Flood and Water Management Act 2010

Local Flood Risk Management Strategy and Action Plan

Habitats Regulations Assessment

Appropriate Assessment

DRAFT

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GLOSSARY

CCW	Countryside Council for Wales	
cSAC	Candidate Special Area of Conservation	
European Designated Site	Defined in this report as any SAC, SPA, cSAC, pSPA or Ramsar Site	
Habitats Regulations	the Conservation of Habitats and Species Regulations (2017)	
HRA	Habitats Regulations Assessment	
LFRMS	Local Flood Risk Management Strategy	
Natura 2000 Site	SPAs and SACs make up the Natura 2000 series. In the UK, Ramsar Sites have the same protection as these sites	
	In the UK, Ramsar Sites have the same protection	
Site	In the UK, Ramsar Sites have the same protection as these sites	
Site PPPs	In the UK, Ramsar Sites have the same protection as these sites Plans, Polices and Programmes	
Site PPPs pSPA	In the UK, Ramsar Sites have the same protection as these sites Plans, Polices and Programmes Potential Special Protection Area	
Site PPPs pSPA Ramsar	In the UK, Ramsar Sites have the same protection as these sites Plans, Polices and Programmes Potential Special Protection Area Sites protected under the Ramsar Convention	
Site PPPs pSPA Ramsar RCT	In the UK, Ramsar Sites have the same protection as these sites Plans, Polices and Programmes Potential Special Protection Area Sites protected under the Ramsar Convention Rhondda Cynon Taf	

EXECUTIVE SUMMARY

Under the Conservation of Species and Habitats Regulations (2017), a Habitats Regulations Assessment (HRA) is required of the Local Flood Risk Management Strategy (LFRMS) for Rhondda Cynon Taf. The Screening Exercise previously conducted on the initial cycle of the LFRMS between 2011-13 concluded that the potential effect on European Designated Sites was uncertain. An Appropriate Assessment was then carried out for the initial LFRMS by Rhondda Cynon Taf County Borough Councils Environmental Services Group.

This Appropriate Assessment is a second cycle Habitats Regulations Assessments required for the revised LFRMS. A review of the changes to the initial and second cycle LFRMS concluded the revision will not lead to significant environmental effects at a strategic level which have not already been identified and explored in the previous assessment.

In this Appropriate Assessment, information on the conservation objectives and the potential impact of the LFRMS on European Designated Sites was collated. The objectives and measures of the revised LFRMS were then analysed alone and in combination for likely significant effect on European Designated Sites.

The Appropriate Assessment concluded that six objectives and measures could affect the integrity of eight identified European Designated Sites. However, at this high level stage, these objectives and measures provide no indication which, if any, sites will be affected or if the effects will be significant in regards to the conservation objectives of the European Designated Sites. Significant affects are also unlikely, as the LFRMS aims to improve or not detrimentally affect European Designated Sites.

Due to this conclusion, there is no requirement to progress to the next stage of the HRA, the Assessment of Alternative Solutions. Any potential significant negative effects will be identified and managed through subsequent HRAs required by the Habitats Regulations.

This Assessment concludes that subsequent HRAs are required for any plans, programmes or polices related to, or that arise from the LFRMS that have the potential to affect any European Designated Site.

1. INTRODUCTION

Habitats Regulations Assessments (HRA) is a process that must take place to consider if a plan or project is likely to have a significant effect on a European designated site for its nature conservation interest. This report documents Appropriate Assessment of the HRA conducted on the revised Local Flood Risk Management Strategy (LFRMS) and Action Plan for Rhondda Cynon Taf County Borough Council (RCTCBC).

1.1 The Local Flood Risk Management Strategy

RCTCBC is a Lead Local Flood Authority (LLFA) and is required to develop, maintain, apply and monitor a LFRMS for their particular administrative area. In order to comply with new legislation and to enable more effective flood risk management, RCT's Flood Risk Management department have developed a revised LFRMS and Action Plan which also delivers on the requirements under the 2009 Flood Risk Regulations to produce a Flood Risk Management Plan (FRMP). The LFRMS and Action Plan (Local Strategy) applies to the administrative area of RCTCBC, covering approximately 424km² with a population of 237,497 (Census 2021).

The Local Strategy aims to address local flood risk (defined as flooding from surface water, groundwater and ordinary watercourse flooding such as small rivers, ditches and streams) and the risk associated with climate change. The Local Strategy aims to achieve more effective flood risk management by:-

- Ensuring a clear understanding of the risks of flooding and erosion, nationally and locally, so that investment in risk management can be prioritised more effectively;
- Setting out clear and consistent plans for risk management so that communities and businesses can make informed decisions about the management of the residual risk;
- Encouraging innovative management of flood and coastal erosion risks, taking account of the needs of communities and the environment;
- Forming links between the Local Strategy and local spatial planning;
- Ensuring that emergency plans and responses to flood incidents are effective and that communities are able to respond properly to flood warnings; and
- Helping communities to recover more quickly and effectively after incident.

The Local Strategy sets a framework for all major decision making affecting local flood risk management. It also helps to translate the National Strategy for Flood and Coastal Erosion Risk Management (National Strategy) into local terms, coordinating local level activities and actions against a backdrop of the national objectives.

The implications of the Local Strategy include:-

- Reduced local flood risk;
- Better health and wellbeing of individuals and communities;
- A more resilient built and natural environment;
- Better knowledge, understanding and awareness in regards to flood risk;
- Clearer stakeholder roles and responsibilities;
- Better investment decisions and allocation of funds for flood improvement works;
- Prioritised, effective flood risk plans; and
- A more natural environment.

The Local Strategy report contains strategic objectives for managing local flooding along with measures that state how this will be achieved (in section 2.4 details these aims, objectives and measures can be found). The roles and responsibilities of those involved in managing the risk of flooding and the functions that may be exercised by them are stated. A cost benefit analysis of the proposed measures can also be found and then the way in which the Local Strategy contributes to wider environmental objectives is discussed.

