Isle of Anglesey County Council

Habitats Regulations Assessment for the New Local Development Plan

Scoping Report

Final report
May 2025

Isle of Anglesey County Council

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Scoping Report

Project Number
13309

Version	Status	Prepared	Checked	Approved	Date
1.	Draft report	H. Mukeshkumar M. Hopes	R. Turner	K Nicholls	27.03.2025
2.	Final report	H. Mukeshkumar M. Hopes	R. Turner	K. Nicholls	02.05.2025

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FS566056
EMS566057
OHS627041

Contents

Chapter 1
Introduction

1.1 LUC has been commissioned by Isle of Anglesey County Council (hereafter referred to as 'the Council') to carry out a Habitats Regulations Assessment (HRA) in relation to its new Local Development Plan (LDP). At this early stage in the plan making process, this HRA Scoping Report contains high level commentary on issues that are intended to be considered within the HRA of the LDP. As the LDP develops, further iterations of the HRA report will be produced which will include Screening and Appropriate Assessment where required.

1.2 The purposes of this report are as follows:

- To identify which European sites have the potential to be affected by the new Local Development Plan, including establishing key information such as threats and vulnerabilities, current pressures and any species and habitat interdependencies; and
- To set out the scope of the HRA Screening and subsequent Appropriate Assessment if required.

Context for the Local Development Plan

1.3 A Local Development Plan sets out a local planning authority's strategy for the development and use of land in its area. Once adopted, the LDP forms the basis of planning decisions in the area.

The Isle of Anglesey Local Development Plan

1.4 Anglesey County Council and Gwynedd Council adopted the current Joint LDP in July 2017, which set out the planning strategy for the area (excluding the parts of Gwynedd that fall within Eryri National Park) over the 15 years up to 2026.

1.5 Initially the two Councils intended to prepare a new Joint LDP; however in March 2023 a decision was made to cease the joint working agreement on planning policy matters and Anglesey County Council has commenced work on preparing its own new LDP.

1.6 The Council is now in the early stages of preparing the new LDP, following consultation on a Draft Delivery Agreement during Summer 2024.

1.7 The new LDP is expected to include a vision and objectives for the plan area, an overall strategy for development in Anglesey, site allocations for different types of development including housing and employment, and

development-management style policies for managing applications that come forward.

The requirement to undertake a Habitat Regulations Assessment

1.8 The requirement to undertake a HRA of development plans was confirmed by the amendments to the Habitats Regulations published for England and Wales in 2007[1]; the currently applicable version is the Habitats Regulations 2017, as amended[2].

1.9 When preparing the new Local Development Plan, Anglesey County Council is therefore required by law to carry out an HRA. The Council can commission consultants to undertake HRA work on its behalf and this (the work documented in the HRA report) is then reported to and considered by the Council as the 'competent authority'. The Council will consider this work and would usually only progress a plan if it considers that the plan will not adversely affect the integrity[3] of any 'European site', as defined below (the exception to this would be where 'imperative reasons of overriding public interest' can be demonstrated). The requirement for authorities to comply with the Habitats Regulations when preparing a Plan is also noted in Planning Policy Wales (PPW)[4].

1.10 HRA refers to the assessment of the potential effects of a plan on one or more sites afforded the highest level of protection in the UK: Special Protection Areas (SPAs) and Special Areas of Conservation (SACs). These were classified under European Union (EU) legislation but since 1 January 2021 are protected in the UK by the Habitats Regulations 2017[2] (as amended). Although the EU Directives from which the UK's Habitats Regulations originally derived are no longer binding, the Regulations still make reference to the lists of habitats and species that the sites were designated for, which are listed in annexes to the EU Directives:

- SACs are designated for particular habitat types (specified in Annex 1 of the EU Habitats Directive[5]) and species (Annex II). The listed habitat types and species (excluding birds) are those considered to be most in need of conservation at a European level. Before EU exit day, designation of SACs also had regard to the coherence of the 'Natura 2000' network of European sites. After EU exit day, regard is had to the importance of such sites for the coherence of the UK's 'national site network'.
- SPAs are classified for rare and vulnerable birds (Annex I of the EU Birds Directive[6]), and for regularly occurring migratory species not listed in Annex I.

1.11 The term 'European sites' was previously commonly used in HRA to refer to 'Natura 2000' sites[7] and Ramsar sites (internationally designated under the Ramsar Convention). However, a Government Policy Paper[8] on changes to the Habitats Regulations 2017 post-Brexit states that:

- Any references to Natura 2000 in the 2017 Regulations and in guidance now refer to the new 'national site network'.
- The national site network includes existing SACs and SPAs; and new SACs and SPAs designated under these Regulations.
- Designated Wetlands of International Importance (known as Ramsar sites) do not form part of the national site network. Many Ramsar sites overlap with SACs and SPAs and may be designated for the same or different species and habitats.

1.12 Although Ramsar sites do not form part of the new national site network, Government guidance[4] and practice guidance[9] states that Ramsar sites should be treated within the planning system in the same way as SACs and SPAs.

1.13 Furthermore, sites which have been formally proposed as SPAs and SACs but which are not yet subject to legal protection under the Habitats Regulations, should be treated within the planning system in the same way as if they were legally designated. The same considerations should, as a matter of policy, be applied to proposed Ramsar sites.[4]

"Any proposals affecting the following sites [in addition to Special Areas of Conservation (SACs) and Special Protection Areas (SPAs)] would also require a HRA because these are protected by government policy[10]:

- Proposed SACs

1 The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007 (2007) SI No. 2007/1843. TSO (The Stationery Office), London.
2 The Conservation of Habitats and Species Regulations 2017 (2017) SI No. 2017/1012, as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579).
3 The integrity of a site is the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was designated. (Source: UK Government Planning Practice Guidance)
4 Welsh Government (2024) Planning Policy Wales Edition 12.
5 Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the 'Habitats Directive')
6 Directive 2009/147/EC of 30 November 2009 on the conservation of wild birds (the 'Birds Directive')
7 The network of protected areas identified by the EU: https://ec.europa.eu/environment/nature/natura2000/index_en.htm
8 https://www.gov.uk/government/publications/changes-to-the-habitats-regulations-2017/changes-to-the-habitats-regulations-2017
9 The HRA Handbook, Section A3. David Tyldesley & Associates, a subscription based online guidance document: https://www.dtapublications.co.uk/handbook/European
10 Welsh Government (2021) Habitats Regulations Assessments: Protecting a European Site. Accessible at: https://www.gov.wales/habitats-regulations-assessments-protecting-european-site-html

- Potential SPAs
- Ramsar sites - wetlands of international importance (both listed and proposed)
- Areas secured as sites compensating for damage to a European site."

1.14 The legislative requirement for HRA does not apply to other nationally designated wildlife sites such as Sites of Special Scientific Interest or National Nature Reserves.

1.15 For simplicity, this report uses the term 'European site' to refer to all types of designated site for which Government guidance[10] requires an HRA.

1.16 The overall purpose of a HRA is to conclude whether or not a proposal or policy, or a whole plan, would adversely affect the integrity of the European site in question. This is judged in terms of the implications of the plan for a site's 'qualifying features' (i.e. those Annex I habitats, Annex II species, and Annex I bird populations for which it has been designated). Significantly, HRA is based on the precautionary principle. Where uncertainty or doubt remains, an adverse effect should be assumed.

Structure of this report

1.17 This chapter has introduced the requirement to undertake a HRA of the new Anglesey Local Development Plan. The remainder of the report is structured as follows:

- **Chapter 2** describes the approach being taken to the HRA for the new LDP. It also describes case law changes, summarises the key issues that will need to be considered during the HRA process and describes the identification of European sites in and around Anglesey that could be affected by the new Local Development Plan.
- **Chapter 3** describes the European sites in and around Anglesey and their key vulnerabilities.
- **Chapter 4** sets out the assumptions that will underpin the HRA and explores each impact pathway in turn.
- **Chapter 5** describes the next steps that will be carried out in the HRA of the new Local Development Plan.

1.18 The information in the main body of the report is supported by the following appendices:

- **Appendix A** presents a map (**Figure A.1**) showing the European sites in and around Anglesey and a map (**Figure A.2**) showing the location of those European sites in relation to the strategic road network.
- **Appendix B** sets out detailed information about the European sites that are the focus of the HRA.

Chapter 2
Approach to HRA

2.1 The HRA should be undertaken by the 'competent authority', in this case Isle of Anglesey County Council. LUC has been commissioned by the Council to carry out HRA work on its behalf, although this is to be reported to and considered by the Council as the competent authority during the development of the new Local Development Plan, before adopting the LDP. The HRA also typically requires close working with Natural Resources Wales as the statutory nature conservation body[11] to obtain the necessary information, agree the process, outcomes and mitigation proposals. Where a plan or project requires Appropriate Assessment, consultation with Natural Resources Wales is a statutory requirement.

Stages of HRA

2.2 The HRA of plans is undertaken in stages (as described below) and should conclude whether or not a proposal would adversely affect the integrity of the European site in question.

2.3 HRAs are carried out at all levels of plan making, including higher tier plans such as national plans to lower tier local plans and at a project level. The process for carrying out a HRA is the same for any plan or project. However, HRAs carried out for local level plans and projects will be more specific to a certain area or development proposal covering a smaller area than a HRA of a national plan. In turn, project-level HRAs will be able to be more specific.

2.4 The HRA process should inform the preparation of a plan by seeking to avoid adverse effects on the integrity of European sites. Therefore, the outcome of a HRA will help to inform whether a plan should be adopted. If it is determined that adverse effects are unavoidable, recommendations are made through the HRA to ensure that mitigation is included in the policies within the plan to ensure the delivery of appropriate mitigation. This will reduce the likelihood or severity of any adverse impact on European sites. Mitigation could include the requirement for project-level/site specific HRAs for specific proposals within a plan.

