Conwy County Borough Council Local Flood Risk Management Strategy

Habitat Regulation Assessment Stage 1 Screening Report

March 2013
Conwy County Borough Council

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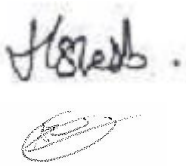
Checked by		H Webb C Probert	14/02/13
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Content

Glossary of Acronyms

CCBC	Conwy County Borough Council
CCW	Countryside Council for Wales
CMP	Core Management Plan
cSAC	Candidate Special Area of Conservation
DEFRA	Department for Environment, Food and Rural Affairs
EAW	Environment Agency Wales
FWMA	Flood and Water Management Act 2010
FRMA	Flood Risk Management Authority
HRA	Habitat Regulations Assessment
LFRMS	Local Flood Risk Management Strategy
pSPA	Proposed Special Protected Areas
SAB	SuDS Approval Body
SCI	Site of Community Importance
SEA	Strategic Environmental Assessment
SuDS	Sustainable Urban Drainage System
WG	Welsh Government
ZoI	Zone of Influence

Executive Summary

Conwy County Borough Council (CCBC), as a Lead Local Flood Authority (LLFA), is required to prepare a Local Flood Risk Management Strategy (LFRMS) under Section 10 of the Flood and Water Management Act 2010 (FWMA).

The purpose of the strategy is to address potential flood risk arising from local sources within the boundaries of the Authority area. The aims of the strategy are to ensure that our communities are aware of what risks exist, to be aware of what the Council and other risk management partner's responsibilities are in terms of flood risk, and what communities can do to involve themselves.

A Habitats Regulations Assessment (HRA) is required under the EU Habitats Directive (92/43/EEC) for any proposed plan or project which may have a Likely Significant Effect on one or more European Sites, and which is not necessary for the management of those sites. The competent authority CCBC has therefore assessed the potential effects of its LFRMS on European Sites (namely Special Areas of Conservation, Special Protection Areas and Ramsar sites).

A screening process was undertaken to investigate which of the Conwy LFRMS outcomes have the potential for a Likely Significant Effect on European Sites. The main potential adverse effects on protected sites are considered likely to arise from the following LFRMS outcomes:

- Outcome 1: To improve the understanding of local flood (surface water, groundwater and ordinary watercourses) and coastal risks, specifically measure 1.6 - Develop a county wide map based record of flood risk assets, Flood Investigation Reports, historical flooding and areas at risk of flooding to allow a proactive risk management approach to be taken by the flood authority;

- Outcome 4: To reduce the impact and consequences for individuals, communities, businesses and the environment from flooding and coastal erosion, specifically measure 4.2- Identify areas at greatest risk of flooding, and develop a capital cost investment programme to alleviate flooding; and

- Outcome 6: Improve and/or maintain the capacity of existing drainage systems by targeted maintenance specifically measure 6.1- Develop a risk based reactive and cyclical maintenance regime.

The Strategy is a high-level strategic plan whose outcomes and measures are concentrated on strategically increased public awareness, preparedness and involvement regarding flood risk, rather than project-specific measures. As such, the scope of work associated with its implementation is uncertain and will be developed at a later stage.

Any specific schemes implemented as a result of the Strategy will be subject to the formal planning process in line with The Town and Country Planning Act (Environmental Impact Assessment) (England and Wales) Regulations 1999 and may require an Environmental Impact Assessment (EIA) or HRA. This will ensure that any potential scheme-specific effects are identified and avoided. Following the implementation of any scheme-specific avoidance measures, none of the sites are concluded to be significantly affected by the Strategy and an Appropriate Assessment is not considered to be required.

Potential beneficial effects have been identified as a result of the LFRMS. Schemes derived from the Strategy have the opportunity to enhance water quality, reduce the likelihood of contamination and mobilisation of pollutants, reduce the risk of diffuse pollution and provide opportunities to develop new habitats and enhance the biodiversity across CCBC.

1. Introduction

1.1 Background

The increase in occurrence and severity of flooding in recent years, including that of summer 2007, sparked a government-commissioned investigation into the flooding, known as the Pitt Review. The review summarised the failings of historic flood management, resulting in an extensive set of recommendations which were transposed into the Flood and Water Management Act 2010 (FWMA)[1]. The FWMA created a responsibility for County and Unitary Councils to act as Lead Local Flood Authorities (LLFA's) which meant they were required to take leadership for the coordination and management of local flood risk.

Conwy County Borough Council (CCBC) has been designated as a LLFA in Wales, and is required under Section 10 of the FWMA to develop, maintain, apply and monitor a Local Flood Risk Management Strategy (LFRMS) in its area. The purpose of the LFRMS is to address potential flood risk arising from local sources within the boundaries of the Local Authority area. Local flood risk is defined as any flood risk from surface runoff, groundwater and ordinary watercourses. Flood risk arising from the sea, main rivers and reservoirs is outside of the scope of the strategy and is managed by the Environment Agency Wales (EAW). However, consideration is given to the cumulative effects arising through the role of coastal processes on flood risk from terrestrial sources and the potential implications of local flood risks on the water quality in coastal areas.

As a requirement of the European Directive 2001/42/EC[2], the effect on the environment of the Strategy is required to be assessed through a Strategic Environmental Assessment (SEA). In addition to undertaking a SEA, a Habitat Regulation Assessment (HRA) is also required under the European Habitats Directive 92/43/EEC[3]. The Habitats Directive is brought into effect in Wales (and England) by the Conservation of Habitats and Species Regulations 2012 (as amended)[4].

A plan or project cannot be given effect or consented unless it can be determined that it would not have an adverse effect on the integrity of European Sites or, where there are no alternative solutions, there are Imperative Reasons of Overriding Public Interest and compensatory measures are secured to ensure the coherence of the European Site (Natura 2000) network. Any plan or project which has the potential to affect a European Site, no matter how far away from that site should be considered. The LFRMS is regarded to be such a plan as it could implement plans and policies that may have the potential to impact on European sites.

There are currently 7 European designated sites within or partially within the County of Conwy. Due to the presence of the protected sites, this Stage 1 Habitat Regulation Assessment (HRA) is required and has been produced in order to assess the potential impacts that implementing the LFRMS may have on the identified sites.

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[1] Her Majesty's (HM) Government (2010) Flood and Water Management Act

[2] Directive 2001/42/EC of the European Parliament and of the Council (June 2001) on the Assessment of the Effects of Certain Plans and Programmes on the Environment

[3] Directive 92/43/EEC of the European Parliament and of the Council (May1992) on the Conservation of Natural Habitats and Wild Fauna and Flora

[4] The Conservation of Habitats and Species (Amendment) Regulations 2012

In addition to the sites that are within the boundary of the county, implementing the Strategy has the potential to impact other designated sites that may exist outside the county. This is defined as the Zone of Influence (ZoI), and would also include protected sites that may be hydrologically linked to the designated sites within Conwy County. This is further detailed in the Section 2.

1.2 Conwy Local Flood Risk Management Strategy

Under the Flood and Water Management Act 2010, all Lead Local Flood Authorities (LLFA's) are required to develop, maintain (which includes updating and reviewing), apply, and monitor the application of a strategy for local flood risk management in their area. This strategy is known as a Local Flood Risk Management Strategy (LFRMS).

A 'local flood risk' is defined within the Act as being a flood risk from:

- Surface run-off;
- Groundwater; and
- Ordinary watercourses.

The reference to ordinary watercourses includes a reference to a reservoir, lake, pond or other areas of water which flows into an ordinary watercourse. An ordinary watercourse is defined (in the Water Resources Act 1991) as any watercourse, including lakes and ponds, that is not a main river.

Conwy County Borough Council is a LLFA, and as such has prepared a LFRMS[5]. The LFRMS is a high level strategy document that sets out management policies for flood risk management. The Strategy does not provide details on management for specific flood risk areas. Specific Area Management Action Plans (SAMAP's) may be produced in the future, and will cascade down from the Strategy. The implementation of these plans will be subject to plan-specific HRA's, where appropriate.

The Welsh Government (WG) has produced a National Strategy for Flood and Coastal Erosion Risk Management in Wales[6]. This is the overarching document for all LFRMS in Wales. The LFRMS must be consistent with this document. The WG has also produced a guidance document for LLFA 'Local Flood Risk Management Strategies: Local Strategy' (November 2011)[7].

The WG guidance states that LFRMS should be developed in keeping with the four overarching objectives for flood and coastal erosion risk management in Wales as set out in the National Strategy. The four objectives are as follows:

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

Section 10(4) of the FWMA, specifies what must be included within a LFRMS:

[5] Conwy County Borough Council (November 2012) Local Flood Risk Management Strategy

[6] Welsh Government (November 2011) National Strategy for Flood and Coastal Erosion Risk Management in Wales

[7] Welsh Government (November 2011) Local Flood Risk Management Strategies – Local Strategy

- The Risk Management Authorities in the Local Authority's area;
- The flood and coastal erosion risk management functions that may be exercised by those Authorities in relation to the area;
- The objectives for managing local flood risk (including, when available, any objectives included in an LLFA flood risk management plan prepared in accordance with the Flood Risk Regulations 2009;
- The measures proposed to achieve those objectives;
- How and when the measures are expected to be implemented;
- The costs and benefits of those measures, and how they are to be paid for;
- The assessment of local flood risk for the purpose of the strategy;
- How and when the strategy is to be reviewed; and
- How the strategy contributes to the achievement of wider environmental objectives.

1.3 Conwy LFRMS Outcomes and Strategic Options

The consultation version of the Strategy contains ten overarching objectives which follow the guiding principles for flood risk management in Conwy. These objectives are identified in Conwy's Strategy as **strategic outcomes**.

The outcomes identified in the Strategy are to be implemented through a series of measures that are set out in the following sections of the document. Further to these is a set of environmental objectives which aim to achieve wider environmental benefits as required by the Flood and Water Management Act.

The Strategy will be supplemented by overarching annual action plans in order to give a more detailed overview of what CCBC want to achieve that year and how it will be undertaken. Individual projects arising from the implementation of the annual action plan will be subject to project specific HRA's, where appropriate.

1.4 Legislative Background

Under the European Directive 92/43/EEC on the 'Conservation of Natural Habitats and Wild Fauna and Flora (also referred to as the 'Habitats Directive'), habitats and species of European importance are afforded legal protection. The Habitats Directive along with the Birds Directive (European Directive 2009/147/EC on the conservation of wild birds) are transposed into United Kingdom (UK) law as 'The Conservation of Habitats and Species Regulations 2010 (as amended)'. This legislation provides a legal framework for the protection of habitats and species of European importance across the UK.

In accordance with the Habitats Directive, member states must adopt measures that maintain and restore European protected habitats and species (as listed in Annex I and II respectively) to a 'favourable conservation status' (as defined in articles 1 and 2). Member states are also required to contribute to a coherent European ecological network (referred to as the 'Natura 2000 Network') by designating Special Areas of Conservation (SACs) based on these European protected habitats and species. The Natura 2000 Network also includes Special Protection Areas (SPAs), which are classified under Article 4 of the Birds Directive. SPAs are designated based on their significant international importance as sites that host rare and vulnerable birds (as listed in Annex I of the Birds Directive). Other Natura 2000 sites include: candidate SAC (cSAC), proposed SPA (pSPA), European Offshore Marine Sites (EOMS) and Sites of Community Importance (SCIs) which have been adopted by the European Commission, but have not yet been formally designated by the government of the Member State.

