighted text indicates that, following the Test of Likely Significant Effects, the European site or operational catchment is screened out from the need for project level HRA

## **Annex 1: Maps of Management Catchments**

### Dee Catchment Map



Prioritised water bodies and European Protected Sites within the Management Catchment

0 2 4 8 12 16 Kilometers

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## **Annex 2: (All) Measures Screening Matrix**



## **Annex 3: TLSE Screening Matrix**