Requirements of the Habitats Regulations

2.5 In assessing the effects of a plan in accordance with Regulation 105 of the Conservation of Habitats and Species Regulations 2017 (as amended) (the 'Habitats Regulations'),

[11] Regulation 5 of the Habitats Regulations 2017.

there are potentially two tests to be applied by the competent authority: a 'Significance Test', followed if necessary, by an Appropriate Assessment which would inform the 'Integrity Test'. The relevant sequence of questions is as follows:

- Step 1: Under Reg. 105(1)(b), consider whether the plan is directly connected with or necessary to the management of the sites. If not, proceed to Step 2.
- Step 2: Under Reg. 105(1)(a) consider whether the plan is likely to have a significant effect on a European site, either alone or in combination with other plans or projects (the 'Significance Test'). If yes, proceed to Step 3.

2.6 [Steps 1 and 2 are undertaken as part of Stage 1: HRA Screening, shown in **Table 2.1** below.]

- Step 3: Under Reg. 105(1), make an Appropriate Assessment of the implications for the European site in view of its current conservation objectives (the 'Integrity Test'). In so doing, it is mandatory under Reg. 105(2) to consult Natural Resources Wales, and optional under Reg. 105(3) to take the opinion of the general public.

2.7 [This step is undertaken during Stage 2: Appropriate Assessment, shown in **Table 2.1**.]

- Step 4: In accordance with Reg. 105(4), but subject to Reg. 107, give effect to the plan only after having ascertained that the plan would not adversely affect the integrity of a European site.

2.8 [This step follows Stage 2 where a finding of 'no adverse effect' is concluded. If it cannot be it proceeds to Step 5 as part of Stage 3 of the HRA process]

- Step 5: Under Reg. 107, if Step 4 is unable to rule out adverse effects on the integrity of a European site and no alternative solutions exist then the competent authority may nevertheless agree to the plan or project if it must be carried out for 'imperative reasons of overriding public interest' (IROPI).

2.9 [This step is undertaken during Stage 3: Assessment where no alternatives exist and adverse impacts remain taking into account mitigation shown in **Table 2.1**]

Typical stages

2.10 **Table 2.1** summarises the stages and associated tasks and outcomes typically involved in carrying out a full HRA of a plan, based on various guidance documents[12,13,14].

Table 2.1: Stages of HRA

Stage	Task	Outcome
Stage 1: HRA Screening	Description of the plan and confirmation that it is not directly connected with or necessary to the management of European sites. Identification of potentially affected European sites and their conservation objectives[15]. Assessment of likely significant effects of the plan alone or in combination with other plans and projects, prior to consideration of avoidance or reduction ('mitigation') measures[16].	Where effects are unlikely, prepare a 'finding of no significant effect report'. Where effects judged likely, or lack of information to prove otherwise, proceed to Stage 2.
Stage 2:	Information gathering (plan and European Sites[17]). Impact prediction.	Appropriate Assessment report describing the plan, European site baseline conditions, the adverse effects of the plan on the European site, how

[12] Welsh Assembly Government (2009) Planning Policy Wales, Technical Advice Note, 5. Nature Conservation and Planning, available from https://gov.wales/sites/default/files/publications/2018-09/tan5-nature-conservation.pdf
[13] European Commission (2001) Assessment of plans and projects significantly affecting European Sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC.
[14] The HRA Handbook. David Tyldesley & Associates, a subscription based online guidance document: https://www.dtapublications.co.uk/handbook/European
[15] Conservation objectives are published by Natural Resources Wales for SACs and SPAs – located within the Core Management Plans.
[16] In line with the CJEU judgment in Case C-323/17 People Over Wind v Coillte Teoranta, mitigation must only be taken into consideration at this stage and not during Stage 1: HRA Screening.
[17] In addition to European site citations and conservation objectives, key information sources for understanding factors contributing to the integrity of European sites include (where available): Core Management Plans (prepared by Natural Resources Wales).

Stage	Task	Outcome
Appropriate Assessment (where Stage 1 does not rule out likely significant effects)	Evaluation of plan impacts in view of conservation objectives of European sites. Where impacts are considered to directly or indirectly affect qualifying features of European sites, identify how these effects will be avoided or reduced ('mitigation').	these effects will be avoided or reduced, including the mechanisms and timescale for these mitigation measures. If effects remain after all alternatives and mitigation measures have been considered proceed to Stage 3.
Stage 3: Assessment where no alternatives exist and adverse impacts remain taking into account mitigation	Identify 'imperative reasons of overriding public interest' (IROPI). Demonstrate no alternatives exist. Identify potential compensatory measures.	This stage should be avoided if at all possible. The test of IROPI and the requirements for compensation are extremely onerous.

2.11 It is normally anticipated that an emphasis on Stages 1 and 2 of this process will, through a series of iterations, help ensure that potential adverse effects are identified and eliminated through the inclusion of mitigation measures designed to avoid or reduce effects. The need to consider alternatives could imply more onerous changes to a plan document. It is generally understood that so called 'imperative reasons of overriding public interest' (IROPI) are likely to be justified only very occasionally and would involve engagement with the Government.

Case Law

2.12 This HRA will be prepared in accordance with relevant case law findings, including most notably the 'People over Wind' and 'Holohan' rulings from the Court of Justice for the European Union (CJEU).

2.13 The *People over Wind, Peter Sweetman v Coillte Teoranta* (April 2018) judgment ruled that Article 6(3) of the Habitats Directive should be interpreted as meaning that mitigation measures should be assessed as part of an Appropriate Assessment and should not be taken into account at the Screening stage. The precise wording of the ruling is as follows:

> "Article 6(3) ……must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the Screening stage, to take account of measures intended to avoid or reduce the harmful effects of the plan or project on that site.

2.14 In light of the above, the HRA Screening stage will not rely upon avoidance or mitigation measures to draw conclusions as to whether the new Local Development Plan could result in likely significant effects on European sites, with any such measures being considered at the Appropriate Assessment stage as relevant.

2.15 This HRA will also fully consider the *Holohan v An Bord Pleanala* (November 2018) judgement which stated that:

> "Article 6(3) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora must be interpreted as meaning that an 'appropriate assessment' must, on the one hand, catalogue the entirety of habitat types and species for which a site is protected, and, on the other, identify and examine both the implications of the proposed project for the species present on that site, and for which that site has not been listed, and the implications for habitat types and species to be found outside the boundaries of that site, provided that those implications are liable to affect the conservation objectives of the site."

2.16 In undertaking the HRA, LUC will fully consider the potential for effects on species and habitats, including those not listed as qualifying features, to result in secondary effects upon the qualifying features of European sites, including the potential for complex interactions and dependencies. In addition, the potential for offsite impacts, such as through impacts to functionally linked land, and/or species and habitats located beyond the boundaries of the European site, but which may be important in supporting the ecological processes of the qualifying features, will also be fully considered in this HRA.

2.17 In addition to this, the HRAs will take into consideration the 'Wealden' judgement from the CJEU.

2.18 *Wealden District Council v Secretary of State for Communities and Local Government, Lewes District Council and South Downs National Park Authority* (2017) ruled that it was not appropriate to scope out the need for a detailed assessment for an individual plan or project based on the annual average daily traffic (AADT) figures detailed in the Design Manual for Roads and Bridges or the critical loads used by Defra or Environmental Agency without considering the in-combination impacts with other plans and projects.

2.19 In light of this judgement, the HRA will therefore consider traffic growth based on the effects of development from the new Local Development Plan in combination with other drivers of growth such as development proposed in neighbouring districts and demographic change.

2.20 The HRA will also take into account the *Grace and Sweetman* (July 2018) judgement from the CJEU which stated that:

> ""there is a distinction to be drawn between protective measures forming part of a project and intended avoid or reduce any direct adverse effects that may be caused by the project in order to ensure that the project does not adversely affect the integrity of the area, which are covered by Article 6(3), and measures which, in accordance with Article 6(4), are aimed at compensating for the negative effects of the project on a protected area and cannot be taken into account in the assessment of the implications of the project."
>
> "As a general rule, any positive effects of the future creation of a new habitat, which is aimed at compensating for the loss of area and quality of that habitat type in a protected area, are highly difficult to forecast with any degree of certainty or will be visible only in the future."
>
> "A mitigation strategy may only be taken into account at AA (a.6(3)) where the competent authority is "sufficiently certain that a measure will make an effective contribution to avoiding harm, guaranteeing beyond all reasonable doubt that the project will not adversely affect the integrity of the area."
>
> "Otherwise, it falls to be considered to be a compensatory measure to be considered under a.6(4) only where there are imperative reasons of overriding public interest."

2.21 The Appropriate Assessment of the Local Development Plan will therefore only consider the existence of measures to avoid or reduce their direct adverse effects (mitigation) if the expected benefits of those measures are beyond reasonable doubt at the time of the assessment.

Screening Methodology

2.22 HRA Screening of the new Local Development Plan will be undertaken in line with current available guidance and seek to meet the requirements of the Habitats Regulations.

2.23 The purpose of the Screening stage is to:

- Identify all aspects of the plan which would have no effect on a European site, so that that they can be eliminated from further consideration in respect of this and other plans.
- Identify all aspects of the plan which would not be likely to have a significant effect on a European site (i.e. would have some effect, because of links/connectivity, but which are not significant), either alone or in combination with other aspects of the same plan or other plans or projects, which therefore do not require 'appropriate assessment'.
- Identify those aspects of the plan where it is not possible to rule out the risk of significant effects on a European site, either alone or in combination with other plans or projects. This provides a clear scope for the parts of the plan that will require appropriate assessment.