In the UK, Ramsar sites (as protected under the Ramsar Convention 1971) are afforded the same level of protection as fully designated Natura 2000 sites. These sites, which are considered to be 'wetlands of

international importance', are designated based on criteria set out in the Ramsar Convention. Generally, they are sites that either: 'contain representative rare or unique wetland types' or 'are sites of international importance for conserving biological diversity'. Species and habitats involved in the 'Ramsar Selection Criteria' also require consideration under the Habitats Regulations as if they were designated Natura 2000 features.

In accordance with Article 6(3) of the Habitats Directive, an 'Article 6 Assessment' (also referred to as 'Appropriate Assessment' or 'Habitats Regulations Assessment' (HRA)) must be completed for any plan or project that may have a Likely Significant Effect on a Natura 2000 site. It would be the purpose of the Appropriate Assessment to identify whether or not the proposed plan or project (alone or "in combination" with other plans or projects) would adversely affect the integrity of designated site(s). As Ramsar sites are afforded the same level of protection as Natura 2000 sites, they may also be subject to a HRA if the plan or project may have a Likely Significant Effect on the Ramsar site (Department for Environment, Food and Rural Affairs (Defra) 2006). Potential mitigation measures to avoid Likely Significant Effects can be identified at the HRA screening stage, thus avoiding the need for an Appropriate Assessment. The main purpose of a HRA is to identify whether or not the integrity of a designated site will be adversely impacted by the proposed plan or project and if it is, the generation of potential mitigation measures to "offset" these impacts.

The protected sites described above (i.e. Natura 2000 and Ramsar sites) will be collectively referred to as 'European Sites' in this report.

1.5 Habitats Regulations Assessment (HRA) Process

There are four key stages in the HRA process and these stages are as follows:

Stage One - Screening: this identifies the potential effects upon the European Sites and considers if the effects are likely to be significant.

Stage Two - Appropriate Assessment: if the project or plan may have significant impacts on a European Site, or there is uncertainty, this subsequent stage involves the consideration of the adverse effects of the project or plan, either alone or in combination with other projects or plans, on the integrity of a European Site with respect to the site's structure and function and conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts;

Stage Three - Assessment of Alternative Solutions: If the mitigation measures prescribed at Stage 2 cannot avoid adverse effects on the integrity of a European Site this process examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 site;

Stage Four - Assessment where no alternative solutions exist and where adverse impacts remain: If no suitable alternative solutions are available this Stage requires an assessment of compensatory measures where, in the light of an assessment of Imperative Reasons of Overriding Public Interest (IROPI), it is deemed that the project or plan should proceed.

This report includes the information required to facilitate the Stage 1: Screening. Through this process the Likely Significant Effects as a result of the Strategy are assessed. If it is identified that the effects of implementing the Strategy may cause significant impacts then this triggers the further stages of the assessment - Stage 2: Appropriate Assessment.

The Stage 1: Screening consists of the following key steps as detailed below and this is shown diagrammatically in Figure 1.1:

1. Identifying the European Sites that may be potentially affected;
2. Understanding the Conservation Objectives of the identified sites;
3. Considering the policies in the plan (or in this case the Strategy) and the magnitude of the effect that they may have on a European Site (as far as they may be reasonably predicted); and
4. Determining whether the project or plan is directly connected with or necessary to the management of the site/s; and assessing the significance of any effects on the European Site/s.

The appraisal of a plan under the Habitats Regulations is a process that should be undertaken during the preparation of the plan, so that the appraisal influences its evolution.

In Wales guidance on how plans and projects should be assessed to satisfy the HRA process is provided for in several key publications as listed below

- Guidance For Plan Making Authorities In Wales - The Appraisal Of Plans Under The Habitats Directive[8]; and
- Guidance Note Methodological Approaches To The Habitats Regulations Assessment Of Plans And Projects Requiring Multiple Consents[9].

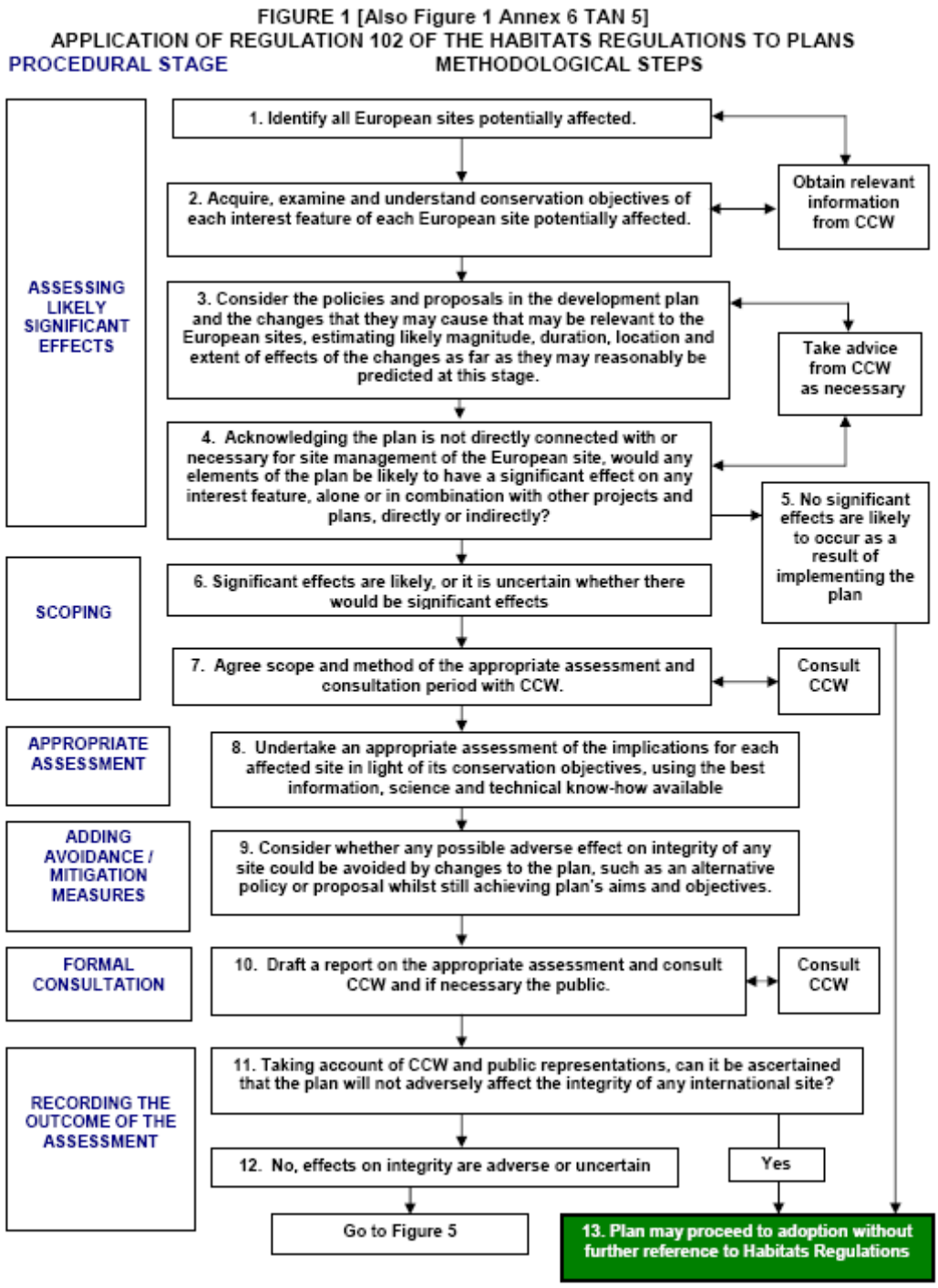
These documents, along with guidance on the significance of impacts provided for in the Design Manual for Roads and Bridges (DMRB)[10] along with professional judgement, have been used to determine if the proposed LFRMS could “”undermine an European Site’s Conservation Objectives” and thereby result in a significant impact to such a site.

[8] Tyldesley, D., 2009, Draft Guidance For Plan Making Authorities In Wales: The Appraisal Of Plans Under The Habitats Directive for Countryside Council for Wales CCW Bangor

[9] Tyldesley, D., 2011, Guidance Note Methodological Approaches To The Habitats Regulations Assessment Of Plans And Projects Requiring Multiple Consents for Countryside Council for Wales CCW Bangor

[10] The Design Manual for Roads and Bridges, Volume 11, Section 4, Part 1, HD 44/09: Assessment of Implications (of highways and/or roads projects) on European Sites (including appropriate assessment) (Highways Agency, February 2009).

Figure 1.1: Stages of the Habitats Regulations Assessment (HRA) Process for Plans



Source: Guidance for plan making authorities in Wales – The appraisal of plans under the Habitats Directive, CCW 2009 (revised April 2010 and September 2012)

2. Assessing Likely Significant Effects

2.1 Identification of European (Natura) Sites

This step involves the identification of relevant European Sites within the County boundary and within the likely zone of influence of the Strategy (up to 15 km from the boundary of the county). Potential effects on European Sites are also considered in the context of causal pathways and the sensitivity of the receiving environment, which are not necessarily determined by spatial distance.

Relevant sites are those that are defined as having primary reasons and/or qualifying features that are hydrological in nature or associated with hydrology and thus could potentially be affected by the implementation of the Strategy. Conversely sites that are not related to hydrology (and therefore are unlikely to be affected by the measures) have been screened out.

Based on information reviewed there are 22 European Sites located within the County boundary and Zone of Influence (ZoI), of which all are considered to be relevant (as detailed below). Appendix A provides a plan showing the locations in relation to the county.

The following 22 European Sites have been screened in, their classifications are provided in brackets:

- Snowdonia - (SAC);
- Gwydyr Forest Mines – (SAC);
- Creuddyn Peninsula Woods- (SAC);
- Menai Strait and Conwy Bay - (SAC);
- Great Orme's Head - (SAC);
- Elwy Valley Woods – (SAC);
- Migneint-Arening-Dduall - (SAC and SPA);
- Coedydd Aber - (SAC);
- Meirionnydd Oakwoods and Bat Sites - (SAC);
- River Dee and Bala Lake - (SAC);
- Liverpool Bay - (SPA);
- Lavans Sands, Conwy Bay - (SPA);
- Llyn Idwal - (Ramsar);
- Afon Eden – Cors Goch Trawsfynydd - (SAC);
- Afon Gwyrfai a Llyn Cwellyn - (SAC);
- Berwyn and South Clwyd Mountains - (SAC and SPA);
- Dee Estuary - (SAC, SPA and Ramsar);
- Llwyn - (SAC);
- Lleyn Penninsula and the Sarnau - (SAC);
- Llyn Tegid Bala lake - (Ramsar);
- Rhinog - (SAC); and
- Halkyn Mountain - (SAC).

2.2 Conservation Objectives and Vulnerabilities of the European Sites

The justification of "screening-in" the European Sites are described in Appendix B and Appendix C. The information contained in Appendix B and C details their respective primary reasons for designation, qualifying features, conservation objectives and vulnerabilities.

In order to understand and therefore asses how the Strategy could impact the European Sites it is important to know the sites historical vulnerabilities. These may include;

1. Degradation from past drainage and maintenance of water levels;
2. Abandonment of traditional grazing and reed and peat-cutting practices contributing to successional vegetation change;
3. Pollution of water supplies especially from agricultural run-off of nitrate and phosphate threatens site with eutrophication or airborne nitrate inputs;
4. Activities that prevent maintenance of water quality level and hydrological integrity of sites remaining intact; and
5. Spread of invasive or non favourable species.

Thus key activities which should be considered are those that result in a change to volume of flow, pollutant loading and speed of flow.