It is required that the Local Strategy is consistent with the National Strategy, produced by the Welsh Government. This has been achieved by working within the 5 over aching objectives of the National Strategy. A HRA has been conducted in the National Strategy and in this document, it states the requirement for further HRAs to be conducted on lower tier (i.e. local) Strategies and Plans.

1.2 Legislative Context

The Flood and Water Management Act (2010) implemented many of the recommendations from Sir Michael Pitt's Review of the widespread 2007 floods in the UK. It provides legislation for the sustainable management of risks associated with flooding and coastal erosion. It required a National Flood Risk Management Strategy to be written for Wales and defines LLFAs and 'Risk Management Authorities' that have special responsibilities and powers in regard to flood risk

management. Under the Act, RCT was given a set of new responsibilities for coordinating the management of local flood risk including: -

- The preparation of local flood risk management strategies;
- A duty to comply with the National Strategy;
- To co-operate with other authorities, including sharing data;
- A duty to investigate all flooding within its area, insofar as a LLFA consider it necessary or appropriate;
- A duty to maintain a register of structures and features likely to affect flood risk; and
- A duty to contribute to sustainable development.

Along with these duties, RCT was given a number of permissive (or optional) powers, including: -

- Powers to request information;
- Powers to designate certain structures or features that affect flood or coastal erosion risk;
- The expansion of powers to undertake works to include broader risk management actions; and
- The ability to cause flooding or coastal erosion under certain conditions.

In Wales, the Conservation of Habitats and Species Regulations (2017), referred to in this report as the 'Habitats Regulations', implements the EU Habitats Directive (92/43/EEC) on the conservation of natural habitats and of wild flora and fauna along with certain elements of the EU Birds Directive (2009/147/EC) on the conservation of wild birds. This legislation provides the legal framework for the protection of habitats and species of European importance in Wales.

HRA aims to assess the impacts of a plan, in combination with the effects of other plans and programmes, against the conservation objectives of European Designated Sites and to determine whether it would adversely affect the integrity of that site. Alternative options or mitigation measures should be explored to avoid any potential damaging effects if significant negative effects are predicted. If it is not possible to avoid or remove the identified effects assessed as arising from the plan implementation, then, if the plan makers wish to proceed with the policies/ proposals as set it must be demonstrated that there are Imperative Reasons of Overriding Public Interest (IROPI) to continue with the plan (Article 6(4) of the Habitats Directive).

Under the Habitats Regulations, a network of internationally important sites designated for their ecological status is defined. Table 1 below summarises the different types of designated site protected under these Regulations. In this report, these sites are collectively referred to as 'European Designated Sites'.

Type of site	Description
Special Areas of Conservation (SAC)	Areas are classified under the Habitats Directive and are designated for the conservation of a variety of important or threatened habitats, animals, and plant species, as defined in Annex I and II of the Directive. SACs can compromise of a range of habitat types, including upland areas, areas of moors, woodland, and coastal zones (including offshore).
candidate Special Areas of Conservation (cSAC)	Areas that are candidates for achieving SAC status; a site remains a cSAC until it has been formally designated as a SAC by UK Government.
Special Protection Areas (SPA)	Areas that are classified under the Birds Directive as being of international importance for the breeding, feeding, wintering or regularly occurring migratory birds. SPAs can comprise of a range of habitat types, including moorland, estuarine and marshland environments.
potential Special Protection Areas (pSPA)	Areas that have potential to achieve SPA status that are in the process of being assessed.
Ramsar sites	Wetlands of international importance for their ecology, including their fish assemblages, botany, zoology, limnology, or hydrology.

Table 1: Sites defined as 'European Designated Sites' in this Report

1.3 The Stages of Habitats Regulations Assessment

Stage One: Screening

This is the process which identifies, whether the strategy is directly connected with, or necessary to the management of European sites, the potential impacts upon European site/s of the strategy, either alone or in combination with other plans, and assesses the significance of those effects. During the initial cycle of RCT's Local Strategy in 2011-13, the 'Local Flood Risk Management Strategy, Habitats Regulations Assessment, Screening Report' documents this stage. If there is reasonable, scientific doubt that there might be an effect then stage two commences.

Stage Two: Appropriate Assessment

At this stage, the consideration of the potential impacts of the strategy on European site/s, either alone or in combination with other plans, with respect to the sites' conservation objectives. The purpose of the Appropriate Assessment is to assess the effect on European site/s integrity. Where adverse impacts are identified, an assessment of the potential mitigation of those impacts is undertaken. This Report forms the second cycle Appropriate Assessment for the revised Local Strategy.

Stage Three: Assessment of Alternative Solutions

Where it cannot be ascertained that the strategy will not adversely affect the integrity of a European site, the next stage is to examine alternative ways of achieving the objectives of the strategy that better respect the integrity of the European sites affected.

Stage Four: IROPI (Imperative Reasons of Overriding Public Interest) test and consideration of compensatory measures

Where no feasible alternative solutions exist and adverse effect on site integrity remains, the determination of whether the Strategy should proceed is by the test of imperative reasons of overriding public interest (IROPI). The imperative reasons may be of a social or economic nature, or where a site/s that hosts a priority natural habitat type or priority species, the reasons must be for human health, public safety or of primary importance to the environment, or for reasons specifically approved by the EC. If there are imperative reasons of overriding public interest, compensatory

measures must be taken to ensure that the overall coherence of the European sites is protected.

1.4 The Structure and Purpose of this Report

The Screening Stage of the HRA was previously conducted on the initial cycle of the Local Strategy in 2011-13. This stage identified and filtered European Designated Sites along with proposed plans and projects that require further assessment. The purpose of this Appropriate Assessment is to identify the potential impacts of the filtered plans and projects on the filtered European Designated Sites, both alone and in combination with other plans, to demonstrate that there won't be an adverse effect on the integrity of European Designated Sites.

This Appropriate Assessment is a second cycle Habitats Regulations Assessments required for the revised Local Strategy. A review of the changes to the initial and second cycle Local Strategies concluded the revision will not lead to significant environmental effects at a strategic level which have not already been identified and explored in the previous assessment.