Identification of European sites which may be affected by the new Local Development Plan

2.24 To initiate the search of European sites that could potentially be affected by the LDP, it is established practice in HRAs to consider European sites within the local planning authority area covered by a plan, and also within a buffer distance from the boundary of the plan area.

2.25 A distance of 15km from the Anglesey boundary has been used as a starting point to identify European sites that could be affected by impacts relating to the LDP. The use of this distance is common practice in HRAs of plans.

Assessment of 'likely significant effect'

2.26 As required under Regulation 105 of The Conservation of Habitats and Species Regulations 2017 (SI 2017/1012), as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579), an assessment will be undertaken of the 'likely significant effects' of the policy approaches set out within the new Local Development Plan. The assessment will be undertaken to identify which policies would be likely to have a significant effect on European sites in Anglesey (+15km). This assessment will need to be repeated with each iteration of the HRA. The Screening assessment will be conducted without taking mitigation into account in accordance with the 'People over Wind' judgment.

2.27 Consideration will be given to the potential for the development proposed as part of the plans to result in significant effects associated with:

- Physical loss or damage to habitat;
- Non-physical disturbance (noise, vibration and light pollution);
- Non-toxic contamination;
- Air pollution;
- Recreational pressure; and
- Changes to hydrology, including water quantity and quality.

2.28 This thematic/impact category approach will allow for consideration to be given to the cumulative effects of the plan rather than focusing exclusively on individual developments provided for by the new Local Development Plan.

2.29 A risk-based approach involving the application of the precautionary principle will be adopted in the assessment, such that a conclusion of 'no significant effect' will only be reached where it is considered very unlikely, based on current knowledge and the information available, that a proposal in the plan in question would have a significant effect on the integrity of a European site.

2.30 For some types of impacts, the potential for likely significant effects can be determined on a proximity basis. This Scoping Report identifies the European sites that could potentially be affected by the LDP and considers the types of impacts that could be relevant to the plan's possible impact pathways to European sites. This is detailed in **Chapter 4**.

Interpretation of 'likely significant effect'

2.31 Relevant case law helps to interpret when effects should be considered as being likely to result in a significant effect, when carrying out a HRA of a Plan.

2.32 In the Waddenzee case[18], the European Court of Justice ruled on the interpretation of Article 6(3) of the Habitats Directive (translated into Reg. 102 in the Habitats Regulations), including that:

- An effect should be considered 'likely', "if it cannot be excluded, on the basis of objective information, that it will have a significant effect on the site" (para 44).
- An effect should be considered 'significant', "if it undermines the conservation objectives" (para 48).
- Where a plan or project has an effect on a site "but is not likely to undermine its conservation objectives, it cannot be considered likely to have a significant effect on the site concerned" (para 47).

2.33 An opinion delivered to the Court of Justice of the European Union[19] commented that:

> "The requirement that an effect in question be 'significant' exists in order to lay down a de minimis threshold. Plans or projects that have no appreciable effect on the site are thereby excluded. If all plans or projects capable of having any effect whatsoever on the site were to be caught by Article 6(3), activities on or near the site would risk being impossible by reason of legislative overkill."

2.34 This opinion (the 'Sweetman' case) therefore allows for the authorisation of plans and projects whose possible effects, alone or in combination, can be considered 'trivial' or de minimis; referring to such cases as those "which have no appreciable effect on the site". In practice such effects could be screened out as having no likely significant effect; they would be 'insignificant'.

2.35 The HRA Screening assessment will therefore consider whether the Anglesey LDP could have likely significant effects either alone or in combination.

Mitigation Provided by the new Local Development Plan

2.36 Some of the potential effects of the plans could be mitigated through the implementation of other policies in the plan itself. For example, the provision of green infrastructure within new developments allocated in the LDP could help mitigate increased pressure from recreation activities at European sites. Nevertheless, in accordance with the 'People over Wind' judgment, avoidance and mitigation measures cannot be relied upon at the Screening stage, and therefore, where such measures exist, they will be considered at the Appropriate Assessment stage for impacts and policies where likely significant effects, either alone or in-combination, could not be ruled out.

Assessment of potential in-combination effects

2.37 Regulation 105 of the Habitats Regulations 2017 requires an Appropriate Assessment where "a land use plan is likely to have a significant effect on a European site (either alone or in combination with other plans or projects) and is not directly connected with or necessary to the management of the site". Therefore, it will be necessary to consider whether

[18] European Court of Justice in Case C-127/02 Landelijke Vereniging tot Behoud van de Waddenzee

[19] Advocate General's Opinion to CJEU in Case C-258/11 Sweetman and others v An Bord Pleanala 22nd Nov 2012.

any impacts identified from the LDP may combine with other plans or projects to give rise to significant effects in-combination.

2.38 Where the LDP is likely to have an effect on its own e.g. due to water pollution (due to impact pathways being present), but it is not likely to be significant, the in-combination assessment at Screening stage will need to determine whether there may also be the same types of effect from other plans or projects that could combine with the plan to produce a significant effect. If so, this likely significant effect (e.g., water pollution) arising in combination with other plans or projects, would then need to be considered through the Appropriate Assessment stage (for example to determine if water pollution would have an adverse effect on the integrity of the relevant European site). Where the Screening assessment has concluded that there is no impact pathway between development that may be proposed in the LDP and the conditions necessary to maintain qualifying features of a European site, then there will be no in-combination effects to assess at the Screening or Appropriate Assessment stage. This approach accords with recent guidance on HRA[20].

2.39 The potential for in-combination impacts will focus on plans prepared by local authorities that overlap with European sites that are within the scope of the HRA. The findings of any associated HRA work for those plans will be reviewed where available. Where relevant, any strategic projects in the area that could have in-combination effects with the plans will also be identified and reviewed. This will include a review of Nationally Significant Infrastructure Projects as detailed on the National Infrastructure Planning website.

2.40 The online HRA Handbook suggests the following plans and projects may be relevant to consider as part of the in-combination assessment:

- Applications lodged but not yet determined, including refusals subject to an outstanding appeal or legal challenge.
- Projects subject to periodic review e.g. annual licences, during the time that their renewal is under consideration.
- Projects authorised but not yet started.
- Projects started but not yet completed;
- Known projects that do not require external authorisation.
- Proposals in adopted plans.
- Proposals in draft plans formally published or submitted for final consultation, examination or adoption.

2.41 The need for in-combination assessment also arises at the Appropriate Assessment stage, as discussed in the section below.

Appropriate Assessment methodology

2.42 Following the Screening stage, if likely significant effects on European sites are unable to be ruled out, the plan-making authority is required under Regulation 105 of the Habitats Regulations 2017 to make an 'Appropriate Assessment' of the implications of the plan for European sites, in view of their conservation objectives. European Commission Guidance states that the Appropriate Assessment should consider the impacts of the plan (either alone or in combination with other projects or plans) on the integrity of European sites with respect to their conservation objectives and to their structure and function.

Assessing the effects on site integrity

2.43 A site's integrity depends on it being able to sustain its 'qualifying features' (i.e. those Annex 1 habitats, Annex II species, and Annex 1 bird populations for which it has been designated) and to ensure their continued viability. A high degree of integrity is considered to exist where the potential to meet a site's conservation objectives is realised and where the site is capable of self-repair and renewal with a minimum of external management support.

2.44 A conclusion needs to be reached as to whether or not the new Local Development Plan would adversely affect the integrity of a European site. As stated in the European Commission Guidance, assessing the effects on the site(s) integrity involves considering whether the predicted impacts of the plan policies (either alone or in combination) have the potential to:

- Cause delays to the achievement of conservation objectives for the site.
- Interrupt progress towards the achievement of conservation objectives for the site.
- Disrupt those factors that help to maintain the favourable conditions of the site.
- Interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site.
- Cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a habitat or ecosystem.

[20] Available online at - The HRA Handbook. David Tyldesley & Associates, a subscription based online guidance document

- Change the dynamics of relationships that define the structure or function of the site (e.g. relationships between soil and water, or animals and plants).
- Interfere with anticipated natural changes to the site.
- Reduce the extent of key habitats or the population of key species.
- Reduce the diversity of the site.
- Result in disturbance that could affect the population, density or balance between key species.
- Result in fragmentation.
- Result in the loss of key features.

2.45 The conservation objectives for each European site (**Appendix B**) are generally to maintain the qualifying features in favourable condition. The Standard Data Forms, Core Management Plans and if relevant Information Sheet on Ramsar Wetlands (RIS) for each European site provide a high-level overview of the issues (both current and predicted) affecting the condition of the European features on the site(s) and outline the priority measures required to improve the condition of the features. These have been drawn on to help to understand what is needed to maintain the integrity of the European sites.

2.46 For each European site where an uncertain or likely significant effect is identified in relation to the LDP, the potential impacts will be set out and judgements made (based on the information available) regarding whether the impact will have an adverse effect on the integrity of the site. Consideration will be given to the potential for mitigation measures to be implemented that could reduce the likelihood or severity of the potential impacts such that there would not be an adverse effect on the integrity of the site.

Chapter 3
European Sites in and around Anglesey

3.1 Geographical Information Systems (GIS) data has been used to map the locations and boundaries of European sites in and within 15km of the Anglesey boundary (**Figure A.1, Appendix A**), using publicly available data from Natural Resources Wales. All European sites lying partially or wholly within 15km have been included. A distance of 15km is generally considered appropriate for identifying potential impact pathways. European sites located beyond 15km can be included if they share functional ecological connectivity to the plan area, for example via river systems. However, in this instance, no European sites beyond 15km of Anglesey have been scoped in for further assessment as there are no potential pathways by which they could be impacted as a result of the new Local Development Plan.