2.3 Consideration of the Policies and Proposals

To ensure that the plans or polices that are to be implemented are correctly assessed, each of the outcomes (and measures to implement those outcomes) have been reviewed and assessed to identify the impacts on the European Sites identified in the initial stages. Each outcome has been considered on a variety of topics, which include the changes that they may cause to the European Sites and are as follows:

- Estimating likely magnitude;
- The duration;
- The location; and
- Extent of effects of the changes as far as they may reasonably be predicted at this stage.

The outcomes are listed in the following Table 2.1 below along with the measures required to implement these outcomes and the potential effect that these measures may cause that may be relevant to the European Site. These potential effects may either be direct or indirect, temporary or permanent, positive or negative.

Measures required to implement the objectives that are thought to have a potential effect on a European Site are highlighted in the Table 2.1below and included in Table 2.2.

Table 2.1: Potential effects that may arise from measures to implement outcomes of the Strategy.

Outcome 1: To improve the understanding of local flood (surface water, groundwater and ordinary watercourses) and coastal risks	
Measures	**Potential Effects**
1.1 Record all flooding incidents and where appropriate carry out flooding investigations; **1.2** Record all appropriate structures/assets on watercourses so that ownership and responsibility can be identified in	For the purposes of this screening most of these measures have been scoped out with the exception of measure 1.6 as this is considered to be largely a desk and investigational based objective that will enable an improved understanding of the Counties flood risk to

the event of a problem with flooding; **1.3** Develop a consistent approach to designation of flooding/drainage structures; **1.4** Identify and assess the condition of existing drainage assets within the County, to prioritise capital investment; **1.5** Develop a standard press statement to be issued following a flood event; **1.6** Develop a county wide map based record of flood risk assets, Flood Investigation Reports, historical flooding and areas at risk of flooding to allow a proactive risk management approach to be taken by the flood authority; **1.7** Create flood hazard and flood risk maps and flood risk management plans for areas in the county known to be at risk of significant flooding; and **1.8** Update the Conwy County Flood Risk Assessment.	be developed and planned rather than the implementation of intrusive activities likely to adversely affect European Sites. Changes to asset ownership and responsibility could cause both positive and negative effects as they may result in a change to how that particular asset is managed and as such should be considered on an asset by asset basis by deferring down the HRA to all lower tier plans and projects that may arise.
Outcome 2: Increasing individual and community awareness and preparedness for flood and coastal erosion events and the impacts of climate change on flood risk	
Measure	**Potential Effects**
2.1 Raise public awareness of the impacts of climate change on flooding and (failure of) coastal defences; **2.2** Publish a public awareness strategy (Workshops, public awareness events, update and improve the Council Website, adverts in local press) and communicate it; **2.3** Maintain / improve a flood incidents team (on call 24 hour) to deal with non-emergency flood incidents; **2.4** To collaborate with statutory bodies to promote the existing flood warning service (EAW) and their proposed flooding campaigns; **2.5** Create an integrated county wide real time hydraulic and flood alert map (long term); **2.6** Make the public aware of available flood prevention and mitigation measures (resistance and resilience) to protect their property and assets; and **2.7** Target areas of historical flooding (or at high probability of flooding) to increase awareness of emergency procedures in the event of a flood.	For the purposes of this screening these measures have been scoped out as this is considered to be largely a desk and investigational based objective that focuses on flooding and community awareness. As such, it will enable an improved understanding of the Counties flood risk to be developed rather than the implementation of intrusive activities likely to adversely affect European Sites.

Outcome 3: To collaborate with FRMA's, stakeholders and the public to reduce flood and coastal risks, and share data and resources to the greatest benefit	
Measure	**Potential Effects**
3.1 Identify responsibilities of the riparian owners of managing their assets, through public engagement; **3.2** Continue to meet with the North Wales LFRMA's and Coordination Group to share knowledge, data and lessons learnt; **3.3** Develop an effective communication plan to ensure collaborative working and data sharing; **3.4** Undertake stakeholder engagement, to identify responsibilities of flood risk partners; and **3.5** Introduce a process to carry out internal and external flood debrief meetings following a flood.	For the purposes of this screening these measures have been scoped out as this is considered to be this is largely a desk and investigational based objective that will enable an improved understanding of the Counties flood risk to be developed rather than the implementation of intrusive activities likely to adversely affect European Sites
Outcome 4: To reduce the impact and consequences for individuals, communities, businesses and the environment from flooding and coastal erosion	
Measure	**Potential Effects**
4.1 Identify vulnerable groups within the community, and prepare action plans in the event of flooding; **4.2** Identify areas at greatest risk of flooding, and develop a capital cost investment programme to alleviate flooding; **4.3** Educate general public on options for protecting their properties through flood prevention options and resistance and resilience measures; **4.4** Assist and provide support following a flood event; and **4.5** Develop site specific flood response plans for at high risk communities.	For the purposes of this screening these measures have been scoped out (excluding 4.2) as this is considered to be largely a desk and investigational based objective that focuses on identifying areas of flooding and community awareness. Where funds are targeted and how they are targeted could cause changes in how flood attenuation and control schemes are employed and as such both positive and negative impacts to the European Sites. For these measures it is acceptable to "defer down" the HRA to lower tier plans and projects that will arise from their implementation.

Outcome 5: To ensure that planning decisions are properly informed by flooding issues and the impact future planning may have on flood risk management and long term developments	
Measure	**Potential Effects**
5.1 Develop clear guidance for the Planning Department when assessing planning applications; **5.2** Develop a process with the Planning Department to create clear advise and direction to developers on FRMS and drainage (including incorporation of SuDS into new developments); **5.3** Establish a SuDS Approval Body (SAB); **5.4** Keep the Planning Department informed and up-to-date with flood areas in the County; and **5.5** Develop policies for effective land use management and enhance development control procedures where appropriate.	For the purposes of this screening these measures have been scoped out as they are considered to be production of guidance and advice objective that will enable an improved management of the Counties flood risk in relation to planning, rather than the implementation of intrusive activities likely to adversely affect European Sites. Guidance may cause the selection or avoidance of techniques or methods that may cause adverse impacts to European Sites. Likewise, guidance may also promote the implementation of beneficial techniques. Any guidance arising from this objective will be screened for potential likely significant effects on European Sites and all consents for work are passed to the Environment Agency, the relevant nature conservation body (currently CCW) and Biodiversity units for consultation. Therefore, it is thought that there will not be a significant effect on European Sites and as such these measures can be scoped out.
Outcome 6: Improve and/or maintain the capacity of existing drainage systems by targeted maintenance	
Measure	**Potential Effects**
6.1 Identify and assess the condition of existing drainage assets within the County, to prioritise capital investment; **6.2** Develop a risk based reactive and cyclical maintenance regime; and **6.3** Develop a risk based programme for improving existing infrastructure.	For the purposes of this screening these options have been scoped out as it is considered to be an identification and assessment process of the existing condition of the counties drainage assets to inform investment, this is considered to inform improvement programmes to be developed rather than the implementation of intrusive activities likely to adversely affect European Sites. Once prioritisation is known then the thorough procedures in place within CCBC when reviewing improvement projects, will be assessed for intrusive activities likely to adversely affect European Sites on a project by project basis. The relevant nature conservation body (currently CCW) will also be consulted where necessary in regard to lower tier plans or projects which could have a significant effect on European Sites.

Outcome 7: Take a sustainable approach to flood risk management balancing economic, environmental and social benefits	
Measure	**Potential Effects**
7.1 Ensure the environmental consequences of implementing the LFRMS are considered against the technical, economic and social benefits; **7.2** Consider the principles of the Conwy Sustainability Strategy in FCERM; and **7.3** Consider the use of attenuation through wetlands to increase the length of flow durations, store flood water, and provide amenity and ecological benefits.	Any changes in the policies for flood risk management procedures and programmes, may impact on a feature, conservation objective or vulnerability associated with a European Sites. However, consideration of environmental consequences are likely to reduce negative impacts arising from the implementation of LFRMS. Once changes are known then the thorough procedures in place within CCBC when reviewing projects, will highlight the possibility for intrusive activities likely to adversely affect European Sites on a project by project basis. The relevant nature conservation body (currently CCW) will also be consulted where necessary in regard to lower tier plans or projects which could have a significant effect on European Sites.
Outcome 8: Increase approaches that utilise the natural environment	
Measure	**Potential Effects**
8.1 Adopt natural flood-risk management techniques including SuDS; **8.2** Keeping up-to-date with new and innovative technologies for flood defence and flood management; **8.3** Where possible incorporate multiple benefits such as water quality, biodiversity and amenity benefits; and **8.4** Continue to implement Conwy's non-culverting statement.	Changes in drainage, engineering, or flood defence and management technologies, may impact both negatively or positively on a feature, conservation objective or vulnerability associated with a European Sites. Once any proposed changes are known then the thorough procedures in place within CCBC when reviewing plans and projects, will highlight the possibility for intrusive activities likely to adversely affect European Sites on a project by project basis. The relevant nature conservation body (currently CCW) will also be consulted where necessary in regard to lower tier plans or projects which could have a significant effect on European Sites..
Outcome 9: Ensure the development of skills required to implement effective and innovative flood risk management measures	
Measure	**Potential Effects**
9.1 Provide appropriate staffing levels and develop staff	This objective is unlikely to impact any feature,

expertise to deliver the requirements of the act; **9.2** Invest in appropriate software and hardware; **9.3** Outsource specialist skills to deliver specific projects, and **9.4** Collaborate and provide support, training and network of staff across the region.	conservation objective or vulnerability associated with screened-in European Sites as they relate to the development of staff skills.
Outcome 10: Identify projects and programmes which are affordable, maximising capital funding from internal and external sources	
Measure	**Potential Effects**
10.1 Identify potential funding sources which may include communities and local business's; **10.2** Undertake full lifecycle cost benefit analysis for projects including social, and environmental benefits; and **10.3** Investigate opportunities for match funding and grants.	This objective is unlikely to impact any feature, conservation objective or vulnerability associated with screened-in European Sites as they relate to the obtaining of funds to finance projects, as such it is anticipated that the improvements would be screened on a project by project basis. The relevant nature conservation body (currently CCW) will also be consulted where necessary in regard to lower tier plans or projects which could have a Likely Significant Effect on European Sites.

Outcomes that are considered unlikely to have significant effects on a European Site are generally intangible in nature and involve measures such as increasing the awareness of flood risk, developing greater community ownership and partnership involvement across CCBC.

The implementation of the Strategy may result in an improvement in water quality and resources across the County. It may also reduce the likelihood of contaminated land and sewerage networks being flooded in CCBC and the subsequent mobilisation of pollutants, fertilisers and pesticides and their discharge into nearby watercourses and water bodies. The adoption of SuDS (as outlined in the Strategy) will promote the sustainable use of water in CCBC and will contribute to the reduction in diffuse pollution from urban runoff and the overall enhancement of water quality in CCBC. The implementation of the LFRMS may also provide potential opportunities to develop new habitats and enhance biodiversity across CCBC, through development of wetlands.

In contrast, the implementation of the LFRMS may involve measures (i.e. hard engineering solutions) that have the potential to adversely affect (or improve) the physical nature of watercourses and water bodies in CCBC and subsequently their water quality. This in turn may impact (positively or negatively) their ecology. Other measures may alter the hydrological regime of an ecosystem and subsequently may have negative repercussions for species dependent on these ecosystems. It is important to note that any flood alleviation scheme will have to be correctly assessed through the due planning process and would be subject to the initial screening stage of a HRA (Assessing Likely Significant Effects). Application of avoidance or mitigation measures during this initial screening stage may negate the requirement for an Appropriate Assessment on a case by case basis

Some of the objectives and measures proposed by the Strategy may result in the implementation of an action or a project that could potentially have a Likely Significant Effect on a European Site.