This report documents the findings of the Appropriate Assessment of RCT's Draft revised Local Strategy. Following this introductory section, the document is organised into a further five sections: -

- in Section 2 Site information is collated;
- in Section 3 the Local Strategy's strategic objectives and measures are reviewed;
- In section 4, an in combination assessment of Plans, programmes and polices (PPPs) is documented;
- In section 5 reducing the effects of European Designated Sites is discussed and mitigation measures are explored; and
- In section 6, the main conclusions are drawn.

1.5 Guidance used in this HRA

A variety of support material guidance was used during the production of this report; these are listed below: -

- Habitats Directive (92/43/EEC)
- The Conservation of Habitats and Species Regulations (2017)
- The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations (2019)
- 'Technical Advice Note (TAN 5)', Annex 6, by the Welsh Government, September 2009
- Advice Note Ten: Habitats Regulations Assessment relevant to nationally significant infrastructure projects (version 9), by the Planning Inspectorate, August 2022
- 'Wales National Development Framework Habitats Regulations Assessment', by the Welsh Government, July 2019
- Planning Policy Wales, by the Welsh Government (2021)
- 'Guidance for Habitats Regulations Assessments: Protecting a European Site', by the Joint Guidance (the Department for Environment, Food & Rural Affairs (DEFRA), Natural England and the Welsh Government), March 2021
- 'Appropriate Assessment: Guidance on the use of Habitats Regulations Assessment', by the Department for Levelling Up, Housing & Communities, and the Ministry of Housing, Communities & Local Government, July 2019
- 'Habitats Regulations Assessment: A Toolkit to Support HRA Screening and Appropriate Assessment of Plans', by Enfusion Limited for the South East Wales Strategic Planning Group (SEWSPG), September 2008
- RCT Local Development Plan (LDP) Habitats Regulations Assessment (HRA) by RCT CBC, March 2011

The data used in this desktop assessment was sourced from the following:

- JNCC website, SAC information pages- SAC core management plans;
- CCW website- SAC information pages;
- RCTCBC 2011-13 LFRMS Strategic Environmental Assessment (SEA) Scoping Report; and
- RCTCBC Local Development Plan (LDP) Habitats Regulations Assessment (HRA).

1.6 Consultation

A draft version of the HRA report will be issued to CCW for review and comment, with any comments taken into account and addressed in the production of the final report.

2. COLLATION OF SITE INFORMATION

2.1 Overview

In the screening stage of the first cycle of the HRA, a shortlist European Designated sites was produced of sites that have potential to be affected by the Local Strategy. A screening stage for the second cycle HRA was not undertaken following the conclusion that changes to the initial and second cycle Local Strategies would not lead to significant environmental effects that have not already been identified in the previous assessment.

It was acknowledged that the first cycle Local Strategy would have implications that extend beyond the intended plan boundaries and that distance is not a definitive guide to the likelihood or severity of impacts on European Designated Sites. The same applies to the second cycle Local Strategy.

This assessment encompasses European Designated Sites outside of the RCT boundary if the sites integrity is at risk. These sites are listed below in Table 2.

Name	Designation	EU Code
Blaen Cynon	SAC	UK <u>0030092</u>
Cardiff Beech Woods	SAC	UK <u>0030109</u>
Coedydd Nedd a Melte	SAC	UK <u>0030141</u>
Cwm Cadlan	SAC	UK <u>0013585</u>
Blackmill Woodlands	SAC	UK0030090
Severn Estuary suite of	SAC, SPA and	UK0013030 (SAC)
sites	Ramsar	UK9015022 (SPA)
		UK14006 (Ramsar)

 Table 2: European Designated sites that could potentially be affected by the LFRMS with respective

 EU Codes

In Annex A, more detail can be found on the first cycle screening process and information on the conservation objectives of each site can also be found. The rest of

this section summarises each of the scoped in sites and describes the potential impact of the LFRMS, specific to that site.

2.2 Blaen Cynon

Figure 1 below shows an aerial view of Blaen Cynon SAC and Table 3 summaries the key characteristics of the site.



Figure 1: Aerial view of Blaen Cynon SAC

Source: CCW website

 Table 3: Blaen Cynon Overview

Key Facts	
Approximate Centroid Grid Reference	SN 946 066
Site Location & Description	This SAC is formed of three separate areas of land northwest of Hirwaun, between the A465 and A4059 roads.It is located next to a housing estate, approximately 1 km south of the village of Penderyn, at an altitude of 220-265 m. Blaen Cynon contains an extensive complex of damp pastures and heaths, supporting the

	largest metapopulation of marsh fritillary <i>Euphydryas aurinia</i> on the southern edge of the Brecon Beacons National Park. There are areas of raised bog, species-rich neutral grassland, acid grassland and semi-natural broadleaved woodland.		
Total Area (ha)	66.83		
	Bogs, Marshes, Water fringed vegetation. Fens	27.6%	
	Heath, Scrub, Maquis and garrigue Phygrana	8.3%	
	Dry grassland, Steppes	11.7%	
General Site Character	Humid grassland, Mesophile grassland	41.3%	
Ondractor	Improved grassland	5.5%	
	Broad-leaved deciduous woodland	3.9%	
	Other land (ie towns, villages, roads, waste places, mines, industrial sites)	1.7%	
Primary reasons for selection and Qualifying Interests	 Marsh Fritillary Butterfly Contains an extensive complex of damp pastures and heaths supporting the largest meta-population of Marsh Fritillary <i>Euphydryas aurinia</i> on the southern edge of the Brecon Beacons National Park. 		
Hydrological needs	The hydrological regime is a key factor affecting the site integrity. The drainage and hydrological conditions on the site should be maintained to favour the habitats that support the Marsh fritillary and their management. Devil's-bit scabious (that supports the Marsh fritillary) prefers moist soils.		
Potential impact of Local Strategy	 The Local Strategy could potentially alter the integrity of the site by: - Holding water for longer in upstream catchments, rather than being exported via the wastewater network Altering surface water regimes Altering the velocity of water regime through the catchment Improving surface water quality Altering the water table Requiring land for flood alleviation works, although it is highly unlikely that land will be used for this purpose in a European Designated Site. The Local Strategy could have a detrimental effect on the qualifying interests of this site; the Marsh Fritillary Butterfly population. 		