3.2 European sites scoped in which are within Anglesey or within 15km are listed in **Table 3.1** below. Detailed information about each site is provided in **Appendix B**.

Table 3.1 European sites within Anglesey and within 15km of the district

European Site	Closest Distance / Direction from Anglesey
Special Areas of Conservation (SACs)	
Llyn Dinam	Within the Anglesey boundary
Cemlyn Bay / Bae Cemlyn	Within the Anglesey boundary
Anglesey Fens / Corsydd Mon	Within the Anglesey boundary
Abermenai to Aberffraw Dunes / Y Twyni o Abermenai i Aberffraw	Within the Anglesey boundary
Menai Strait and Conwy Bay / Y Fenai a Bae Conwy	Within the Anglesey boundary
Holy Island Coast / Glannau Ynys Gybi	Within the Anglesey boundary
Anglesey Coast: Saltmarsh / Glannau Mon: Cors heli	Within the Anglesey boundary
Glan-traeth	Within the Anglesey boundary

European Site	Closest Distance / Direction from Anglesey
North Anglesey Marine / Gogledd Môn Forol	Within the Anglesey boundary
Afon Gwyrfai a Llyn Cwellyn	2.4km south east
Glynllifon	5.3km south
Coedydd Aber	5.8km east
Snowdonia / Eryri	5.8km east
Great Orme's Head / Pen y Gogarth	9.4km east
Eifionydd Fens / Corsydd Eifionydd	9.7km south
Creyddyn Peninsula Woods / Coedwigoedd Penrhyn Creuddyn	14km east
Special Protection Areas (SPAs)	
Holy Island Coast / Glannau Ynys Gybi	Within the Anglesey boundary
Puffin Island / Ynys Seiriol	Within the Anglesey boundary
Anglesey Terns / Morwenoliaid Ynys Môn	Within the Anglesey boundary
Liverpool Bay / Bae Lerpwl	Within the Anglesey boundary
Lavan Sands, Conwy Bay / Traeth Lafan	0.2km east
Ramsar Sites	
Anglesey and Llyn Fens / Corsydd Môn a Llyn	Within the Anglesey boundary
Llyn Idwal	14.5km south east

3.3 The attributes of these European sites which contribute to and define their integrity have been described within **Appendix B**. In doing so, reference was made to the Standard Data Forms published on the Joint Nature Conservation Committee (JNCC) website,[21] Core Management Plans including Conservation Objectives published by Natural Resources Wales and if relevant Information Sheet on Ramsar Wetlands. This analysis enables European site interest features to be identified, along with the features of each site which determine site integrity and the specific sensitivities of the site. This information will allow an analysis of how the potential impacts of the new LDP may affect the integrity of each site.

[21] Available at: https://jncc.gov.uk/our-work/ramsar-sites/

Chapter 4
Assessment Assumptions

4.1 For many of the broad impacts that could arise from the new Local Development Plan, the potential for significant effects will be determined by location, using GIS data to determine the proximity of potential development locations to the European sites that are the subject of the assessment.

4.2 However, there are many uncertainties associated with using set distances as there are very few standards available as a guide to how far impacts will travel. Therefore, a number of assumptions will be applied in relation to assessing the potential effects on European sites that may result from the LDP, as described below.

4.3 Other types of potential effect may be identified during the HRA process. If so, any assumptions that the assessment of those effects is based on will be set out in the full HRA reports.

Physical Damage and Loss of Habitat - onsite

4.4 Any development resulting from the new Local Development Plan would take place within Anglesey. Therefore, only European sites within the Council's administrative boundary could be affected through physical damage or loss of habitat from within the European site's boundaries as a result of the plan. The following European sites are located within the boundary of Anglesey and therefore impacts from physical damage and/or loss of habitat onsite could arise from the LDP:

- Llyn Dinam SAC
- Cemlyn Bay SAC
- Anglesey Fens SAC
- Abermenai to Aberffraw Dunes SAC
- Menai Strait and Conwy Bay SAC
- Holy Island Coast SAC
- Anglesey Coast: Saltmarsh SAC
- Glan-traeth SAC
- North Anglesey Marine SAC
- Holy Island Coast SPA
- Puffin Island SPA

- Anglesey Terns SPA
- Liverpool Bay SPA
- Anglesey and Llyn Fens Ramsar

4.5 Further consideration of these European sites will be required at the Screening stage.

4.6 All other European sites are located outside of the area covered by the Council's LDP and are therefore scoped out of the assessment in relation to onsite physical damage and loss.

Therefore, the following European sites have been scoped in for assessment at the Screening stage in relation to onsite physical damage and loss:

- **Llyn Dinam SAC**
- **Cemlyn Bay SAC**
- **Anglesey Fens SAC**
- **Abermenai to Aberffraw Dunes SAC**
- **Menai Strait and Conwy Bay SAC**
- **Holy Island Coast SAC**
- **Anglesey Coast: Saltmarsh SAC**
- **Glan-traeth SAC**
- **North Anglesey Marine SAC**
- **Holy Island Coast SPA**
- **Puffin Island SPA**
- **Anglesey Terns SPA**
- **Liverpool Bay SPA**

Physical Loss of Habitat - Functionally Linked Habitat

4.7 Habitat loss from development in areas outside of the European site boundaries (offsite) may also result in likely significant effects where that habitat contributes towards maintaining the interest feature for which the European site is designated. This includes land which may provide offsite movement corridors or feeding and sheltering habitat for mobile species such as bats, birds and fish (usually referred to as 'functionally linked' habitat).

4.8 The following European sites are located within 15km of Anglesey and support species susceptible to impacts from physical damage and loss of functionally linked land:

- Llyn Dinam SAC - otter
- Anglesey Fens SAC – otter, marsh fritillary butterfly, great crested newt, Geyer's whorl snail, southern damselfly
- Abermenai to Aberffraw Dunes SAC – great crested newt
- Menai Strait and Conwy Bay SAC – sea lamprey, European river lamprey, twaite shad, allis shad, grey seal
- Holy Island Coast SAC – grey seal
- Holy Island Coast SPA – chough
- Glan-traeth SAC – great crested newt
- Creuddyn Peninsula Woods SAC – lesser horseshoe bat
- Eifionydd Fens SAC – marsh fritillary butterfly, Atlantic salmon
- Great Orme's Head SAC – lesser horseshoe bat
- Snowdonia SAC – Atlantic salmon
- Coedydd Aber SAC – otter, Atlantic salmon
- Glynliffon SAC – otter, lesser horseshoe bat
- Afon Gwyrfai a Llyn Cwellyn SAC – otter, Atlantic salmon, sea lamprey, European river lamprey
- Puffin Island SPA – great cormorant
- Anglesey Terns SPA – roseate tern, common tern, Arctic tern, sandwich tern
- Liverpool Bay SPA – red-throated diver, little gull, common scoter, little tern, common tern
- Lavan Sands, Conwy Bay SPA – Eurasian oystercatcher, red-breasted merganser, Eurasian curlew, great crested grebe, common redshank

4.9 Cemlyn Bay SAC, Anglesey and Llyn Fens Ramsar site, Anglesey Coast: Saltmarsh SAC, North Anglesey Marine SAC and Llyn Idwal Ramsar site do not support any qualifying species that may be impacted through functionally linked habitat and as a result these sites are also scoped out from further assessment.

4.10 In addition to this, North Anglesey Marine SPA has been scoped out of the assessment, as it designated for porpoises, which are reliant on marine habitat and as such will not be impacted by proposed growth within Anglesey.

Functionally linked habitat – otter

4.11 Otters are highly dependent on (and therefore likely to be found in close proximity of) freshwater habitats and can

have particularly large home ranges of up to 32km,[22] though this is likely for continuous areas of freshwater habitat. Llyn Dinam SAC and Anglesey Fens SAC lie within Anglesey, and therefore development affecting freshwater habitats which are ecologically connected to the freshwater habitats at these SACs could affect the associated otter populations, a qualifying feature of these sites. These sites are therefore scoped in for further assessment at the Screening stage.

4.12 Afon Gwyrfai a Llyn Cwellyn SAC, Coedydd Aber SAC and Glynliffon SAC all lie outside of Anglesey at distances of 2.4km, 5.3km and 5.8km respectively. While these distances are within 32km, given the physical marine barrier between the Isle of Anglesey and mainland Wales (the location of these European sites) it is unlikely that development as part of the new LDP will impact these otter populations, and they are therefore scoped out from further assessment.

Functionally linked habitat – marsh fritillary butterfly

4.13 Conservation objectives for marsh fritillary butterfly require a minimum of 50ha of suitable habitat should be protected, of which at least 10ha must be in good condition. It is reasoned that not all of this habitat is expected to be found within the European sites and that some will be on nearby land within a radius of about 2km.

4.14 Anglesey Fens SAC is located within the boundary of Anglesey and therefore will be considered further in relation to loss of functionally linked habitat for marsh fritillary butterfly as suitable habitat within 2km of the SAC has the potential to be lost.

4.15 Eifionydd Fens SAC, however, is 9.7km south of Anglesey and due to that distance has therefore been scoped out from further assessment in relation to marsh fritillary butterfly.

Functionally linked habitat – southern damselfly

4.16 The lifetime dispersals of southern damselfly are on average short distances; however some have been found to disperse up to 1km.[23] Anglesey Fens SAC is located within the Anglesey boundary and therefore will be scoped in for further assessment at the Screening stage.