The Measures listed in Table 2.2 below have been screened-in as they are thought to potentially have an adverse impact on a European Site and have been screened against the relevant European Sites in Appendix B and C.

Table 2.2 Outcomes that may have a Likely Significant Effect on a European Site

Outcomes that have measures that cannot be scoped out and will be considered during the screening in Appendix B and C	**Measure**
Objective 1: To improve the understanding of local flood (surface water, groundwater and ordinary watercourses) and coastal risks.	**1.6** Develop a county wide map based record of flood risk assets, Flood Investigation Reports, historical flooding and areas at risk of flooding to allow a proactive risk management approach to be taken by the flood authority.
Objective 7: Take a sustainable approach to flood risk management balancing economic, environmental and social benefits	**7.3** Consider the use of attenuation through wetlands to increase the length of flow durations, store flood water, and provide amenity and ecological benefits
Objective 8: Increase approaches that utilise the natural environment	**8.1** Adopt natural flood-risk management techniques including SuDS

2.4 Direct or Indirect Impacts on European Sites

As part of the process to assess the impacts of the Strategy it is required to acknowledge that the Strategy is not directly connected with or necessary to the management of any European Site. In addition, it is necessary to identify any elements of the plan that may have a Likely Significant Effect on any interest feature alone or in combination with any other projects or plans both directly or indirectly.

Potential in-combination effects may arise from the implementation of the Strategy, in combination with the effects of other schemes, policies, plans and programmes. To be relevant, the residual effects of other plans or projects will need to either make an unlikely effect of the LFRMS likely, or an insignificant effect of the LFRMS significant, or both.

Considering the above, in-combination effects are difficult to assess but will be produced by various current or proposed projects within CCBC boundaries both on small and large scales. However, it is considered impractical to consider small scale projects in this screening process as the impacts of these are very difficult to quantify, although it is acknowledged that numerous small projects may have a combined impact, it is impossible to measure the impact with any confidence or accuracy.

It is always difficult to identify in-combination impacts as the assessment is conducted using the available information, and as such is unable to include schemes that are in the conception or preconception stage as these may not be in the public domain. Nevertheless the following plans have been considered:

- The Dwr Cymru Water Resources Management Plan;
- Relevant drought management plans;
- North West Wales and Conwy Catchment Flood Management Plans; and

- Relevant Shoreline Management Plans.

Large scale projects within CCBC boundaries will be subject to individual Environmental Impact Assessment (EIA) and a HRA through the due planning process and as such any adverse environmental impacts on the European Sites, including in-combination effects with projects arising from the LFRMS, should be identified through the planning process.

As the LFRMS has limited targets concerning physical measures it would be unfeasible to predict in-combination effects with any degree of certainty without further specific information in regards to engineering solutions as a result of this screening process. Lower tier plans and projects resulting from the LFRMS will include further detail on the location and timing of practical measures and can be subject to the HRA screening process outlined in this document if required.

2.5 Likelihood of Significant Effects

Having identified the relevant measures from the strategy objectives, the next stage of the assessment is to determine whether those measures will have a Likely Significantly Effect on a European Site, either alone or in combination with other plans and projects. For each of the European Sites this is achieved by considering the strategy objectives and measures that have not been scoped out in Section 2.3 against the following criteria:

- Reason for the European Site designations;
- Key environmental conditions that support site integrity;
- Environmental vulnerabilities;
- Catchment (s) (EA 2010);
- Initial screening results (without measures);
- Measures; and
- Final screening results (including measures).

The tables in Appendices B and C document the results of this screening for European sites located within CCBC boundary and European sites that are hydrologically connected to the CCBC boundary and within 15 km respectively.

2.5.1 Outcomes that may have the potential to have a Likely Significant Effect or it is uncertain whether there would be significant effects

As the Strategy is a high-level strategic plan, there is insufficient or no detail on proposed schemes and projects. As such an assessment of impacts or effects are dependent on factors that are yet to be determined (future flood events, funding ect). However, there is a potential that schemes may be implemented in the future and that further consideration may be required for specific projects once they are realised. Provided these projects or measures are appropriately screened in accordance with the European Habitats Directive prior to implementation, it is anticipated that adverse impacts to the European Sites can be appropriately identified, avoided or if applicable mitigated in accordance with the spirit of the European Directive.

Overall, as the LFRMS is a high level plan with no project specific details, any potential significant effects on European Sites will be mitigated for by deferring down the HRA to any lower tier plans or projects. Every lower tier plan or project arising from the LFRMS will be subject to a plan or project based HRA and will include consultation with the relevant nature conservation body (currently CCW). Therefore, it is unlikely

that the plans and projects arising from the LFRMS either alone, or in combination with elements of the same plan, or other plans and projects, would produce a Likely Significant Effect on European Sites within the limits of IoACC boundaries.

2.6 Consultation

The Statutory Authorities (currently CCW/ EAW) will be consulted on a project by project basis with respect to this assessment and any resulting comments or recommendations illustrated here once received.

3. Conclusions and Recommendations

A review of the available data has identified a total of 22 European Sites that are within the County boundary and the Zone of Influence. All of these sites are linked or may be impacted by the implementation of the Conwy Local Flood Risk Management Strategy.

The Strategy is a high level document aimed at implementing the requirements of the Flood and Water Management Act 2010, whereby the FWMA created a responsibility for County and Unitary Councils to act as Lead Local Flood Authorities (LLFA's). As such the LLFA are required to take leadership for the coordination and management of local flood risk. The Strategy document identifies 10 outcomes (and subsequent measures to implement those outcomes) that the LLFA intends to implement to fulfil their legal requirements under the Act.

This document has reviewed each of the outcomes, and considered the likely impacts that they may have on the identified European Sites, both located within the County and within the likely Zone of Influence (with 15 km of the county boundary, and hydrologically linked).

As the Strategy is a high-level plan, project specific detail is not available, and therefore assessment of effect, is dependent on factors such as available funding at the time of implementation. However, the Strategy does potentially advocate the implementation of projects that will need to be considered further at the implementation or project stage when further project specific detail is available. Therefore, the LFRMS looks to mitigate any potential significant effects on European Sites by deferring down the HRA, where any lower tier plans or projects arising from the LFRMS will be subject to a plan or project based HRA where appropriate.

This document concludes that although the implementation of measures could have an effect, it is perceived that there will be no Likely Significant Effect on a European Site. Therefore, no further steps in the HRA (i.e. Appropriate Assessment) are required at this stage.

It is recommended that projects, measures or resulting maintenance regimes are assessed in accordance with Guidance For Plan Making Authorities In Wales - The Appraisal Of Plans Under The Habitats Directive (Revised April 2010 and September 2012), issued by CCW (http://www.ccgc.gov.uk/landscape--wildlife/managing-land-and-sea/environmental-assessment/habitats-regulations-assessmen.aspx). The reporting mechanism that is used for transport schemes within the DMRB HD 44/09 (as referenced in Section 4) is useful as the system can be used to assess projects across disciplines to produce a thorough HRA.

Appendices

Appendix A. Map of European Sites Located within the ZoI of

Appendix B. Screening Assessment of European Sites Located Within CCBC Boundary

B.1. Objectives and measures to be considered during the screening assessment

Outcomes that have measures that cannot be scoped out and will be considered during the screening in Appendix B and C	Measure
Objective 1: To improve the understanding of local flood (surface water, groundwater and ordinary watercourses) and coastal risks.	**1.6** Develop a county wide map based record of flood risk assets, Flood Investigation Reports, historical flooding and areas at risk of flooding to allow a proactive risk management approach to be taken by the flood authority.
Objective 7: Take a sustainable approach to flood risk management balancing economic, environmental and social benefits	**7.3** Consider the use of attenuation through wetlands to increase the length of flow durations, store flood water, and provide amenity and ecological benefits
Objective 8: Increase approaches that utilise the natural environment	**8.1** Adopt natural flood-risk management techniques including SuDS

B.2. Screening assessment

Reasons for Designation	Key Conservation Objectives	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
Snowdonia – SAC						
Primary Reasons For Designation *Annex I Habitats* ▪ Llyn Idwal – small shallow upland corrie with unchanged, high water quality and characteristic plant assemblage; ▪ Best developed and most extensive example (south of Scotland) of siliceous alpine and boreal grasslands habitat; ▪ Most extensive and diverse example of hydrophilous (i.e. plants pollinated by flowing water) tall herb fringe communities in Wales; ▪ Extensive screes of igneous rocks with associated plant species; ▪ Calcareous rocky slopes with associated plant species; and ▪ Siliceous rocky slopes with associated plant species. *Annex II Species* ▪ Slender green feather moss (*Drepanocladus vernicosus*); and ▪ Floating water-plantain (*Luronium*	▪ Maintain and increase the extent of Annex I habitats and ensure the maintenance of their structure; ▪ Ensure the presence and abundance of typical plant species in each Annex I habitat, as outlined in Core Management Plan (CMP); ▪ Ensure there are no signs of disturbance (i.e. overgrazing, heavy trampling, frequent burning or drainage) present at any of the Annex I habitats, as outlined in CMP; ▪ Ensure there are no non-native invasive species present; ▪ Ensure slender green feather moss is present at the Cwm Afon Llafar flushes along with other associated vegetation, as outlined in the CMP; and ▪ Ensure floating water-	▪ Extensively grazed by sheep; ▪ Damaged and reduced montane communities such as moss heath; ▪ Intense recreational pressures that have resulted in concentrated severe erosion problems (remedial work is on-going); and ▪ Watercourses and lakes are particularly vulnerable to acidification.	River Conwy and Clwyd catchment flood management plan (CFMP) area[11]: *Conwy Catchment and Upland sub-area*	2 of the primary reasons and qualifying features for this designated site are hydrological in nature, while 6 are associated with hydrology. As such this site may be impacted by the implementation of the CLFRMS.	Consultation and consent for CCW/CCBC/EAW required for work within watercourses. As a result of the consultation with statutory bodies (such as CCW/CCBC) it would be anticipated that each individual project would require a project specific HRA and would need to produce a management plan to undertake works within the SAC. Environmental impacts can be reduced through good site practice.	Provided control measures are adhered to, **it is anticipated that there will be <u>No Significant Effects</u> on qualifying features of the SAC or their management.** Potential beneficial effects have been identified.