2.3 Cardiff Beech Woods

Figure 2 below shows an aerial view of Cardiff Beech Woods SAC and Table 4 summaries the key characteristics of the site.



Figure 2: Aerial view of Cardiff Beech Woods SAC

Source: CCW website

Table 4: Cardiff	Beech Woods Overview
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Key Facts	
Approximate Centroid Grid Reference	ST118824
Site Location	Located to the northeast of Cardiff and is intersected by the A4054 and the A470. The site contains one of the largest concentrations of <i>Asperulo-Fagetum</i> beech forests in Wales and represents the habitat close to the western limit of its past native range in both the UK and Europe.
Description	The woods show mosaics and transitions to other types, including more acidic beech woodland and oak Quercus and ash <i>Fraxinus excelsior</i> woodland. Characteristic and notable species in the ground flora include ramsons <i>Allium ursinum</i> , <i>sanicle Sanicula europaea</i> , bird's-nest orchid <i>Neottia nidus-avis</i> and yellow bird's-nest <i>Monotropa hypopitys</i> .
Total Area (ha)	115.62

General Site Character	Broad-leaved deciduous woodland	99.5%	
	Other land (including towns, villages, roads, waste places, mines, industrial sites)	0.5%	
Primary reasons for selection and 		se to the nd Europe.	
Hydrological needs	Although the sites integrity is not particularly sensitive to hydrological needs, significant changes in the hydrology of the site could have an adverse effect		
Potential impact of Local Strategy	 adverse effect The Local Strategy could potentially alter the integrity of the site by: - Holding water for longer in upstream catchments, rather than being exported via the waste water network Altering surface water regimes Altering the velocity of water regime through the catchment Improving surface water quality Altering the water table Requiring land for flood alleviation works, although it is highly unlikely that land will be used for this purpose in a European Designated Site. The Local Strategy is unlikely to affect the conversation objectives or the qualifying features of the site. However, significant changes in the sites hydrological regime could lead to a detrimental impact. 		

2.4 Coedydd Nedd a Melte

Figure 3 below shows an aerial view of Coedydd Nedd a Melte SAC and Table 5 summaries the key characteristics of the site.



Figure 3: Aerial view of Coedydd Nedd a Melte

Source: CCW Website

Table 5: Coedydd Nedd a Melte Overview
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Key Facts	
Approximate Centroid Grid Reference	SN919093
	This site lies within the Brecon Beacons National Park and is a very large and diverse example of old sessile oak wood in south Wales. The southernmost part of the site is approximately 500 m north of the A465 and 2.5 km north-west of Rhigos.
Site Location & Description	The oak woodland habitat is mostly confined to the river valleys where the underlying geology is mainly carboniferous sandstones and coal measures. The ash woodland is less widespread, occurring mainly on the more base rich-sandstones, particularly along tops of crags, and on limestone in the north and south.
	The whole site is biologically rich, with many woodland plant communities represented and rich bryophyte and lichen assemblages. Notable higher plant

	species include wood fescue Festuca altissima and the ferns D aemula, Hymenophyllum tunbrigense and Asplenium viride.	ryopteris
Total Area (ha)	378.18	
	Inland water bodies (standing water, running water)	2.6%
	Heath. Scrub. Maquis and garrigue. Phygrana	8.5%
	Dry grassland. Steppes	7.4%
	Humid grassland. Mesophile grassland	1%
General Site Character	Improved grassland	0.2%
	Broad-leaved deciduous woodland	76.9%
	Coniferous woodland	2.1%
	Inland rocks. Screes. Sands. Permanent snow and ice	0.9%
	Other land (including towns, villages, roads, waste places, mines, industrial sites)	0.4%
Primary reasons for selection and	 Old sessile oak woods with Ilex and Blechnum in the Br The woods extend along a series of deeply incised valleys a 	
Qualifying Interests	2) <u>Tilio-Acerion forests of slopes, screes and ravines</u>	
Hydrological needs	Although the sites integrity is not particularly sensitive to hydrol significant changes in the hydrology of the site could have an a	-
	The Local Strategy could potentially alter the integrity of the site	e by: -
	 Holding water for longer in upstream catchments, rather exported via the waste water network Altering surface water regimes 	er than being
Potential	 Altering the velocity of water regime through the catchr Improving surface water quality 	nent
impact of Local Strategy	 Altering the water table Requiring land for flood alleviation works, although it is that land will be used for this purpose in a European Dependent of the second seco	
	The Local Strategy is unlikely to affect the conversation objective qualifying features of the site. However, significant changes in hydrological regime could lead to a detrimental impact.	

2.5 Cwm Cadlan

Figure 4 below shows an aerial view of Cwm Cadlan SAC and Table 6 summaries the key characteristics of the site.



Figure 4: Arial view of Cwm Cadlan

Source: CCW website

Table	6:	Cwm	Cadlan	Overview
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Key Facts	
Approximate Centroid Grid Reference	SN961098
Site Location & Description	 This site is within the Bannau Brycheiniog National Park. The village of Penderyn lies approximately 1 km to the west and Hirwaun 5 km to the south.near Aberdare. The SAC has many interests, including: Molinia meadows on calcareous, peaty or clayey silt-laden soils (Molinion caeruleae) and Alkaline Fens. The site was traditionally managed as pasture and some as hay-meadow but there has long been a liver fluke problem in this area and there have been past attempts to drain many fields within the SAC - there is an extensive network of drainage ditches within the site. Some of these are slowly infilling, but some vegetation is likely to have been permanently modified by these drains.