Functionally linked habitat – Geyer's whorl snail

4.17 There is limited research into the range of Geyer's whorl snails, however other whorl snail species disperse up to 100m from known sites.[24] The species is known to have a localised range, specifically found on relatively exposed, constantly humid calcareous flush- fens[25]. Due to this, the species is considered likely to be primarily concentrated within the European site boundary, however there is potential for this species to utilise habitat in close proximity to the designated site. The ability of this species to self-fertilise makes it possible for a single coloniser to establish a new population, meaning it is possible the species could use adjacent habitat and therefore, in line with a precautionary approach, impacts on functionally linked habitat affecting the species cannot be ruled out. Anglesey Fens SAC is within Anglesey and has therefore been scoped in for further assessment at Screening stage.

Functionally linked habitat – great crested newt

4.18 Great crested newt will typically disperse up to 500m away from breeding ponds and therefore this range has been applied to assess for impacts on functionally linked habitat. Anglesey Fens SAC, Abermenai to Aberffraw Dunes SAC and Glan-traeth SAC are all within Anglesey and have therefore been scoped in for further assessment at Screening stage.

Functionally linked habitat – migratory fish assemblage

4.19 The populations of qualifying migratory fish (Atlantic salmon, European river lamprey, sea lamprey, allis shad, twaite shad) depend upon freshwater habitats of the European sites in which they are present. Menai Strait and Conwy Bay SAC, which is designated for supporting sea lamprey, European river lamprey, twaite shad, allis shad, is within Anglesey and therefore any impacts on ecologically connected freshwater habitats outside of this site need to be considered further at Screening stage.

4.20 Eifionydd Fens SAC, Snowdonia SAC, Coedydd Aber SAC and Afon Gwyrfai a Llyn Cwellyn SAC all lie outside of Anglesey in mainland Wales and therefore can be scoped out due to the distance and marine barrier.

Functionally linked habitat – bats

4.21 Lesser horseshoe bats can forage up to 2km away from roosting sites as identified in the Bat Conservation Trust's guidance on Core Sustenance Zones, which relate to areas surrounding a roost within which habitat availability and quality will have a significant influence on the resilience and

[22] NatureScot (2024) Otters. Available at: https://www.nature.scot/plants-animals-and-fungi/mammals/land-mammals/otter
[23] Thompson DJ, Rouquette JR & Purse BV (2003). Ecology of the Southern Damselfly. Conserving Natura 2000 Rivers Ecology Series No. 8.
[24] Office of Public Works (2009) Ecological Impact Assessment (EcIA) of the Effects of Statutory Arterial Drainage Maintenance Activities on Fens, Mires & Whorl Snails.
[25] Special Areas of Conservation: JNCC: Geyer's whorl snail Vertigo geyeri: https://sac.jncc.gov.uk/species/S1013/

conservation status of the colony[26][27]. Creuddyn Peninsula Woods SAC, Great Orme's Head and Glynliffon SAC are 14km, 9.4km and 5.3km respectively from Anglesey and have therefore been scoped out of further assessment.

Functionally linked habitat – bird assemblage

4.22 From our experience of HRA work elsewhere, the recognised distance for the consideration of offsite functionally linked habitat for birds is generally 2km, but for certain species a greater distance may be appropriate, including most notably, whooper swan (5km buffer), curlew, golden plover and lapwing (15km buffer), and pink footed goose (20km). None of the sites support these species and therefore the 2km buffer has been applied.

4.23 Holy Island Coast SPA, Puffin Island SPA, Anglesey Terns SPA and Liverpool Bay SPA are within Anglesey and have therefore been scoped in for further assessment at Screening stage. Lavan Sands, Conwy Bay SPA has also been scoped in, as it is 0.2km away from Anglesey and therefore within the 2km buffer.

Functionally linked habitat – grey seal

4.24 Grey seals make use of coastal habitats such as beaches, rocky shores and sandbars. There is no dispersal data for grey seals from haul-out sites and it is possible these species use multiple haul out sites, some of which may fall outside of the European site areas. Therefore, in line with a precautionary approach, Menai Strait and Conwy Bay SAC and Holy Island Coast SAC, which are designated for this species and are located within Anglesey, have been scoped in for further assessment.

Therefore, the following European sites have been scoped in for assessment at the Screening Stage in relation to physical damage and loss of functionally linked habitat (offsite):

- **Llyn Dinam SAC**
- **Anglesey Fens SAC**
- **Abermenai to Aberffraw Dunes SAC**
- **Glan-traeth SAC**
- **Menai Strait and Conwy Bay SAC**
- **Holy Island Coast SAC**
- **Holy Island SPA**
- **Puffin Island SPA**
- **Anglesey Terns SPA**
- **Liverpool Bay SPA**
- **Lavan Sands, Conwy Bay SPA**

Non-Physical Disturbance

4.25 Noise and vibration effects, e.g. during the construction of new housing, transport infrastructure or other development, are most likely to disturb bird species and are thus a key consideration with respect to European sites where birds are the qualifying features, although such effects may also impact upon some mammals and fish species. Artificial lighting at night (e.g. from internal lighting from structures through windows, street lamps, flood lighting and security lights) has the potential to affect species where it occurs in close proximity to key habitat areas, such as movement or foraging of bats and otter, movement of fish species and key roosting sites for bird species.

Non-Physical Disturbance - onsite

4.26 It has been assumed (on a precautionary basis and based on our experience of previous HRAs and consultation with statutory bodies) that the effects of noise, vibration and light pollution are capable of causing an adverse effect if development takes place within 500m of a European site with qualifying features sensitive to these disturbances. This approach has been applied to HRAs of Local Plans and Local Development Plans for numerous local authorities in the UK and it has been considered the application of this buffer is appropriate and in line with a precautionary principle.

4.27 European sites which may be affected by noise, vibration and light pollution as a result of the Local Development Plan therefore include those within Anglesey or those within 500m of the plan area, which support species susceptible to non-physical disturbance. This includes:

- Llyn Dinam SAC – otters
- Anglesey Fens SAC – otters
- Menai Strait and Conwy Bay SAC – sea lamprey, European river lamprey, twaite shad, allis shad, grey seal
- Holy Island SAC – grey seal
- Holy Island Coast SPA – chough
- Glan-traeth SAC – great crested newt

[26] Bat Conservation Trust (2016) Core Sustenance Zones: Determining Zone Size: Core_Sustenance_Zones_Explained_04.02.16.pdf

[27] Bat Conservation Trust (2019) Species information guide: lesser horseshoe bat.

- Puffin Island SPA – great cormorant
- Anglesey Terns SPA – roseate tern, common tern, Arctic tern, sandwich tern
- Liverpool Bay SPA – red-throated diver, little gull, common scoter, little tern, common tern
- Lavan Sands, Conwy Bay SPA – Eurasian oystercatcher, red-breasted merganser, Eurasian curlew, great crested grebe, common redshank
- North Anglesey Marine SAC - Porpoises

4.28 All remaining sites either do not support features susceptible to impacts from non-physical disturbance or are located over 500m from the boundary of Anglesey and therefore, were scoped out from further assessment.

Therefore, the following European sites have been scoped in for assessment at the Screening stage in relation to non-physical disturbance (onsite):

- **Llyn Dinam SAC**
- **Anglesey Fens SAC**
- **Menai Strait and Conwy Bay SAC**
- **Holy Island SAC**
- **Holy Island Coast SPA**
- **Glan-traeth SAC**
- **Puffin Island SPA**
- **Anglesey Terns SPA**
- **Liverpool Bay SPA**
- **Lavan Sands, Conwy Bay SPA**
- **North Marine Anglesey SAC**

Non-physical disturbance – Functionally Linked Land

4.29 Non-physical disturbance may also affect qualifying species at functionally linked habitat. It was established in the Physical Loss of Habitat - Functionally Linked Habitat section above that the following qualifying species may use functionally linked habitat occurring within the Council's boundary:

- Llyn Dinam SAC - otter
- Anglesey Fens SAC – otter, marsh fritillary butterfly, great crested newt, Geyer's whorl snail, southern damselfly
- Abermenai to Aberffraw Dunes SAC – great crested newt
- Menai Strait and Conwy Bay SAC – sea lamprey, European river lamprey, twaite shad, allis shad, grey seal
- Holy Island Coast SAC – grey seal
- Holy Island Coast SPA – chough
- Glan-traeth SAC – great crested newt
- Creuddyn Peninsula Woods SAC – lesser horseshoe bat
- Eifionydd Fens SAC – marsh fritillary butterfly, Atlantic salmon
- Great Orme's Head SAC – lesser horseshoe bat
- Snowdonia SAC – Atlantic salmon
- Coedydd Aber SAC – otter, Atlantic salmon
- Glynliffon SAC – otter, lesser horseshoe bat
- Afon Gwyrfai a Llyn Cwellyn SAC – otter, Atlantic salmon, sea lamprey, European river lamprey
- Puffin Island SPA – great cormorant
- Anglesey Terns SPA – roseate tern, common tern, Arctic tern, sandwich tern
- Liverpool Bay SPA – red-throated diver, little gull, common scoter, little tern, common tern
- Lavan Sands, Conwy Bay SPA – Eurasian oystercatcher, red-breasted merganser, Eurasian curlew, great crested grebe, common redshank
- North Anglesey SAC - Porpoises

4.30 All remaining European sites were not considered to support features susceptible to impacts from non-physical disturbance and have therefore been scoped out from further assessment. Eifionydd Fens SAC and Anglesey Fens SAC impacts have been scoped out in relation to marsh fritillary, southern damselfly and Geyer's whorl snail, which are not considered sensitive to impacts from non-physical disturbance.