[11] Environment Agency (2010) *Conwy and Clwyd Catchment Flood Management Plan*

Reasons for Designation	Key Conservation Objectives	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
natans). **Other Qualifying Features** *Annex I Habitats* ▪ Northern Atlantic wet heaths with cross-leaved heath (*Erica tetralix*); ▪ European dry heaths; ▪ Alpine and sub-alpine calcareous grasslands; ▪ Species-rich *Narudus* (grass genus) grassland, on siliceous substrates in mountain areas (and sub-mountain areas in continental Europe); ▪ Blanket bogs; ▪ Depressions on peat substrates of 'Rhynchosporion' (rare habitat of exposed, humid peat where strips of vegetation occur); ▪ Petrifying springs with tufa (a hard deposit of calcium carbonate) formation; ▪ Alkaline fens; ▪ Alpine pioneer formations of the 'Carcion bicoloris-atrofuscae', which are one of the few natural plant communities in UK; and ▪ Old sessile oak woods with holly and blechnum fern species in the British Isles.	plantain is present at Cwmffynnon.				Project level assessments such as EIA's and HRA's	
Gwydyr Forest Mines – SAC						
Primary Reasons For Designation *Annex I Habitats* ▪ Scattered and disused lead and zinc mines; and ▪ Calaminarian grasslands with plant species: forked spleenwort	▪ Maintain and increase extent of Calaminarian grassland. Ensure there are o broadleaf, coniferous, exotic or scrub plant species present; and ▪ Maintain optimal roosting	▪ Generally unmanaged Component grassland sites, generally unmanaged and not used for recreation;	River Conwy and Clwyd CFMP area: *Conwy Catchment and Upland*	None of the primary reasons or qualifying features are hydrological in nature or associated with	Consultation and consent for CCW/CCBC/EAW required for work within watercourses.	Provided control measures are adhered to, **it is anticipated that there will be <u>No Significant Effects</u> on qualifying**

Reasons for Designation	Key Conservation Objectives	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
(*Asplenium septentrionale*) and alpine penny-crest (*Thlaspi caerulescens*). **Other Qualifying Features** *Annex II species* ▪ Lesser Horseshoe Bats (*Rhinolophus hipposideros*).	habitat and sufficient foraging habitat to support lesser horseshoe bat population in the long term.	and ▪ Conifer encroachment may pose a problem, continued monitoring required.	*and Conwy Valley sub-area*	hydrology. However, Lesser Horseshoe Bats are reliant on linear features for commuting between roosts and to feeding areas, as such secondary impacts as a result of projects such as vegetation clearance, lighting etc may have an impact on the designated sites	As a result of the consultation with statutory bodies (such as CCW/CCBC)it would be anticipated that each individual project would require a project specific HRA and would need to produce a management plan to undertake works within the SAC. Environmental impacts can be reduced through good site practice. Project level assessments such as EIA's and HRA's	**features of the SAC or their management.** Potential beneficial effects have been identified.
Creuddyn Peninsula Woods – SAC						
Primary Reasons for Designation *Annex I Habitats* ▪ Ravine forest with ash (*Fraxinus excelsior*), wych elm (*Ulmus glabra*) and lime species (mainly small-leaved lime (*Tilia cordata*)). Often introduced sycamore (*Acer pseudoplatanus*) is present. **Other Qualifying Features** *Annex I Habitats* ▪ Semi-natural dry grasslands and scrubland facies: on calcareous substrates (i.e. grasslands found on	▪ Maintain and increase extent of woodland (by natural processes), however do not encroach on grassland or yew wood. ▪ Ensure ash is the main native tree species present along with other locally native broadleaved species. See CMP for further details on plant species, their abundance and distribution; and ▪ Maintain woodland's diverse structure with all stages of	▪ Timber production and game shooting may impact on woodland structure and ground flora; and ▪ Recreational pressures associated with public access can also lead to damage.	River Conwy and Clwyd CFMP area: *Conwy, Llanddudno Junction, Llandudno, Mochdre sub-area*	None of the primary reasons or qualifying features are hydrological in nature or associated with hydrology. As such this site is unlikely to be impacted by the implementation of the CLFRMS.	Consultation and consent for CCW/CCBC/EAW required for work within watercourses. As a result of the consultation with statutory bodies (such as CCW/CCBC) it would be anticipated that each individual project would require a project specific	Provided control measures are adhered to, **it is anticipated that there will be <u>No Significant Effects</u> on qualifying features of the SAC or their management.** Potential beneficial effects have been identified.

Reasons for Designation	Key Conservation Objectives	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
thin, well-drained, lime-rich soils associated with chalk and limestone); and ▪ Yew (*Taxus baccata*) woodland.	woodland growth and decay including mature and ancient trees to be present.				HRA and would need to produce a management plan to undertake works within the SAC. Environmental impacts can be reduced through good site practice. Project level assessments such as EIA's and HRA's	
Menai Strait and Conwy Bay – SAC						
Primary Reasons for Designation *Annex I Habitats* ▪ Sandbanks slightly covered by sea water at all times; ▪ Mudflats and sandflats not covered by seawater at low tide; and ▪ Reefs. **Other Qualifying Features** *Annex I Habitats* ▪ Large shallow inlets and bays; and ▪ Submerged or partially submerged sea caves.	▪ Maintain and increase the distribution and extent of Annex I habitats within the site; ▪ Maintain structure and function of Annex I habitats within the site and ensure they are not degraded, as outlined in CMP; and ▪ Maintain the presence, abundance, condition and diversity of typical plant species, as outlined in the CMP.	▪ Construction can cause disturbance to European habitats and disrupt physical processes essential for maintenance of these habitats; ▪ Commercial fishing (i.e. trawling); ▪ Disposal of dredged material may contribute to an increase in turbidity which in turn can affect the distribution and composition of sub-tidal algal communities; and ▪ Development of oil wells and frequent boat traffic into Liverpool Bay may present potential pollution sources.	River Conwy and Clwyd CFMP area: *Conwy Catchment and Upland sub-area* *Conwy, Llandudno Junction, Llanduchno , Mochdre sub-area*	All of the primary reasons and qualifying features are hydrological in nature. As such this site may be impacted by the implementation of the CLFRMS.	Consultation and consent for CCW/CCBC/EAW required for work within watercourses. As a result of the consultation with statutory bodies (such as CCW/CCBC) it would be anticipated that each individual project would require a project specific HRA and would need to produce a management plan to undertake works within the SAC. Environmental impacts can be reduced through	Provided control measures are adhered to, **it is anticipated that there will be <u>No Significant Effects</u> on qualifying features of the SAC or their management.** Potential beneficial effects have been identified.

Reasons for Designation	Key Conservation Objectives	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
					good site practice. Project level assessments such as EIA's and HRA's	
Great Orme's Head – SAC						
Primary Reasons for Designation *Annex I Habitats* ▪ European dry heaths; and ▪ Semi-natural dry grasslands and scrubland facies: on calcareous substrates (i.e. grasslands found on thin, well-drained, lime-rich soils associated with chalk and limestone). **Other Qualifying Features** *Annex I Habitats* ▪ Vegetated sea cliffs of the Atlantic and Baltic coasts.	▪ Maintain and increase extent of dry heath, however do not encroach on semi-natural dry grassland. See CMP for further details on plant species present and phases of heath vegetation; and ▪ Manage bracken (*Pteridium aquilinum*), gorse (*Ulex europaeus*) and native shrub and tree species, in accordance with CMP.	▪ Plateau top and its slopes are subject to a high level of grazing resulting in short cropped turf; ▪ Invasion by native and non-native shrub species in areas inaccessible to grazing livestock; and ▪ Recreational pressure – site is immediately adjacent to Llandudno, a major tourist centre.	River Conwy and Clwyd CFMP area: *Conwy, llandudno Junction, Llanduchno , Mochdre sub area.*	Qualifying feature is associated with hydrology. As such this site may be impacted by the implementation of the CLFRMS.	Consultation and consent for CCW/CCBC/EAW required for work within watercourses. As a result of the consultation with statutory bodies (such as CCW/CCBC) it would be anticipated that each individual project would require a project specific HRA and would need to produce a management plan to undertake works within the SAC. Environmental impacts can be reduced through good site practice. Project level assessments such as EIA's and HRA's	Provided control measures are adhered to, **it is anticipated that there will be <u>No Significant Effects</u> on qualifying features of the SAC or their management.** Potential beneficial effects have been identified.
Elwy Valley Woods – SAC						
Primary Reasons for Designation	▪ Maintain extent of woodland (by natural	▪ Grazing by fallow deer. Some sections	River Conwy and	Primary reason is neither	Consultation and consent for	Provided control measures are

Reasons for Designation	Key Conservation Objectives	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
Annex I Habitats ▪ Woodland with a varied canopy of Ash, small-leaved lime and wild service-tree (*sorbus torminalis*) and outstanding lower plant flora.	processes); ▪ Ensure woodland contains appropriate plant species, as outlined in CMP, at appropriate abundances and densities. Discourage the presence of conifers (except yew), beech, hornbeam (*Carpinus sp.*) and sycamore; and ▪ Retain deadwood (either standing or fallen) to provide habitat for invertebrates, fungi and other woodland species.	are threatened by domestic livestock grazing; ▪ Non-native invasive species occur in woodland (mainly beech and hornbeam); and ▪ Parts of these woods are silviculturally managed. If this is intensified or extended, it could potentially be damaging.	Clwyd CFMP area: *Clwyd Catchments and Upland sub-area*	hydrological in nature nor associated with hydrology. As such this site is unlikely to be impacted by the implementation of the CLFRMS.	CCW/CCBC/EAW required for work within watercourses. As a result of the consultation with statutory bodies (such as CCW/CCBC) it would be anticipated that each individual project would require a project specific HRA and would need to produce a management plan to undertake works within the SAC. Environmental impacts can be reduced through good site practice. Project level assessments such as EIA's and HRA's	adhered to, **it is anticipated that there will be <u>No Significant Effects</u> on qualifying features of the SAC or their management.** Potential beneficial effects have been identified.
Migneint-Arenig-Dduallt – SAC and SPA						
Primary Reasons for Designation *Annex I Habitats* ▪ European dry heaths; and ▪ Blanket bogs. **Other Qualifying Features** *Annex I Habitats* ▪ 22 lakes (greater than 0.5 ha in area) and also smaller ponds – that are	▪ Maintain and enhance extent of Annex I habitats. ▪ Maintain and enhance abundance and distribution of uncommon plants of these Annex I habitats as outlined in CMP; ▪ Manage areas of less favourable blanket bog. Maintain and restore structure of blanket bog	▪ Inappropriate grazing, burning and drainage has resulted in degradation of blanket bog and heath; ▪ Afforestation of mire and heath; ▪ Vegetation and lake features vulnerable	River Conwy and Clwyd CFMP area: *Conwy Catchment and Upland sub-area* North West	1 of the primary reasons and qualifying features are either hydrological in nature, while 2 are associated with hydrology. As such this site	Consultation and consent for CCW/CCBC/EAW required for work within watercourses. As a result of the consultation with statutory bodies (such as CCW/CCBC)it would	Provided control measures are adhered to, **it is anticipated that there will be <u>No Significant Effects</u> on qualifying features of the SAC or their management.**

Reasons for Designation	Key Conservation Objectives	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
naturally dystrophic (i.e. low oxygen content); ▪ Northern Atlantic wet heaths with Cross-leaved Heath; and ▪ Old sessile oak woods with holly and blechnum fern species in the British Isles. **Reasons for SPA designation** ▪ Site is of European importance for Annex I bird species listed on Birds Directive: breeding hen harrier (*Circus cyaneus*), peregrine falcon (*Falco peregrinus*) and merlin (*Falco columbarius*) and regularly occurring migratory bird species.	and heath to include features outlined in CMP; ▪ Control peat erosion on blanket bog and ensure no non-native invasive species or trees are present on blanket bog or heath; ▪ Manage structure of woodland area as well as the abundance and distribution plant species as outlined in CMP; ▪ Retain deadwood on site. ▪ Follow guidelines (referring to breeding numbers, distribution, nesting and roosting sites and hunting habitat) for Annex I bird species as outlined in CMP.	to acidification due to atmospheric pollution. Also artificial liming of the catchment is an additional threat; and ▪ In the past site site has been affected by quarrying which resulted in habitat destruction.	Wales CFMP area: *Snowdonia sub-area*	may be impacted by the implementation of the CLFRMS.	be anticipated that each individual project would require a project specific HRA and would need to produce a management plan to undertake works within the SAC/SPA. Environmental impacts can be reduced through good site practice. Project level assessments such as EIA's and HRA's	Potential beneficial effects have been identified.

Appendix C. Screening Assessment of European Sites Hydrologically Connected to CBCC Boundaries and Within 15 km

The Objectives as in table A.1 are to be used against the screening for European Sites hydrologically connected to the CBCC boundary and within 15km.