Total Area (ha)	83.93		
	Bogs, Marshes, Water fringed vegetation, Fens	15.5%	
	Heath, Scrub, Maquis and garrigue, Phygrana	5%	
	Dry grassland, Steppes	2.3%	
General Site Character	Humid grassland, Mesophile grassland	52.4%	
	Improved grassland	16.6%	
	Broad-leaved deciduous woodland	7.6%	
	Other land (including towns, villages, roads, waste places, mines, industrial sites)	0.6%	
	1) Molinia meadows on calcareous, peaty or clayey silt-lad	en soils.	
Primary reasons for	Cwm Cadlan has the largest recorded example of Molinia m Wales	eadows in	
selection and	2) Alkaline Fens		
Qualifying Interests	Cwm Cadlan supports an outstanding suite of flushed short- communities on glacial drift overlying carboniferous limestor valley of the Nant Cadlan.	-	
Hydrological needs	The marshy grassland communities are strongly influenced by the base status of the groundwater. Reductions in the quality and quarter in the springs and watercourses feeding the site may lead marshy grassland or changes in species composition. Converse impeded drainage may lead to ground-water stagnation and a conspecies composition, e.g. increased abundance of rushes. In the many ditches at the site is likely to lead to re-wetting of som grassland.	uantity of the d to a loss of ely, reduced/ different change filling some of	
	The Local Strategy could potentially alter the integrity of the site	e by: -	
Potential impact of Local Strategy	 Holding water for longer in upstream catchments, rathe exported via the waste water network Altering surface water regimes 	-	
	 Altering the velocity of water regime through the catchment Improving surface water quality 		
	 Altering the water table Requiring land for flood alleviation works, although it is that land will be used for this purpose in a European Dependent of the second seco		
	This could have an effect on the Alkaline Fens, a qualifying feat	ture of the site.	

2.6 Blackmill Woodlands

Figure 5 below shows an aerial view of Blackmill Woodlands SAC and Table 7 summaries the key characteristics of the site.

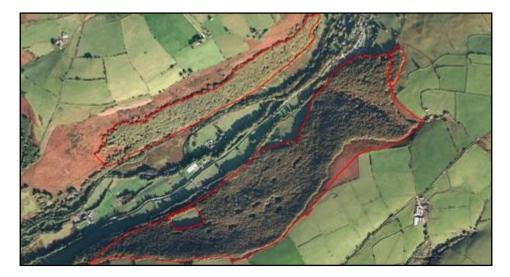


Figure 5: Map of Blackmill Woodlands

Source: CCW Website

Key Facts	
Approximate Centroid Grid Reference	SS929859
Site Location & Description	Blackmill Woodlands is an example of old sessile oak woods at the southern extreme of the habitat's range in Wales and contributes to representation of the habitat in Wales and in south-west England.
	The site is situated within Bridgend County Borough and is approximately 3km away from the City of Bridgend. The A4061 runs directly between the two areas that comprise to make up the SAC.
	The ground flora is restricted by the relative dryness of the site, but the main habitat features of sessile oak <i>Quercus petraea</i> canopy, acidic ground flora of <i>Vaccinium myrtillus</i> and wavy hair-grass <i>Deschampsia flexuosa</i> , and moderate fern and bryophyte cover are present. The woodlands have a long cultural

Table 7: Blackmill Woodlands Overview

	history of management, reflected in the distinctive gnarled appeara of the trees.	nce of many
Total Area (ha)	71.01	
General Site	Heath. Scrub. Maquis and garrigue. Phygrana	7.5%
Character	Broad-leaved deciduous woodland	92.5%
Primary reasons for selection and Qualifying Interests	1) <u>Old sessile oak woods</u> with <i>Ilex</i> and <i>Blechnum</i> in the British Blackmill Woodlands is an example of old sessile oak woods southern extreme of the habitat's range in Wales and contribu- representation of the habitat in Wales and in south-west Engla ground flora is restricted by the relative dryness of the site, bu habitat features of sessile oak <i>Quercus petraea</i> canopy, acidi of <i>Vaccinium myrtillus</i> and wavy hair-grass <i>Deschampsia flex</i> moderate fern and bryophyte cover are present. The woodlan long cultural history of management, reflected in the distinctive appearance of many of the trees	at the Ites to and. The It the main c ground flora <i>uosa</i> , and ds have a
Hydrological needs	Although the sites integrity is not particularly sensitive to hydrologic significant changes in the hydrology of the site could have an advert	
Potential impact of Local Strategy	 The Local Strategy could potentially alter the integrity of the site by Holding water for longer in upstream catchments, rather the exported via the waste water network Altering surface water regimes Altering the velocity of water regime through the catchment Improving surface water quality Altering the water table Requiring land for flood alleviation works, although it is high that land will be used for this purpose in a European Desig The Local Strategy is unlikely to affect the conversation objectives qualifying features of the site. However, significant changes in the shydrological regime could lead to a detrimental impact. 	an being t hly unlikely nated Site. or the

2.7 Severn Estuary Suite of Sites

The Severn Estuary Suite of sites contains: -

- The Severn Estuary Special Area of Conservation (SAC);
- The Severn Estuary Special Protection Area (SPA); and
- The Severn Estuary Ramsar Site.

Figure 6 overleaf shows a map of the Severn Estuary region showing the location of the relevant European Designated Sites. This is followed by Table 8 that summarises the Severn Estuary SAC, Table 9 that summarises the Severn Estuary SPA and Table 10 that summarises the Severn Estuary Ramsar Site.