Functionally linked land – otters

4.31 Otters, as discussed above, are a qualifying feature for Llyn Dinam SAC, Anglesey Fens SAC, Coedydd Aber SAC, Glynliffon SAC and Afon Gwyrfai a Llyn Cwellyn SAC. They are a predominantly nocturnal species and as a result could be impacted by artificial lighting within 500m of the European Site or functionally linked habitat. In addition, indirect effects could also occur if prey species such as fish are impacted by non-physical disturbance. Llyn Dinam SAC and Anglesey Fens SAC are both within Anglesey and have functionally linked habitat that could be affected within 500m, and as a result are scoped in for further assessment.

4.32 Coedydd Aber SAC, Glynliffon SAC and Afon Gwyrfai a Llyn Cwellyn SAC are within mainland Wales, and although this species can use home ranges up to 32km provided there is continuous freshwater habitat, given the physical marine barrier between Anglesey and the main land Wales, it is unlikely that this species will be impacted by development coming forwards as part of the Local Development Plan and as such has been scoped out from further assessment.

Functionally linked habitat – great crested newt

4.33 Anglesey Fens SAC and Glan-traeth SAC support qualifying support great crested newt as a qualifying species. Great crested newt will typically disperse up to 500m away from breeding ponds and therefore, there is potential for this species using functionally linked land to be impacted by non-physical disturbance. These European sites are located within Anglesey and therefore have been scoped in for further assessment.

Functionally linked land – lesser horseshoe bats

4.34 As a nocturnal species, the lesser horseshoe bat relies on unlit and undisturbed habitat to roost and forage and linear landscape features to commute to other foraging and roosting areas. They are particularly sensitive to impacts from lighting, as well as impacts from disturbance as a result of vibration and noise.

4.35 As outlined in the Physical Damage and Loss Section on functionally linked land in paragraph 4.20 above, this species is considered to utilise habitat within 2km of their roosting site, as identified in the Bat Conservation Trust's guidance on Core Sustenance Zones. This distance has been applied in this assessment to determine the potential for impacts to arise from proposed development in the LDP.

4.36 Creuddyn Peninsula Woods SAC, Great Orme's Head and Glynliffon SAC are designated for roosting colonies of lesser horseshoe bats. The sites are 14km, 9.4km and 5.3km away from Anglesey respectively and therefore due to the distance of these designated sites and it associated functionally linked land from Anglesey, it is not considered likely that this species will be impacted by non-physical disturbance from development proposed in the LDP. Therefore, these European sites have been scoped out of further assessment at the Screening stage.

Functionally linked land – bird assemblage

4.37 Holy Island Coast SPA, Puffin Island SPA, Anglesey Terns SPA, Liverpool Bay SPA and Lavan Sands, Conwy Bay SPA all support qualifying breeding and wintering bird populations, a time particularly sensitive to non-physical disturbance.

4.38 As outlined in the Physical Damage and Loss Section on functionally linked land in paragraph 4.20 above, a buffer distance of 2km has been applied. The following European sites support qualifying bird species, which may utilise habitat within Anglesey and a 500m buffer:

- Holy Island Coast SPA
- Puffin Island SPA
- Anglesey Terns SPA
- Liverpool Bay SPA
- Lavan Sands, Conwy Bay SPA

4.39 These designated sites have been scoped in for further assessment at the Screening stage.

Functionally linked land – migratory fish

4.40 Migratory fish, and in particular Atlantic salmon, can be sensitive to non-physical disturbance such as noise and it is important to consider any impacts on the fish and offspring.

4.41 Menai Strait and Conwy Bay SAC is within Anglesey and therefore it is expected that qualifying fish species of the SAC will use functionally linked land within the Council's boundary and as such have potential to be affected by proposed development in LDP as a result of non-physical disturbance. This designated site has therefore been scoped in for further consideration at the Screening stage.

4.42 Eifionydd Fens SAC, Snowdonia SAC, Coedydd Aber SAC and Afon Gwyrfai a Llyn Cwellyn SAC all lie outside of Anglesey in mainland Wales and therefore can be scoped out due to the distance and the marine barrier.

Functionally linked land – grey seals

4.43 Menai Strait and Conwy Bay SAC and Holy Island Coast SAC are designated for supporting grey seals. There is no dispersal data for grey seals from haul out sites, however there is potential for this species to utilise functionally linked land along the coastline. These European sites are located within Anglesey and therefore there is potential for impacts to this species using functionally linked land to arise as a result of development proposed in the LDP.

Functionally linked land – porpoises

4.44 North Anglesey Marine SAC is designated for porpoises, which rely on marine and coastal habitat. This species is particularly sensitive to noise and vibration and as such there is potential for impacts to occur if present within coastal water outside of the SAC adjacent to the coastline. This SAC has therefore been scoped in for further consideration.

Therefore, the following European sites have been scoped in for assessment at the Screening Stage in relation to non-physical disturbance of functionally linked land:

- **Llyn Dinam SAC**
- **Anglesey Fens SAC**
- **Menai Strait and Conwy Bay SAC**
- **Holy Island Coast SAC**
- **Holy Island Coast SPA**
- **Puffin Island SPA**
- **Anglesey Terns SPA**
- **Liverpool Bay SPA**
- **Lavan Sands, Conwy Bay SPA**
- **North Anglesey Marine SAC**
- **Glan-traeth SAC**

Non-Toxic Contamination

4.45 Non-toxic contamination can include the creation of dust which can smother habitats preventing natural processes and may also lead to effects associated with increased sediment and dust which can potentially affect the turbidity of aquatic habitats and can also contribute to nutrient enrichment which can lead to changes in the rate of vegetative succession and habitat composition.

4.46 The effects of non-toxic contamination are most likely to be significant if development takes place within 500m of a European site with qualifying features sensitive to these disturbances, such as riparian and wetland habitats, or sites designated for habitats and plant species. This is the distance that, in our experience, provides a robust assessment of effects in plan-level HRA and meets with the agreement of statutory bodies.

4.47 All sites located within the Anglesey boundary that are designated for wetland/coastal habitats are susceptible to impacts from non-toxic contamination. These include:

- Llyn Dinam SAC
- Cemlyn Bay SAC
- Anglesey Fens SAC
- Abermenai to Aberffraw Dunes SAC
- Menai Strait and Conwy Bay SAC
- Anglesey Coast: Saltmarsh SAC
- Glan-traeth SAC
- North Anglesey Marine SAC
- Holy Island Coast SAC

4.48 European sites with wetland habitats within 500m of Anglesey that could be susceptible to impacts from non-toxic contamination include:

- Lavan Sands, Conwy Bay SPA

4.49 As discussed above, the effects associated with increased sediment and dust can affect the turbidity of wetlands and have knock-on effects on vegetation growth and nutrient enrichment. All the above listed European sites within Anglesey and Lavan Sands, Conwy Bay SPA comprise wetland habitats which are susceptible to non-toxic contamination and are within 500m of potential development. These sites are therefore scoped in for further assessment at the Screening stage.

4.50 The remaining European sites are not considered sensitive to impacts from non-toxic contamination and as such can be scoped out of further assessment.

Therefore, the following European sites have been scoped in for assessment at the Screening stage in relation to non-toxic contamination:

- **Llyn Dinam SAC**
- **Cemlyn Bay SAC**
- **Anglesey Fens SAC**
- **Abermenai to Aberffraw Dunes SAC**
- **Menai Strait and Conwy Bay SAC**
- **Anglesey Coast: Saltmarsh SAC**
- **Glan-traeth SAC**
- **North Anglesey Marine SAC**
- **Holy Island Coast SAC**
- **Lavan Sands, Conwy Bay SPA**

Air Pollution

4.51 In terms of vehicle traffic, nitrogen oxides (NOx, i.e. NO and NO2) are considered to be the key pollutants. Deposition of nitrogen compounds may lead to both soil and freshwater acidification, and NOx can cause eutrophication of soils and water. The HRA will refer to the UK Air Pollution Information

System[28] to determine whether concentrations of NOx at the European sites are currently exceeding critical loads or not.

4.52 Based on the Highways Agency Design Manual for Road and Bridges (DMRB) Document LA105: Air Quality[29] (which was produced to provide advice regarding the design, assessment and operation of trunk roads (including motorways)), it is assumed that air pollution from roads is unlikely to be significant beyond 200m from the road itself. Where increases in traffic volumes are forecast, this 200m buffer needs to be applied to the relevant roads in order to make a judgement about the likely geographical extent of air pollution impacts.

4.53 The DMRB Guidance for the assessment of local air quality in relation to highways developments provides criteria that should be applied to ascertain whether there are likely to be significant impacts associated with routes or corridors. Based on the DMRB guidance, affected roads which should be assessed are those where:

- Daily traffic flows will change by 1,000 AADT (Annual Average Daily Traffic) or more; or
- Heavy duty vehicle (HDV) flows will change by 200 AADT or more; or
- Daily average speed will change by 10 km/hr or more; or
- Peak hour speed will change by 20 km/hr or more; or
- Road alignment will change by 5m or more.

4.54 In line with the Wealden judgment[30], statutory consultees now expect to see in-combination air pollution effects assessed. The implication of the judgment is that, where the road traffic effects of other plans or projects are known or can be reasonably estimated (including those of adopted plans or consented projects), then these should be included in road traffic modelling by the local authority whose local plan or project is being assessed. The screening criteria of 1,000 AADT should then be applied to the traffic flows of the plans in combination.