Reasons for Designation	Key Environmental Conditions that support site integrity	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
Coedydd Aber – SAC – 5 km						
Primary Reasons for Designation *Annex I Habitats* ▪ Old sessile oak woods with holly and blechnum fern species in the British Isles. **Other Qualifying Features** *Annex I Habitats* ▪ Woods dominated by alder and willow on flood plains.	▪ Maintain woodland (by natural processes) and conditions necessary to ensure locally native plant species are present and beech and conifers are not dominant, as outlined in CMP; and ▪ Ensure dead and dying trees with associated dead wood and other dependent species are present, as outlined in CMP.	▪ Overall robust woodland – room for enhancement through the removal of conifers and other invasive species.	North West Wales CFMP area: *Snowdonia sub-area*	Qualifying feature is associated with hydrology. As such this site may be impacted by the implementation of the CLFRMS.	Consultation and consent for CCW/CCBC/EAW required for work within watercourses. As a result of the consultation with statutory bodies (such as CCW/CCBC) it would be anticipated that each individual project would require a project specific HRA and would need to produce a management plan to undertake	Provided control measures are adhered to, **it is anticipated that there will be <u>No Likely Significant Effects</u> on qualifying features of the SAC or their management.** Potential beneficial effects have been identified.

Reasons for Designation	Key Environmental Conditions that support site integrity	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
					works within the SAC. Environmental impacts can be reduced through good site practice. Project level assessments such as EIA's and HRA's	
Meirionnydd Oakwoods and Bat Sites – SAC – 5 km						
Primary Reasons for Designation *Annex I Habitats* ▪ Old sessile oak woods with holly and blechnum fern species in the British Isles; and ▪ Woods dominated by alder and willow on flood plains. *Annex II Species* ▪ Lesser Horseshoe Bats. **Other Qualifying Features** *Annex I Habitats* ▪ Watercourses with floating mats of water-crowfoots and other associated aquatic species. ▪ Northern Atlantic wet heaths with cross-leaved heath; ▪ European dry heaths; ▪ Woodland with a varied canopy of ash, small-leaved lime and wild service-tree and outstanding lower plant flora; and	▪ Maintain extent, structure and species composition of woodland, as outlined in CMP. ▪ Maintain volume of deadwood present as outlined in CMP; ▪ Ensure no non-native invasive species are present; ▪ Maintain and enhance size of current population of lesser horseshoe bats by ensuring presence of sufficient roosts of appropriate quality and suitable foraging habitat, extent and connectivity across the range. ▪ Maintain and (where possible) increase current distribution of plant species associated with watercourses. Ensure that no species indicative of	▪ Liverworts and mosses in gorges are threatened by recreational activities. ▪ Soils within the woodland are vulnerable to acidification. ▪ Lesser horseshoe bats are vulnerable at certain times of year – summer and winter roosts.	North West Wales CFMP area: *Snowdonia sub-area*	1 of the qualifying features is hydrological in nature, while 3 of the primary reasons and qualifying features are associated with hydrology. As such this site may be impacted by the implementation of the CLFRMS. However, Lesser Horseshoe Bats are reliant on linear features for commuting between roosts and to feeding areas, as such	Consultation and consent for CCW/CCBC/EAW required for work within watercourses. As a result of the consultation with statutory bodies (such as CCW/CCBC) it would be anticipated that each individual project would require a project specific HRA and would need to produce a management plan to undertake works within the SAC.	Provided control measures are adhered to, **it is anticipated that there will be <u>No Likely Significant Effects</u> on qualifying features of the SAC or their management.** Potential beneficial effects have been identified.

Reasons for Designation	Key Environmental Conditions that support site integrity	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
▪ Bog woodland.	unfavourable conditions or non-native invasive species are present (e.g. filamentous algae associated with eutrophication).			secondary impacts as a result of projects such as vegetation clearance, lighting etc may have an impact on the designated sites	Environmental impacts can be reduced through good site practice. Project level assessments such as EIA's and HRA's	
River Dee and Bala Lake – SAC – 5 km						
Primary Reasons for Designation *Annex I Habitats* ▪ Watercourses with floating mats of water-crowfoots and other associated aquatic species. *Annex II Species* ▪ Atlantic salmon (*Salmo salar*); and ▪ Floating water-plantain. **Other Qualifying Features** *Annex II Species* ▪ Sea Lamprey (*Petromyzon marinus*); ▪ Brook Lamprey (*Lampetra planeri*); ▪ River Lamprey (*Lampetra fluviatilis*); ▪ Bullhead (*Cottus gobio*); and ▪ Otter (*Lutra lutra*).	▪ Ensure ecological status of water environment is sufficient to sustain population of each species (i.e. no deterioration in water quality). ▪ Avoid physical modifications that may adversely affect the integrity of the SAC. ▪ Ensure that artificial factors do not inhibit features by preventing them from occupying the full extent of their range. This can be achieved through modification; and ▪ With regard to each Annex II species: Maintain and increase extent of their potential range and ensure conservation status of species is favourable.	▪ Site and its features are threatened by practices which have an adverse effect on the quality, quantity and pattern of water flows; ▪ Threats to riverine ecosystem include: inappropriate flow regulation; excessive abstraction (for industry, agriculture and domestic purposes); threats to water quality from direct and diffuse pollution; eutrophication and siltation; ▪ Degradation of riparian habitats due to engineering works, agricultural practices and invasive plant species may also have an adverse	Conwy and Clwyd Catchment and River Dee CFMP area: *Deeside, Wirral, Flintshire sub-area* *Mold sub-area* *Main Alyn sub-area* *Upper Dee sub-area*	All of the primary reasons and qualifying features are hydrological in nature or associated with hydrology. As such this site may be impacted by the implementation of the CLFRMS.	Consultation and consent for CCW/CCBC/EAW required for work within watercourses. As a result of the consultation with statutory bodies (such as CCW/CCBC) it would be anticipated that each individual project would require a project specific HRA and would need to produce a management plan to undertake works within the SAC. Environmental impacts can be reduced through	Provided control measures are adhered to, **it is anticipated that there will be <u>No Likely Significant Effects</u> on qualifying features of the SAC or their management.** Potential beneficial effects have been identified.

Reasons for Designation	Key Environmental Conditions that support site integrity	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
		effect; ▪ Atlantic salmon population is threatened by excessive exploitation by high sea, estuarine and recreational fisheries; and ▪ Introduction of non-indigenous species could also threaten both fish and plant species.			good site practice. Project level assessments such as EIA's and HRA's	
Liverpool Bay – SPA – 5 km						
Reasons for SPA designation ▪ Site is of European importance for Annex I bird species listed on Birds Directive: Red-throated Diver (*Gavia stellata*) and Common scoter (*Melanitta nigra*).	▪ Maintain the area of sandbanks in the site within acceptable limits; ▪ Mean overwintering population of Red-throated Diver should not fall below 922; ▪ There should be no significant reduction in numbers of over-wintering birds or displacement attributable to disturbance; ▪ No decrease in the extent of undisturbed sublittoral, shallow (<20m) Sandbank habitat available for common Scoter feeding; ▪ Mean overwintering population of Scoter should not fall below 54,675 individuals; and ▪ Mean overwintering population of waterfowl	▪ Extraction of Red-throated Diver's main fish prey could impact population;	Conwy and Clwyd CFMP area; River Dee CFMP area; and North West Wales CFMP area.	Habitats and food sources associated with these Annex I bird species are associated with or dependent on hydrology. As such this site may be impacted by the implementation of the CLFRMS.	Consultation and consent for CCW/CCBC/EAW required for work within watercourses. As a result of the consultation with statutory bodies (such as CCW/CCBC) it would be anticipated that each individual project would require a project specific HRA and would need to produce a management plan to undertake works within the SPA.	Provided control measures are adhered to, **it is anticipated that there will be <u>No Likely Significant Effects</u> on qualifying features of the SAC or their management.** Potential beneficial effects have been identified.

Reasons for Designation	Key Environmental Conditions that support site integrity	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
	and sea birds should not fall below 55,597individuals.				Environmental impacts can be reduced through good site practice. Project level assessments such as EIA's and HRA's. This may result in restriction on the timings of the works to account for the bird population.	
Lavan Sands, Conwy Bay – SPA – 5 km						
Reasons for SPA designation ▪ Site is of European importance for Annex I bird species listed on Birds Directive: overwintering bird species - Oystercatcher (*Haematopus ostralegus*) and Eurasian Curlew (*Numenus arquata*).	▪ Ensure 5 year mean peak of wintering oystercatchers is at least 4,000 and that there is suitable food to maintain at sufficient levels to support population of oystercatchers; ▪ Reduce any disturbance that may prevent them from feeding; and ▪ Ensure roost sites are suitable and undisturbed with appropriate management and control of activities that may adversely affect oystercatchers (especially in the long term).	▪ Sporadic cockle suction-dredgying may deplete oystercatchers' food source.	North west Wales – Anglesey; Snowdonia; Bangor and Caemarfon; and Lleyn Peninsula sub-areas.	Habitats and food sources of these Annex I bird species are associated with or dependent on hydrology. As such this site may be impacted by the implementation of the CLFRMS.	Consultation and consent for CCW/CCBC/EA W required for work within watercourses. As a result of the consultation with statutory bodies (such as CCW/CCBC) it would be anticipated that each individual project would require a project specific HRA and would need to produce a management	Provided control measures are adhered to, **it is anticipated that there will be <u>No Likely Significant Effects</u> on qualifying features of the SAC or their management.** Potential beneficial effects have been identified.

Reasons for Designation	Key Environmental Conditions that support site integrity	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
					plan to undertake works within the SPA. Environmental impacts can be reduced through good site practice. Project level assessments such as EIA's and HRA's. This may result in restriction on the timings of the works to account for the bird population.	
Llyn Idwal – Ramsar – 5 km						
Reasons for Ramsar designation: ▪ Under Ramsar Criterion 1: small, shallow, oligotrophic corrie lake. The semi-circular rock basin (or cwm) containing the lake is one of the finest examples in Snowdonia. ▪ Under Ramsar Criterion 2: species-rich plant community, including almost all of the species typical of oligotrophic waters in Britain. Notable species include: six-stamened waterwort (*Elatine hexandra*) and waterawlwort (*Subularia aquatica*) (both nationally scarce) and pillwort (*Pilularia globulifera*) (vulnerable at a European level).	▪ Maintain characteristic associated macrophyte flora along with characteristic vegetation zonation from shore to water and natural profile of lakes (not dammed for use as reservoirs).	N/A	North West Wales catchment: *Snowdonia sub-area*	the features of this site that relate to Criterion 1 and 2 are either hydrological in nature or associated with hydrology. As such this site may be impacted by the implementation of the LFRMS.	Consultation and consent for CCW/CCBC/EAW required for work within watercourses. As a result of the consultation with statutory bodies (such as CCW/CCBC) it would be anticipated that each individual project would require a project specific HRA and	Provided control measures are adhered to, **it is anticipated that there will be <u>No Likely Significant Effects</u> on qualifying features of the SAC or their management.** Potential beneficial effects have been identified.