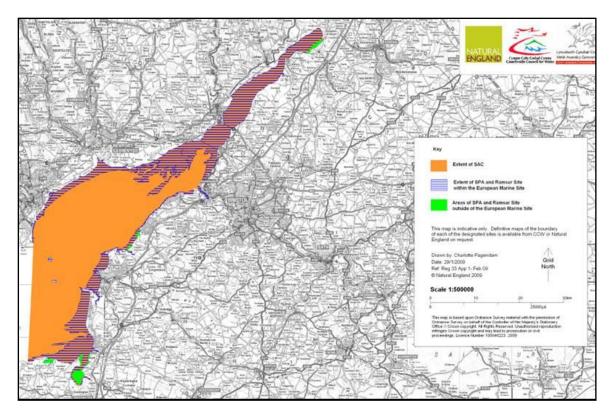


Figure 6: Map of Severn Estuary Natura 2000

Source: Natural England Website

Table 8: Severn Estuary SAC Overview

Key Facts			
Approximate Centriod Grid Reference	ST321748 (centriod of SAC site)		
Site Location & Description	 The Severn Estuary is located between England and Wales and comprises of extensive intertidal mudflats, sand-flats, rocky platforms and islands. The estuary's characteristic 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). This tidal regime results in plant and animal communities typical of the extreme physical conditions of liquid mud and tide- swept sand and rock. The species-poor invertebrate community includes high densities of ragworms, lugworms and other invertebrates forming an important food source for passage and wintering waders. An additional result of the substantial tidal range is one of the largest intertidal zones in the UK. The site is of importance during the spring and autumn migration periods for waders moving up the west coast of Britain, as well as in winter for large numbers of waterbirds, especially swans, ducks 		
Total Area (ha)	and waders. 73715.4		
General Site Character	Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins) Salt marshes. Salt pastures. Salt steppes (1%)	99% 1%	
Primary reasons for selection and Qualifying Interests	 Estuaries Mudflats and sandflats not covered by seawater at low tide Atlantic Salt meadows (Glauco-Puccinellietalia maritimae) Sandbanks which are slightly covered by sea water all the time Reefs Sea lamprey (Petromyzon marinus) River lamprey (Lampetra fluviatilis) 		
Hydrological needs	 8) Twaite shad (Alosa fallax) The site is sensitive to water quality, including chemical, ecological, and biological aspects. 		

	The Local Strategy could potentially alter the integrity of the site by: -
	Holding water for longer in upstream catchments, reducing the peaks of discharge into the Severn Estuary
	Altering surface water regimes
	Altering the velocity of water regime through the catchment
Potential	Improving surface water quality
impact of Local Strategy	Altering the water table
	Improving water quality
	 Requiring land for flood alleviation works, although it is highly unlikely that land will be used for this purpose in a European Designated Site.
	The Local Strategy is unlikely to affect the conversation objectives or the qualifying features of the site. However, is the Local Strategy creates significant changes in the site's hydrological regime, this could lead to a detrimental impact.

Table 9: Severn Estuary SPA Overview

Key Facts	
Site Location and Description	See table 8
General Site Character	See table 8
Total Area (ha)	24700.91
Primary Reasons for selection and Qualifying interests	 Bewick's Swan Cygnus columbianus bewickii 3.9% of the GB population 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

	5) Shelduck Tadorna tadorna 1.1% of the population 6) Redshank Tringa totanus 1.3% of the population 7) waterfowl
Hydrological Needs	The site is sensitive to water quality, including chemical, ecological, and biological aspects.
Potential impact of Local Strategy	 The Local Strategy could potentially alter the integrity of the site by: - Holding water for longer in upstream catchments, reducing the peaks of discharge into the Severn Estuary Altering surface water regimes Altering the velocity of water regime through the catchment Improving surface water quality Altering the water table Improving water quality Requiring land for flood alleviation works, although it is highly unlikely that land will be used for this purpose in a European Designated Site. The Local Strategy is unlikely to affect the conversation objectives or the qualifying features of the site. However, is the Local Strategy creates significant changes in the sites hydrological regime, this could lead to a detrimental impact

Table 10: Severn Estuary Ramsar Overview

Key Facts	
Site Location and Description	See table 8
General Site Character	See table 8
Total Area (ha)	24662.98

Primary Reasons for	1) Immense tidal range (second largest in the world) creating diversity of physical environment and biological communities				
selection and Qualifying interests	 Reduced diversity and high productivity due to unusual estuarine communities 				
Interests	3) This site is important for the run of migratory fish between sea and river via estuary.				
	Species include Salmon <i>Salmo salar</i> , sea trout <i>S. trutta</i> , sea lamprey <i>Petromyzon marinus</i> , river lamprey <i>Lampetra fluviatilis</i> , allis shad <i>Alosa alosa</i> , twaite shad <i>A. fallax</i> , and eel <i>Anguilla anguilla</i> . It is also of particular importance for migratory birds during spring and autumn.				
	4) Species with peak counts in winter:				
	waterfowl				
	5) Species with peak counts in winter:				
	Bewick's swan				
	Greater white-fronted goose				
	Common shelduck				
	• Gadwall				
	• Dunlin				
	Common redshank				
	6) 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.				
Hydrological Needs	The site is sensitive to water quality, including chemical, ecological and biological aspects.				
Detential	The Local Strategy could potentially alter the integrity of the site by: -				
Potential impact of Local Strategy	 Holding water for longer in upstream catchments, reducing the peaks of discharge into the Severn Estuary 				
3)	Altering surface water regimes				

	Altering the velocity of water regime through the catchment
	Improving surface water quality
	Altering the water table
	Improving water quality
	 Requiring land for flood alleviation works, although it is highly unlikely that land will be used for this purpose in a European Designated Site.
q	The Local Strategy is unlikely to affect the conversation objectives or the qualifying features of the site. However, is the Local Strategy creates significant shanges in the site's hydrological regime, this could lead to a detrimental impact

3. REVIEW OF LOCAL STRATEGY OBJECTIVES AND MEASURES

The Local Strategy's strategic objectives and their inter-relationship against the National Strategy objectives are presented in Table 11.