4.55 Roads forming part of the strategic road network[31] (motorways and trunk roads) are most likely to experience any significant increases in vehicle traffic as a result of development (i.e. greater than 1,000 AADT etc.) alongside some important major roads. As such, where a site is within 200m of only minor roads, no significant effect from traffic-related air pollution is considered to be the likely outcome.

4.56 The JNCC's 'Guidance on decision-making thresholds for air pollution'[32] states that, when assessing the air pollution impacts of a plan, 10km should be used as a zone of influence within which the plan is likely to have significant effects on air quality. This buffer has been applied in this assessment.

4.57 Strategic roads within the Anglesey boundary plus a 10km buffer include the A5, A5025, A5108. A5154, A55, A4080, A5114, A5152, A545, A487, A4087, A4871, A499, A487, A4085, A4086 and A4244. These are shown in **Figure A.2, Appendix A.**

4.58 The following European sites are located within 200m of a strategic road:

- Afon Gwyrfai a Llyn Cwellyn SAC – A4085, A487, A4871
- Coedydd Aber SAC – A55
- Snowdonia SAC – A4086, A5
- Anglesey Coast: Saltmarsh SAC A4080
- Glan-traeth SAC – A4080
- Abermenai to Aberffraw Dunes SAC – A4080

4.59 Glynllifon SAC, North Anglesey Marine SAC, Menai Strait and Conwy Bay SAC, Anglesey Terns SPA, Liverpool Bay SPA and Lavan Sands, Conwy Bay SPA are also located within 200m of a strategic road. However, the qualifying features of these European sites are not considered susceptible to impacts and therefore have been scoped out from further assessment.

4.60 All other European sites are located further than 200m from the strategic road network or further than 10km from the Anglesey Council boundary and therefore are scoped out of further assessment of the new Local Development Plan in relation to air pollution.

Therefore, the following European sites have been scoped in for assessment at the Screening stage in relation to air pollution:

- **Afon Gwyrfai a Llyn Cwellyn SAC**
- **Coedydd Aber SAC**
- **Snowdonia SAC**
- **Anglesey Coast: Saltmarsh SAC**
- **Glan-traeth SAC**

[28] http://www.apis.ac.uk/
[29] https://www.standardsforhighways.co.uk/dmrb/search/10191621-07df-44a3-892e-c1d5c7a28d90
[30] Wealden District Council v. (1) Secretary of State for Communities and Local Government; (2) Lewes District Council; (3) South Downs National Park Authority and Natural England
[31] For the purposes of this HRA, the strategic road network relates to the primary road network within Anglesey and a 10km buffer.
[32] JNCC (2021) Guidance on decision-making thresholds for air pollution, https://hub.jncc.gov.uk/assets/6cce4f2e-e481-4ec2-b369-2b4026c88447

- **Abermenai to Aberffraw Dunes SAC**

Recreational Pressure

4.61 Recreational activities and human presence can result in significant effects on European sites as a result of erosion and trampling, associated impacts such as fire and vandalism or disturbance to sensitive features, such as birds through both terrestrial and water-based forms of recreation.

4.62 The LDP will result in housing growth and associated population increase within Anglesey. Where increases in population are likely to result in significant increases in recreation at a European site, either alone or in-combination, the potential for likely significant effects will require assessment. At this stage, there is no definitive figure of how many homes the plan will make provision for over the plan period.

4.63 European sites typically have a 'Zone of Influence' (ZOI) within which increases in population would be expected to result in likely significant effects. ZOIs are usually established following targeted visitor surveys and the findings are therefore typically specific to each European site (and often to specific areas within a European site). The findings are likely to be influenced by a number of complex and interacting factors and therefore it is not always appropriate to apply a generic or non-specific ZOI to a European site. This is particularly the case in relation to coastal European sites, which have the potential to draw large number of visitors from areas much further afield. Specifically, Anglesey is a known and popular tourist destination in North Wales and as such there is potential for likely significant effects to arise as a result of increased growth from the proposed LDP in combination with existing levels of recreation, including in relation to tourism, occurring in this area.

4.64 In contrast to coastal European sites, the ZOI for non-coastal European sites are typically less variable, with visitors travelling from areas more local to a site. Although these sites are unique in their own right, they tend to not have the same draw as coastal sites and with recreational activities more easily managed and directed to alternative greenspace in the area. Using a precautionary approach and based on the Wales Outdoor Recreation Survey 2014[33], a ZOI of 8km was used for non-coastal European sites where an alternative ZOI is not available. This has been applied to all non-coastal European sites as not existing data was available on site specific ZOIs. The 8km ZOI derived from the Outdoor Recreation Survey data relates to the distance of '1 to 5 miles' that 75% of visitors from Wales travel to reach a natural environment. ZOIs are typically based on the distance that 75% of visitors travel from; therefore, 8km is considered likely to represent a highly precautionary ZOI in this assessment, and one which may be modified following the emergence of new information.

4.65 Based on the information above, a ZOI of 8km has been applied. The following European sites have been identified within that distance and scoped in for further consideration:

- Anglesey and Lyn Fens Ramsar site
- Anglesey Fens SAC
- Liverpool Bay SPA
- Anglesey Terns SPA
- Puffin Island SPA
- Holy Island Coast SAC
- Holy Island Coast SPA
- North Anglesey Marine SAC
- Cemlyn Bay SAC
- Glan-traeth SAC
- Anglesey Coast Saltmarsh SAC
- Lyn Dinam SAC
- Menai Strait and Conwy Bay SAC
- Abermenai to Aberffraw Dunes SAC
- Lavan Sands, Conwy Bay SPA
- Afon Gwyrfai a Llyn Cwellyn SAC
- Glynllifon SAC
- Coedydd Aber SAC
- Snowdonia SAC

4.66 All remaining European sites are located over 8km from Anglesey and as such are not considered likely to be impacted by increased recreation pressure as a result of development in the LDP and are scoped out from further assessment.

Therefore, the following European sites have been scoped in for assessment at the Screening Stage in relation to recreational pressure:

- **Anglesey and Llyn Fens Ramsar site**
- **Anglesey Fens SAC**
- **Liverpool Bay SPA**

[33] Natural Resources Wales (2015). Wales Outdoor Recreation Survey 2014: Final Report. Published: July 2015

- **Anglesey Terns SPA**
- **Puffin Island SPA**
- **Holy Island Coast SAC**
- **Holy Island Coast SPA**
- **North Anglesey Marine SAC**
- **Cemlyn Bay SAC**
- **Glan-traeth SAC**
- **Anglesey Coast Saltmarsh SAC**
- **Llyn Dinam SAC**
- **Menai Strait and Conwy Bay SAC**
- **Abermenai to Aberffraw Dunes SAC**
- **Lavan Sands, Conwy Bay SPA**
- **Afon Gwyrfai a Llyn Cwellyn SAC**
- **Glynllifon SAC**
- **Coedydd Aber SAC**
- **Snowdonia SAC**

Water

4.67 An increase in demand for water abstraction and treatment, and changes in land use resulting from the growth proposed in the new LDP could result in changes in hydrology at European sites. Depending on the qualifying features and particular vulnerabilities of the European sites, this could result in likely significant effects; for example due to changes in environmental or biotic conditions, water chemistry and the extent and distribution of preferred habitat conditions. Habitats can also be affected by changes in water quality such as nutrient enrichment, changes in salinity, smothering from dust, and run-off, discharge or spillage from industry, agriculture or construction. Changes in water abstraction, discharge and land use can also affect water quality, for example a change in land use from agriculture to residential reduces direct nutrient run-off to watercourses but increases the volume of nutrients discharges from wastewater treatment works.

4.68 The following European sites have qualifying features that have potential to be sensitive to changes in water quantity or quality:

- Anglesey and Llyn Fens Ramsar site
- Anglesey Fens SAC
- Glan Traeth SAC
- Holy Island Coast SAC
- Holy Island Coast SPA
- Llyn Dinam SAC
- Abergmenai to Aberffraw Dunes SAC
- Afon Gwyrfai a Llyn Cwellyn SAC
- Snowdonia SAC
- Eifionydd Fens SAC
- Llyn Idwal SAC
- Menai Strait and Conwy Bay SAC
- Cemlyn Bay SAC
- Anglesey Coast Saltmarsh SAC
- North Anglesey Marine SAC

4.69 All remaining European sites are scoped out of the assessment as they are not considered to be sensitive to impacts from changes in water quantity or quality.

Water Quantity

4.70 The Isle of Anglesey is supplied by Dwr Cymru Welsh Water and located within the North Eryri / Ynys Mon Water Resource Zone (WRZ). This WRZ covers the mainland adjacent to the Menai Straits (North Eryri) and Anglesey (Ynys Môn). The water resources within the zone consist of five impounding reservoirs, including Ffynnon Llugwy, Llyn Cwellyn and Llyn Marchlyn Bach on the mainland and Llyn Alaw and Llyn Cefni on Anglesey.