Reasons for Designation	Key Environmental Conditions that support site integrity	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
					would need to produce a management plan to undertake works within the Ramsar. Environmental impacts can be reduced through good site practice. Project level assessments such as EIA's and HRA's.	
Afon Eden – Cors Goch Trawsfynydd – SAC – 10 km						
Primary Reasons for Designation *Annex II Species* ▪ Freshwater Pearl Mussel (*Margaritifera margaritifera*); and ▪ Floating Water-Plantain. **Other Qualifying Features** *Annex I Habitats* ▪ Active raised bog. *Annex II Species* ▪ Atlantic salmon; and ▪ Otter	▪ Maintain current extent of species in the long-term as well as sufficient habitat to support current species populations; ▪ Ensure abundant and self-sustaining Atlantic salmon population, as transference pearl mussel glochidia (larvae) is facilitated by this species; ▪ Maintain or enhance population of otters to reflect natural carrying capacity of this habitat. Ensure range of otters is not reduced. This may be dependent on prey abundance; ▪ Ensure suitable undisturbed breeding sites for otters. Where insufficient, sites	▪ Pearl mussel and salmonids are particularly vulnerable to water pollution; ▪ Intensive grazing; and ▪ Acidification.	North West Wales CFMP area: *Snowdonia sub-area*	All of the primary reasons and qualifying features are associated with hydrology. As such this site may be impacted by the implementation of the LFRMS.	Consultation and consent for CCW/CCBC/EAW required for work within watercourses. As a result of the consultation with statutory bodies (such as CCW/CCBC) it would be anticipated that each individual project would require a project specific HRA and would need to produce a management	Provided control measures are adhered to, **it is anticipated that there will be <u>No Likely Significant Effects</u> on qualifying features of the SAC or their management.** Potential beneficial effects have been identified.

Reasons for Designation	Key Environmental Conditions that support site integrity	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
	should be created through habitat enhancement and if necessary provision of artificial holts; ▪ Increase in location and distribution of raised bogs and associated rands and fen lags. Maintain and increase abundance and distribution of uncommon plants associated with this features (as outlined in CMP); ▪ Maintain and restore hydrological integrity and structure of each bog. Manage development of purple moor grass (*Molinia caerulea*) and scrub. Ensure no trees present; ▪ Ensure no artificial ditches are present; and ▪ Ensure no non-native invasive species are present.				plan to undertake works within the SAC. Environmental impacts can be reduced through good site practice. Project level assessments such as EIA's and HRA's.	
Afon Gwyrfai a Llyn Cwellyn – SAC – 10 km						
Primary Reasons for Designation *Annex I Habitats* ▪ Woodland with a varied canopy of ash, small-leaved lime and wild service-tree and outstanding lower plant flora; and ▪ Watercourses with floating mats of water-crowfoots and other associated aquatic species. *Annex II Species* ▪ Atlantic salmon; and ▪ Floating water-plantain.	▪ Ensure water quality is suitable to support characteristic flora and fauna; ▪ Maintain or increase extent of watercourse features and associated vegetation; ▪ Maintain or increase long-term population of Atlantic salmon and otters and their natural range. Ensure there is suitable	▪ Acidification; ▪ Afon Gwyrfai is most vulnerable to cumulative impacts of small-scale changes along its course which may affect water quality and habitat structure.	North West Wales CFMP area: *Snowdonia sub-area*	1 of the primary reasons are hydrological in nature, while 3 of the primary reasons and qualifying features are associated with hydrology. As such this site may be impacted	Consultation and consent for CCW/CCBC/EA W required for work within watercourses. As a result of the consultation with statutory bodies (such as CCW/CCBC) it would be	Provided control measures are adhered to, **it is anticipated that there will be <u>No Likely Significant Effects</u> on qualifying features of the SAC or their management.**

Reasons for Designation	Key Environmental Conditions that support site integrity	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
Other Qualifying Features *Annex II Species* ▪ Otter.	habitat and in the case of otters, that population size is not limited by availability of suitable undisturbed breeding sites; ▪ Ensure Llyn Cwellyn and Afon Gwyrfai continue to support peripheral floating water-plantain assemblage with characteristic zonation of vegetation.			by the implementation of the LFRMS.	anticipated that each individual project would require a project specific HRA and would need to produce a management plan to undertake works within the SAC. Environmental impacts can be reduced through good site practice. Project level assessments such as EIA's and HRA's.	Potential beneficial effects have been identified.
Berwyn and South Clwyd Mountains – SAC and SPA – 10 km						
Primary Reasons for Designation *Annex I Habitats* ▪ European dry heaths; and ▪ Blanket bog. **Other Qualifying Features** *Annex I Habitats* ▪ Semi-natural dry grasslands and scrubland facies: on calcareous substrates (i.e. grasslands found on thin, well-drained, lime-rich soils associated with chalk and limestone); ▪ Transition mires and quaking bogs;	▪ Maintain and increase extent of blanket bog; ▪ Ensure plant species characteristic of blanket bog (as outlined in CMP) are present and there is a high water table at all areas of blanket bog; ▪ Ensure development of irregular pattern across the blanket bog to maintain quality of blanket bog; ▪ Restore areas of degraded blanket bog habitat and discourage	▪ Inappropriate agricultural development (including: drainage, reseeding, application of fertilisers, burning, track construction and adoption of damaging grazing regime) threatens blanket bog, heaths, fens and grasslands. ▪ Areas of heath and grassland are	North West Wales Catchment: *Upper Dyfi and Upper Wnion sub-area*	2 of the primary reasons and qualifying features are associated with hydrology. As such this site may be impacted by the implementation of the CLFRMS.	Consultation and consent for CCW/CCBC/EAW required for work within watercourses. As a result of the consultation with statutory bodies (such as CCW/CCBC) it would be anticipated that each individual project would	Provided control measures are adhered to, **it is anticipated that there will be <u>No Likely Significant Effects</u> on qualifying features of the SAC or their management.** Potential beneficial effects have been

Reasons for Designation	Key Environmental Conditions that support site integrity	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
and ▪ Calcareous and calcshist screes of the montane to alpine levels which are rich in fern flora and act as refugia for a number of rare species.	burning of blanket bog as well as the development of moor drains or grips; ▪ Ensure no non-native invasive plant species are present and no decline in the range or abundance of plant species characteristic of this habitat.	also threatened by encroachment of bracken. ▪ Erosion problems are caused by local tourist pressure and damage by recreational vehicles.			require a project specific HRA and would need to produce a management plan to undertake works within the SAC/SPA. Environmental impacts can be reduced through good site practice. Project level assessments such as EIA's and HRA's.	identified.
Dee Estuary – SAC, SPA and Ramsar – 10 km						
Primary Reasons for Designation *Annex I Habitats* ▪ Mudflats and sandflats not covered by seawater at low tide; ▪ Salicornia and other annuals colonising mud and sand; and ▪ Atlantic salt meadows, which are regularly inundated by the sea and contains characteristic salt-tolerant perennial flowering plant species. **Other Qualifying Features** *Annex I Habitats* ▪ Estuaries; ▪ Annual vegetation of drift lines; ▪ Vegetated sea cliffs of the Atlantic and Baltic coasts;	▪ There must be no decrease in extent of estuarine habitat; ▪ Intra and inter-estuarine Tidal Prism/Cross Section ratio should not deviate significantly from an established baseline; ▪ Average temperature and salinity should not deviate significantly from an established baseline; ▪ Ensure there is no significant reduction in numbers or displacement of birds attributable to disturbance ▪ Presence and abundance of small fish	▪ Distinctive flora would be sensitive to grazing; ▪ Impact of adjacent historic use including waste disposal from former manufacturing industry such as chemical and steel manufacture; ▪ Dock development and navigational dredging, coastal defence works and their impact on coastal process, regulation of fisheries and	River Dee Catchment: *Flint sub-area*	8 of the primary reasons and qualifying features are hydrological in nature, while 5 are associated with hydrology. The habitats and food sources of these Annex I bird species are associated with or dependent on hydrology. The features of this site that	Consultation and consent for CCW/CCBC/EAW required for work within watercourses. As a result of the consultation with statutory bodies (such as CCW/CCBC) it would be anticipated that each individual project would require a project specific HRA and would need to	Provided control measures are adhered to, **it is anticipated that there will be <u>No Likely Significant Effects</u> on qualifying features of the SAC or their management.** Potential beneficial effects have been identified.

Reasons for Designation	Key Environmental Conditions that support site integrity	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
▪ Embryonic shifting dunes; ▪ Shifting dunes along the shoreline with European Marram Grass (*Ammophila arenaria*); ▪ Fixed dunes with herbaceous vegetation ('grey dunes'); and ▪ Humid dune slacks. *Annex II Species* ▪ Sea lamprey; ▪ River lamprey; and ▪ Petalwort (*Petalophyllum ralfsii*). **Reasons for SPA designation** Site is of European importance for Annex I bird species listed on Birds Directive: - During breeding season – Common tern (*Sterna hirundo*) and little tern (*Sterna albifrons*); - On passage – Sandwich tern (*Sterna sandvicensis*) and redshank (*Tringa totanus*); - Overwinter – Bar-tailed Godwit (*Limosa lapponica*); Black-tailed Godwit (*Limosa limosa*); Curlew (*Numenius arquata*); Dunlin (*Calidris alpina*); Grey Plover (*Pluvialis squatarola*); Knot (*Calidris canuta*); Oystercatcher; Pintail (*Anas acuta*); Redshank; Shelduck (*Tadorna tadorna*); and Teal (*Anas crecca*). **Reasons for Ramsar designation:** ▪ Under Ramsar Criterion 1: Extensive intertidal mud and sand flats with	should be maintained in order to support bar-tailed godwit, common tern, little tern and Sandwich tern; ▪ Ensure the existing distribution of suitable roosting habitat is maintained; ▪ Ensure there is no decrease in extent of salt marsh; ▪ Ensure there is no decrease in extent of standing water pools; ▪ During winter, cover of both seed bearing plants and soft leaved herbs and grasses should each be maintained at least 25%; ▪ Ensure there is no decrease in extent of rocky shore at Hilbre Island, Middle Eye, Little Eye and Tanskey Rocks; ▪ Ensure there is no increase in the frequency of disturbance incidents; ▪ Ensure there is no increase in tern mortality associated with traffic or power cables; ▪ Ensure the zonation of clean sands to muddy sands to mud from the mouth of the estuary to the upper estuary is maintained; ▪ Ensure that the location of the saltmarsh / mudflat	recreational use of intertidal, sand dunes and salt marshes.		relate to Criterion 1, 2, 5 and 6 are either hydrological in nature or associated with hydrology. As such this site may be impacted by the implementation of the LFRMS.	produce a management plan to undertake works within the SAC/SPA/Ramsar. Environmental impacts can be reduced through good site practice. Project level assessments such as EIA's and HRA's. This may result in restriction on the timings of the works to account for the bird population.	