No	Local Strategy Objectives	Description of Objective	National Strategy Objectives					
			Α	В	С	D	Е	
1	Reduce distress by decreasing the number of people exposed to the risk of flooding	To reduce social vulnerability of communities exposed to flood risk	X	x	x	x	x	
2	Reduce community disruption by reducing the number of residential and commercial properties exposed to the risk of flooding	To reduce the impact of flooding on physical receptors to improve individual and community well-being	x	x	x	x	x	
3	Reduce risk to life by reducing the number of people exposed to risk of flooding of significant depth and velocity.	To reduce the consequences of flooding to those individuals and communities at highest risk of flooding	X	x	x	x	x	
4	Reduce disruption caused by severe weather to critical infrastructure and essential services	To reduce disruption and to maintain the operation of critical infrastructure and essential services (for example, critical road and railway networks, electricity sub-stations and hospitals) during flooding events.	x	x	x	x	x	
5	Improve or not detrimentally affect water quality	To align with the requirements of the Water Framework Directive and give consideration to the Severn River Basin Management Plan						
6	Identify opportunities that work with natural processes to reduce the risk of flooding	To investigate opportunities that help to protect, restore and emulate the natural functions of catchments, including implementing Natural Flood Management measures, promoting green infrastructure, sustainable land management techniques and adopting a catchment-based approach to flood risk management.		x		x		

Table 11: Local Objectives of RCT's Local Strategy

7	Maintain, or where possible, improve the status of Special Areas of Conservation (SACs), Sites of Special Scientific Interest (SSSIs), Sites of Importance for Nature and Conservation (SINC) sites and contribute to the RCT's 'Action for Nature' (Local Nature Recovery Plan) plan.	To minimise damage to environmentally sensitive areas, and where possible, aim to protect and enhance areas of environmental and cultural significance through managing flood risk.		x			
8	Improve our understanding of local flood risk in RCT and how this risk may be impacted by climate change in the future.	Continue to develop and improve our knowledge and understanding of local flood risk across RCT, considering the impacts of climate change. This will offer multiple benefits such as enabling the Council to identify those areas at greatest risk, prioritising measures to address known risks, validating the accuracy of modelled flood mapping, raising awareness of risks to communities, and informing emergency response plans.	x	x	x	x	x
9	Develop effective communication tools to share information and improve individual and community awareness of local flood risks and how they can be managed proactively	The LLFA to take a leadership role in ensuring stakeholders understand their roles and responsibilities in relation to local flood risk management. The LLFA aims to achieve this by improving the communication and sharing of information to raise awareness of local flood risk and how the risk can be managed proactively by all stakeholders.	x	x		x	
10	ability to prepare, respond and recover to the impacts of flooding	Raise awareness and building preparedness within the community through the promotion of resilience themes, including property/community resilience measures, flood warning and informing, regularly updating emergency response plans and promoting community engagement activities.	x	x			x
11	Ensure that RCT work in partnership with Risk Management Authorities and other stakeholders to holistically manage the risk of flooding	RCT as the LLFA to work together with both Risk Management Authorities, stakeholders and the public to manage the risk of local flooding by sharing data	x	x		x	x

12	Ensure flood risk management functions are considered and delivered in a sustainable way	and resources efficiently and effectively to the greatest benefit. To ensure the LLFA takes a sustainable and holistic approach to flood risk management functions, seeking to deliver wider environmental, social and economic benefits.		x	x	
13	Ensure that investment decisions for flood risk management schemes are	RCT as the LLFA to prioritise investment in the most at risk communities utilising a risk-based, transparent and consistent approach, and with due regard to the Welsh Government FCERM Business Case Guidance	X	x	x	

Table 12 presents the flood measures outlined within the revised Local Strategy to achieve the objectives in Table 11.

Theme	No	LFRMS Measure
Development, Planning and	M1	Consultee to the Local Planning Authority
Adaption	M2	SuDS Approval Body
	М3	Communications
	M4	Warning and informing
Flood Awareness,	M5	Emergency Response Plans
Preparedness and Response	M6	Community Adaption & Resilience
	M7	Partnership Working
	M8	Public Engagement & Consultation
	M9	Investigation of Flooding Incidents

Table 12: Measures of the LFRMS

Studies, Assessment and	M10	Flood Alleviation Scheme Business Case Development
	M11	Strategic Flood Risk Area Assessment
Plans	M12	Flood Risk & Hazard Methodology
	M13	Flood Action Plan
Land, Cultural	M14	Natural Flood Management
and Environmental	M15	Environmental Enhancement & Habitat Creation
Management	M16	RMA Coordination
	M17	Spatial Mapping of Drainage Assets
	M18	Catchment Asset Management Plans
	M19	Asset Register and Records
Asset	M20	Designation of Structures
Management and Maintenance	M21	Land Drainage Consenting & Byelaws
Maintenance	M22	Land Drainage Enforcement
	M23	SuDS Approval Body (SAB) Enforcement
	M24	Construction of Flood Alleviation Schemes
	M25	Powers of entry upon land

	M26	Powers to request information and civil sanctions
	M27	Cause incidental flooding for purpose of flood risk management.
	M28	Enforcement on Private Surface Water Sewers
	M29	Monitoring the Reduction of Risk to People and Property
Monitoring	M30	Hydrological Monitoring & Assessment
	M31	Monitoring the Delivery of Wider Benefits

The strategic objectives and measures were assessed in the screening assessment to at a broad level: -

- Identify measures that, because of their nature, could not conceivably have a negative effect or are not suitable for assessment; and to
- Identify measures that are necessary for the conservation management of Natura 2000 sites (these do not require consideration under the Habitats Regulations).

The full screening process, including the rationale for objectives and measure screening can be found in Annex B. Table 3-3 below shows that of the objectives and measures screened, 6 were considered to potentially have an adverse effect on European Designated Sites.