Reasons for Designation	Key Environmental Conditions that support site integrity	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
large expanses of saltmarsh towards the head of the esturary. ▪ Under Ramsar Criterion 2: Supports breeding colonies of vulnerable natterjack (*Epidalea calamita*). ▪ Under Ramsar Criterion 5: Non-breeding season regularly supports 120,726 individual waterbirds. ▪ Under Ramsar Criterion 6: Species or populations occurring at levels of international importance.	boundary does not deviate significantly; ▪ Ensure the average phytoplankton concentration does not increase significantly; ▪ Ensure there is no increase in concentrations of dangerous substances; ▪ Ensure there is no decrease in the variety of biotopes; ▪ Ensure there is no significant decrease in extent of individual pioneer saltmarsh communities; ▪ Ensure there is no increase in extent of *Spartina anglica* within the pioneer saltmarsh; ▪ Ensure there is no decrease in abundance of *Centaurium littorale;* and ▪ Ensure there is no significant decrease in total extent of Atlantic salt meadow communities.					
Llwyn – SAC – 10 km						
Primary Reasons for Designation *Annex I Habitats* ▪ Largest example of alluvial forests, which has formed on floodplain of River Clywedog and has a canopy of alder with transitions to ash.	▪ Maintain current extent (by natural processes) of woodland; ▪ Ensure development of locally native broadleaved species as well as other plant species outlined in CMP. Maintain high water	▪ Invasive sycamore has potential to replace ash across the site; ▪ Maintenance of water levels can be problematic especially in high	River Conwy and Clwyd Catchment: *Upland areas sub-area*	Primary reason is associated with hydrology. As such this site may be impacted by the implementation of	Consultation and consent for CCW/CCBC/EA W required for work within watercourses. As a result of the	Provided control measures are adhered to, **it is anticipated that there will be <u>No Likely Significant Effects</u> on qualifying**

Reasons for Designation	Key Environmental Conditions that support site integrity	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
	table to discourage presence of sycamore and other non-native species; Maintain structure of woodland as outlined in CMP and regeneration; and ▪ Ensure there is an abundance of deadwood throughout the woodland.	summer water levels.		the LFRMS.	consultation with statutory bodies (such as CCW/CCBC) it would be anticipated that each individual project would require a project specific HRA and would need to produce a management plan to undertake works within the SAC. Environmental impacts can be reduced through good site practice. Project level assessments such as EIA's and HRA's.	**features of the SAC or their management.** Potential beneficial effects have been identified.
Lleyn Peninsula and the Sarnau – SAC – 10 km						
Primary Reasons for Designation *Annex I Habitats* ▪ Sandbanks which are slightly covered by sea water at all times; ▪ Estuaries; ▪ Coastal lagoons; ▪ Large shallow inlets and bays; and ▪ Reefs. **Other Qualifying Features**	▪ The special habitat and species features of the SAC will be maintained and, where necessary, restored so that they will be able to sustain themselves in the long-term as part of naturally functioning ecosystems; ▪ Additional land which should form an integral part of the estuarine	▪ Construction – e.g. slipways, coastal defence and marinas/harbours could cause disturbance to estuarine, intertidal mudflat and sandflat and reef habitats and disrupt physical processes essential for maintenance of	North West Wales catchment: *Lleyn Peninsula sub-area*	6 of the primary reasons and qualifying features are hydrological in nature, while 4 are associated with hydrology. As such this site may be impacted	Consultation and consent for CCW/CCBC/EAW required for work within watercourses. As a result of the consultation with statutory bodies (such as	Provided control measures are adhered to, **it is anticipated that there will be <u>No Likely Significant Effects</u> on qualifying features of the SAC or their management.**

Reasons for Designation	Key Environmental Conditions that support site integrity	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
Annex I Habitats ▪ Salicornia and other annuals colonising mud and sand; ▪ Atlantic salt meadows, which are regularly inundated by the sea and contains characteristic salt-tolerant perennial flowering plant species; and ▪ Submerged or partially submerged sea cave. *Annex II Species* ▪ Bottlenose dolphin (*Tursiops truncatus*); ▪ Otter; and ▪ Grey seal (*Halichoerus grypus*).	ecosystem should be restored and the structure and functions of the estuary, that has been damaged by the constraints of artificial structures such as flood banks, should also be restored; ▪ The intertidal mudflats and sandflats and sandbanks features require an overall stability or increase in the amount of the feature; ▪ Nutrient levels in the water column and sediments should be at or below existing statutory guideline concentrations; ▪ Contaminant levels in the water column and sediments derived from human activity need to be at or below existing statutory guideline concentrations; ▪ Populations of typical species subject to existing commercial fisheries need to be at abundance equal to or greater than that required to achieve maximum sustainable yield and security in the long term; and ▪ In regards to the reef habitat, the potential for expansion of the horse mussel *Modiolus modiolus* community off the north Llŷn coast should not be	these habitats. ▪ Reef communities are vulnerable to specific fishing methods. ▪ Possibility of future drilling for oil and gas in Cardigan Bay and the Irish Sea – also possibility of offshore wind power development. ▪ The development of oil wells and boat traffic in the Irish Sea present potential pollution sources		by the implementation of the LFRMS.	CCW/CCBC) it would be anticipated that each individual project would require a project specific HRA and would need to produce a management plan to undertake works within the SAC. Environmental impacts can be reduced through good site practice. Project level assessments such as EIA's and HRA's.	Potential beneficial effects have been identified.

Reasons for Designation	Key Environmental Conditions that support site integrity	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
	inhibited.					
Llyn Tegid Bala Lake – Ramsar – 10 km						
Reasons for Ramsar designation: ▪ Under Ramsar Criterion 1: largest natural lake in Wales, which lies deep in a formally glaciated trough. ▪ Under Ramsar Criterion 2: - Contains plant species that are scarce to Britain – for instance: Mudwort (*Limosa aquatica*), six-stamened waterwort, water sedge (*Carex aquatilis*); and floating water plantain, which is a globally vulnerable plant species; - 1 in only 6 sites in Britain for whitefish (*Coregonus lavaretus*); - Grayling fish species (*Thymallus thymallus*) is found in this lake – it is usually in riverine ecosystems; and - Nationally rare glutinas snail (*Myxas glutinosa*) has been identified in shallow gravels of the lake shore.	▪ Maintain extent of lake area including lake fen and swamp; ▪ Maintain and increase abundance and distribution of rare aquatic and emergent species so that they are self-sustaining. Ensure fen and swamp layers are comprised of locally native species as outlined in CMP; ▪ Ensure no non-native invasive species are present; and ▪ Ensure water quality is of a good ecological status and eutrophication is controlled.	▪ Threatened by practises that can adversely affect quality, quantity and pattern of water flows. ▪ These practises may include: inappropriate flow regulation, excessive abstraction, threats to water quality from direct and diffuse pollution, eutrophication and siltation; ▪ Degradation of riparian habitats due to engineering works, agricultural practices and invasive plant species may also have an adverse effect.	River Dee Catchment: *Upper Dee sub-area*	Features of this site that relate to Criterion 1 and 2, 5 are either hydrological in nature or associated with hydrology and as such may be impacted by the implementation of the LFRMS.	Consultation and consent for CCW/CCBC/EAW required for work within watercourses. As a result of the consultation with statutory bodies (such as CCW/CCBC) it would be anticipated that each individual project would require a project specific HRA and would need to produce a management plan to undertake works within the Ramsar. Environmental impacts can be reduced through good site practice. Project level assessments such as EIA's and HRA's.	Provided control measures are adhered to, **it is anticipated that there will be <u>No Likely Significant Effects</u> on qualifying features of the SAC or their management.** Potential beneficial effects have been identified.
Rhinog – SAC – 15 km						

Reasons for Designation	Key Environmental Conditions that support site integrity	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
Primary Reasons for Designation *Annex I Habitats* ▪ European dry heaths; and ▪ Old sessile oak woods with holly and blechnum fern species in the British Isles. **Other Qualifying Features** *Annex I Habitats* ▪ Standing water with vegetation communities characterised by amphibious short perennial vegetation; ▪ Northern Atlantic wet heaths with cross-leaved heath; ▪ Alpine and Boreal heath; ▪ Blanket bogs; and ▪ Depressions on peat substrates of Rhynchosporion (a rare habitat of exposed, humid peat where strips of vegetation occur). *Annex II Species* Floating Water-Plantain.	▪ Maintain and increase extent and structure of dry and wet heaths, woodland area, blanket bog and alpine and sub-alpine heath. Maintain current condition of clear-water lakes; ▪ Restore areas of wet heath that are degraded; ▪ Ensure typical and uncommon species of dry and wet heaths, woodland area, blanket bog, alpine and sub-alpine heath and clear-water lakes are frequent and abundant as outlined in CMP; ▪ Ensure no non-native invasive species are present in dry and wet heaths, woodland area, blanket bog and alpine and sub-alpine heath, and that surface of heath and blanket bog are generally free from trees; ▪ Ensure deadwood is present in woodland area as outlined in CMP; ▪ Ensure no significant areas of peat erosion present on blanket bog; ▪ Maintain current extent and distribution of floating water-plantain populations at Llyn Cwm Bychan. Ensure there is sufficient habitat to support existing populations within current	▪ Recreational pressures confined to public rights of way and car parks – with minimal impact on special features; ▪ Lichen-rich and bryophyte-rich oceanic heathland – vulnerable to burning and overgrazing.	North West Wales Catchment: *Snowdonia sub-area*	4 of the qualifying features are associated with hydrology. As such this site may be impacted by the implementation of the LFRMS.	Consultation and consent for CCW/CCBC/EAW required for work within watercourses. As a result of the consultation with statutory bodies (such as CCW/CCBC) it would be anticipated that each individual project would require a project specific HRA and would need to produce a management plan to undertake works within the SAC. Environmental impacts can be reduced through good site practice. Project level assessments such as EIA's and HRA's.	Provided control measures are adhered to, **it is anticipated that there will be <u>No Likely Significant Effects</u> on qualifying features of the SAC or their management.** Potential beneficial effects have been identified.

Reasons for Designation	Key Environmental Conditions that support site integrity	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
	and future distribution.					
Halkyn Mountain – SAC – 15 km						
Primary Reasons for Designation *Annex I Habitats* ▪ Extensive metaliferous (i.e. contains metal) vegetation type found here, which is associated with old lead and zinc ore mines. *Annex II Species* ▪ Great Crested Newts (*Triturus cristatus*). **Other Qualifying Features** *Annex I Habitats* ▪ European dry heaths; ▪ Semi-natural dry grasslands and scrubland facies: on calcareous substrates (i.e. grasslands found on thin, well-drained, lime-rich soils associated with chalk and limestone); and ▪ *Molinia* meadows that are some of the most species rich *Molinia* grasslands in the UK – include purple moor grass and a wide range of other associated species.	▪ Maintain and increase extent of habitats: grassland, dry heath, scrubland and *Molinia* meadows; ▪ Ensure the plant species present in grassland, heath communities and scrubland habitats are those outlined in the CMP; ▪ Maintain structure of grasslands, heath and scrubland communities as outlined in CMP; Ensure hydrological conditions are maintained to sustain the *Molinia* meadows (especially in terms of water quantity and quality); ▪ Manage grazing levels at grasslands; ▪ Ensure there are no non-native invasive species are present; ▪ With regard to great crested newts: - Site should support at least 200 adults in and around ponds within the site; - Manage terrestrial and aquatic habitats to ensure suitable breeding ponds and foraging, sheltering, dispersal and over-wintering areas for	▪ Has been subject to extensive mining; ▪ Decrease in low intensity grazing has resulted in an increase in extent of bracken and scrub; ▪ Subject to inappropriate agricultural practises e.g. overgrazing, livestock feeding and watering, burning and cutting.	River Dee Catchment: *Flint sub-area*	1 of the primary reasons is associated with hydrology. As such this site may be impacted by the implementation of the LFRMS.	Consultation and consent for CCW/CCBC/EAW required for work within watercourses. As a result of the consultation with statutory bodies (such as CCW/CCBC) it would be anticipated that each individual project would require a project specific HRA and would need to produce a management plan to undertake works within the SAC. Environmental impacts can be reduced through good site practice. Project level assessments such as EIA's and HRA's.	Provided control measures are adhered to, **it is anticipated that there will be <u>No Likely Significant Effects</u> on qualifying features of the SAC or their management.** Potential beneficial effects have been identified.

Reasons for Designation	Key Environmental Conditions that support site integrity	Environmental Vulnerabilities	Catchment (s) (EA 2010)	Initial screening results without control measures	Control measures	Screening results with control measures
	great crested newts. Retain and restore existing ponds; - Ensure conditions of at least 50% of the ponds are suitable for great crested newts as outlined in CMP; - Ensure no barriers to newt dispersal and refuge potential within 50 m of breeding ponds is maintained; and - Ensure amphibian chytridiomycosis is not present.					