Table 13: Local Strategy Objectives and Measures screened due to potential effect on European Designated Sites

Local Strategy Objective/ Measure	Possible Effects of Measure on European Designated Sites
Identify opportunities that work with natural processes to reduce the risk of flooding Natural Flood Management	 Possible effects include: - Creation of, loss of, fragmentation/ physical damage/ enhancement to habitats Changes in the hydro morphology of channels (for example, the wetted perimeter of channels, affecting biodiversity). Changes in turbidity and velocity of water water quality (including biological, ecological, and physio-
Environmental Enhancement & Habitat Creation	 chemical aspects) Visual or noise disturbance Reduced surface water flooding Potential increase in the connectivity of water bodies, which could lead to increases of non-native invasive species
SuDS Approval Body	 Possible effects include: - Reducing run-off rates Reducing downstream flooding Encouraging natural groundwater recharge Reducing pollutant concentrations in stormwater and improving water quality (ecological, chemical, and biological) Creation of habitats for wildlife Changes in the physical regime Noise or visual disturbance Changes to turbidity
Construction of Flood Alleviation Schemes	 Possible effects include: - Changes in water levels Changes in flow velocity Changes to the physical regime Loss of, fragmentation or physical damage to habitats Changes in the physical regime Changes in the physical regime Changes in turbidity

	 Simplification of habitats/ communities Visual or Noise disturbance Potential changes to water quality (ecological, chemical, and biological) Killing/ injury or removal of flora and fauna
Land Drainage Consenting	Possible effects include: -
& Byelaws	 Creation of, loss of, fragmentation or physical damage/ enhancement to habitats Changes in the hydro morphology of channels (for example, the wetted perimeter of channels, affecting biodiversity). Changes in turbidity and velocity of water water quality (including ecological and physio-chemical aspects) Reduced surface water flooding Potential increase in the connectivity of water bodies, which could lead to increases of non-native invasive species Encouraging natural groundwater recharge Improving water quality Creation of habitats for wildlife

4. IN COMBINATION ASSESSMENT OF PLANS, PROGRAMMES AND POLICIES

4.1 Screening of Plans, Programmes and Polices Overview

In the scoping exercise, other Plans, Polices and Programmes (PPPs) relevant to the Local Strategy were screened for in combination affects with the Local Strategy on European Designated Sites (this is detailed in Annex C). The risk of negative effects in combination is very low as the measures in the Local Strategy are intended to maintain or improve the status of European Designated Sites, to improve or not detrimentally effect water quality, to work with natural processes and to where possible, improve naturalness.

At this high-tier level, no PPPs have been identified to have a negative effect in combination with the Local Strategy. It is not appropriate to consider the effects of PPPs at each Designated European Site as there is insufficient information on the location of works to arise from the Local Strategy.

The information considered in Annex C may help inform Habitats Regulations Assessments of individual measures undertaken at later plan, project, or permission stages, however later assessments will require their own HRAs and in combination assessments.

4.2 Interaction of Individual Measures within the Local Strategy

There is a risk of possible objectives and measures in the Local Strategy having a detrimental effect on the conservation objectives of European Designated Sites when acting in combination with each other. The Local Strategy does not detail the measures in terms of location, extent, and time. Therefore, the objectives and measures can be implemented at a location, time and extent that will not have a significant effect in combination with each other on any European Designated Site.

5. REDUCING EFFECTS OF THE LOCAL STRATEGY AND MITIGATION MEASURES

At this high-tier strategy stage, without detailed proposals (no information is currently available on the magnitude, duration, location, size and extent of the works that will be undertaken under the Local Strategy) it is not possible to provide specific mitigation, avoidance or reduction measures. Mitigation measures will be dependent on the European Designated Sites conservation objectives and the type of impact the measure or objective will have. Therefore, this Appropriate Assessment should be considered precautionary and further HRAs will be conducted as more detailed plans become available. In these HRAs, detailed mitigation measures can be explored.

The main hazards of the Local Strategy on European Designated Sites are changes to surface water flows and ordinary watercourse flows. For example, the 'SuDs Approval Body' measure will contribute to these changes, whilst improving water quality simultaneously. It is generally expected that for the European Designated Sites screened in, the impact will not be significant due to the nature of the changes, and it is anticipated that many of the European Designated Sites will benefit from these affects. Alternative measures to construction of flood defences such as Natural Flood Management (NFM) will be considered and promoted through the Local Strategy; these measures are also likely to reduce detrimental effects on European Designated Sites.

It has been considered in this assessment if appropriate process is in place to ensure that potential negative effects on European Designated Sites can be identified and mitigated when the objectives and measures of the Local Strategy are implemented. HRAs of lower tier plans will ensure these negative effects are identified and managed.

It has also been considered if the 'screened in' objectives and measures should be altered to ensure no detrimental effect on European Designated Sites. However, it is likely that these 'screened in' objectives and measures will result in beneficial impacts on European Designated Sites.

6. SUMMARY AND CONCLUSIONS

In line with the requirements of the Habitats Regulations, a second cycle Appropriate Assessment has been conducted to determine the potential impact of the revised Local Strategy on European Designated Sites.

This Appropriate assessment has found that several objectives and measures of the Local Strategy could affect the integrity of European Designated Sites. However, these objectives and measures provide no indication of what will be involved or the location of works. The objectives and measures that could potentially affect the integrity of European Designated Sites are likely to improve the status of these Sites.

At this high-level stage, it is not possible to conclude which, if any, sites will be affected or if the effects will be significant in regards to the conservation objectives of the European Designated Sites highlighted in this report. It is acknowledged that the Local Strategy sets out the strategic direction for managing flood risk in RCT and that no impacts will arise directly from the strategy itself.

The strategy, however, cannot be put into effect until lower-tier plans, projects or activities arising out of this Local Strategy are determined and implemented; therefore the potential impacts of the strategy cannot be fully determined until more detailed plans are confirmed. Subsequent plans and projects arising from this Local Strategy will be subject to another HRA if there is a potential to affect European Designated Sites, under the Habitats Regulations.

The Local Strategy does not constrain where or how the measures will take place, therefore the objectives and measures can go ahead somewhere or in some way that will not have a significant effect on any European Designated Site.

This Appropriate Assessment concludes that the Local Strategy is not likely to have any significant negative effects on any European sites, alone or in combination with other plans or projects. If there is a potential negative impact, further HRAs conducted on lower tier plans and projects will ensure that this is identified and managed. Given this conclusion, there is no requirement to progress to the next stage of the HRA (the Assessment of Alternative Options).

This conclusion does not remove the need further HRAs of any other plans, projects, or permissions related with, or arising from the Local Strategy .