4.71 The following European sites are hydrologically connected to the WRZ which supplies Anglesey and as such have potential to affected by increased demand for abstraction as a result of growth in the LDP:

- Anglesey and Llyn Fens Ramsar site
- Anglesey Fens SAC
- Glan Traeth SAC
- Holy Island Coast SAC
- Llyn Dinam SAC
- Abergmenai to Aberffraw Dunes SAC
- Afon Gwyrfai a Llyn Cwellyn SAC
- Snowdonia SAC
- Eifionydd Fens SAC
- Llyn Idwal SAC
- Menai Strait and Conwy Bay SAC
- Cemlyn Bay SAC
- Anglesey Coast Saltmarsh SAC

- North Anglesey Marine SAC

Therefore, the following European sites have been scoped in for assessment at the Screening stage in relation to water quantity:

- **Anglesey and Llyn Fens Ramsar site**
- **Anglesey Fens SAC**
- **Glan Traeth SAC**
- **Holy Island Coast SAC**
- **Llyn Dinam SAC**
- **Abergmenai to Aberffraw Dunes SAC**
- **Afon Gwyrfai a Llyn Cwellyn SAC**
- **Snowdonia SAC**
- **Eifionydd Fens SAC**
- **Llyn Idwal SAC**
- **Menai Strait and Conwy Bay SAC**
- **Cemlyn Bay SAC**
- **Anglesey Coast Saltmarsh SAC**
- **North Anglesey Marine SAC**

Water Quality

Water treatment and discharge

4.72 Habitats can also be affected by changes in water quality such as nutrient enrichment, changes in salinity, smothering from dust, and run-off, discharge or spillage from industry, agriculture, or construction. Changes in water abstraction, discharge and land use can also affect water quality, for example a change in land use from agriculture to residential reduces direct nutrient run-off to watercourses but increases the volume of nutrients discharges from wastewater treatment works.

4.73 NRW has identified a number of European sites in unfavourable condition due to excessive nutrients, which require nutrient neutrality as mitigation[34] and therefore are sensitive to changes in water quality resulting from proposed development within the LDP. A review of European sites identified by NRW confirmed that there were no European sites hydrologically connected to Anglesey, which are in unfavourable condition and as such no impacts are predicted in relation to this impact pathway. All European sites have therefore been scoped out from further assessment.

Direct pollution / run off

4.74 Development resulting from the LDP has the potential to increase pollution from direct run-off at nearby European sites or functionally linked land. Distances can vary depending on topography and connectivity. Typically, a 500m buffer is applied, however due to the separation of Anglesey from the main land by a marine barrier impacts from direct pollution/run off is not considered likely outside of the boundary of Anglesey. Therefore, only sites within Anglesey have been scoped in.

4.75 The following sites are located within Anglesey:

- Anglesey and Llyn Fens Ramsar site
- Anglesey Fens SAC
- Glan Traeth SAC
- Holy Island Coast SAC
- Llyn Dinam SAC
- Abergmenai to Aberffraw Dunes SAC
- Menai Strait and Conwy Bay SAC
- Cemlyn Bay SAC
- Anglesey Coast Saltmarsh SAC
- North Anglesey Marine SAC

4.76 All remaining European sites are scoped out due to their being located over 500m from the Council's boundary and as such they are not considered likely to be affected by direct pollution/runoff impacts arising from proposed growth in Anglesey.

Therefore, the following European sites have been scoped in for assessment at the Screening stage in relation to water quality:

- **Anglesey and Llyn Fens Ramsar site**
- **Anglesey Fens SAC**
- **Glan Traeth SAC**
- **Holy Island Coast SAC**
- **Llyn Dinam SAC**
- **Abergmenai to Aberffraw Dunes SAC**
- **Menai Strait and Conwy Bay SAC**
- **Cemlyn Bay SAC**
- **Anglesey Coast Saltmarsh SAC**

[34] Available: Natural Resources Wales / Principles of nutrient neutrality in relation to development or water discharge permit proposals

- **North Anglesey Marine SAC**
- **Anglesey Terns SPA**
- **Puffin Island SPA**

Summary of Screening Assumptions

The outcome of the Scoping assessment and a summary of which European sites will require further assessment at the Screening stage in relation to each broad impact type is summarised in **Table 4.1** below.

Table 4.1 Summary of Screening Assumptions

European site	Physical damage/loss of habitat	Non-physical disturbance	Non-toxic contamination	Air Pollution	Recreational Pressure	Water Quantity	Water Quality
Llyn Dinam SAC	Scoped in	Scoped in	Scoped in	Scoped out	Scoped in	Scoped in	Scoped in
Cemlyn Bay SAC	Scoped in (onsite only)	Scoped out	Scoped in	Scoped out	Scoped in	Scoped in	Scoped in
Anglesey Fens SAC	Scoped in	Scoped in	Scoped in	Scoped out	Scoped in	Scoped in	Scoped in
Abermenai to Aberffraw Dunes SAC	Scoped in	Scoped out	Scoped in	Scoped in	Scoped in	Scoped in	Scoped in
Menai Strait and Conwy Bay SAC	Scoped in	Scoped in	Scoped in	Scoped out	Scoped in	Scoped in	Scoped in
Holy Island Coast SAC	Scoped in (onsite only)	Scoped in	Scoped in	Scoped out	Scoped in	Scoped in	Scoped in
Anglesey Coast: Saltmarsh SAC	Scoped in (onsite only)	Scoped out	Scoped in	Scoped in	Scoped in	Scoped in	Scoped in
Glan-traeth SAC	Scoped in	Scoped in	Scoped in	Scoped in	Scoped in	Scoped in	Scoped in
North Anglesey Marine SAC	Scoped in (on site only)	Scoped in	Scoped in	Scoped out	Scoped in	Scoped in	Scoped in
Creuddyn Peninsula Woods SAC	Scoped out	Scoped out	Scoped out	Scoped out	Scoped out	Scoped out	Scoped out
Eifionydd Fens SAC	Scoped out	Scoped out	Scoped out	Scoped out	Scoped out	Scoped in	Scoped out
Great Orme's Head SAC	Scoped out	Scoped out	Scoped out	Scoped out	Scoped out	Scoped out	Scoped out
Snowdonia SAC	Scoped out	Scoped out	Scoped out	Scoped in	Scoped in	Scoped in	Scoped out

European site	Physical damage/loss of habitat	Non-physical disturbance	Non-toxic contamination	Air Pollution	Recreational Pressure	Water Quantity	Water Quality
Coedydd Aber SAC	Scoped out	Scoped out	Scoped out	Scoped in	Scoped in	Scoped out	Scoped out
Glynllifon SAC	Scoped out	Scoped out	Scoped out	Scoped out	Scoped in	Scoped out	Scoped out
Afon Gwyrfai a Llyn Cwellyn SAC	Scoped out	Scoped out	Scoped out	Scoped in	Scoped in	Scoped in	Scoped in
Holy Island Coast SPA	Scoped in	Scoped in	Scoped out	Scoped out	Scoped in	Scoped out	Scoped out
Puffin Island SPA	Scoped in	Scoped in	Scoped out	Scoped out	Scoped in	Scoped out	Scoped in
Anglesey Terns SPA	Scoped in	Scoped in	Scoped out	Scoped out	Scoped in	Scoped out	Scoped in
Liverpool Bay SPA	Scoped in	Scoped in	Scoped out	Scoped out	Scoped in	Scoped out	Scoped out
Lavan Sands, Conwy Bay SPA	Scoped in (functionally linked habitat only)	Scoped in	Scoped in	Scoped out	Scoped in	Scoped out	Scoped out
Anglesey and Llyn Fens Ramsar	Scoped in (onsite only)	Scoped out	Scoped out	Scoped out	Scoped in	Scoped in	Scoped in
Llyn Idwal Ramsar	Scoped out	Scoped out	Scoped out	Scoped out	Scoped out	Scoped in	Scoped out

Chapter 5
Conclusion and Next Steps

5.1 This Scoping Report has introduced the HRA processes that will be undertaken in relation to the new Anglesey Local Development Plan. It has been produced to provide guidance for developing the plan in the context of European sites and as an early reference point for stakeholders wishing to comment on the scope of the HRA. As explained in **Chapter 1**, the following stages of the HRA will be undertaken and reported on separately.

5.2 This HRA Scoping Report is being published for consultation with Natural Resources Wales. Whilst there is no formal requirement to do so at this stage, this consultation will be undertaken to confirm that the proposed scope of the assessment is considered appropriate before HRA Screening (and Appropriate Assessment, if required) is carried out in relation to both plans.

5.3 NRW is requested to consider the following questions in particular:

- Have we correctly identified the European sites that should be scoped in to the HRA of the new Local Development Plan (see **Chapter 3** and **Appendix A**)?
- Have we correctly identified the sensitivities of the scoped-in European sites to potential impacts from the new Local Development Plan (see **Chapter 4** and **Appendix B**)?
- Is the proposed approach to HRA of the new Local Development Plan reasonable (see **Chapters 2** and **4**)?

5.4 NRW's response will be reviewed and any necessary amendments to the approach to and information in the HRA will be made prior to the first iteration of HRA Screening for the plan.

5.5 Following the methodology set out in **Chapter 2**, the HRA report will be progressed throughout the new Local Development Plan preparation process, with the HRA reports relating to each iteration of the plan being published during consultation periods. Specific consultation on subsequent HRA Reports will be undertaken with NRW as the statutory consultation body for HRA as the new Local Development Plan progresses.

5.6 After the Scoping consultation, the next stage of the HRA process (Screening) will determine whether the new Local Development Plan will result in any likely significant effects (LSEs) on the European sites scoped in. Alongside

information on the emerging Plan, the following key pieces of information will be required at the Screening stage:

- Existing avoidance and mitigation strategies for European sites.
- Visitor survey information for European sites, including any defined Zones of Influence.
- Road traffic AADT calculations to determine whether thresholds are exceeded in-combination with other plans and projects as a result of the new Local Development Plan. If AADT thresholds are exceeded, air quality modelling will be required to understand whether the LDP will result in adverse effect on integrity and whether avoidance and mitigation measures can be applied which would prevent an adverse effect on integrity.
- Water resources management plans and water cycle studies for Anglesey and neighbouring authorities.

5.7 European sites where Likely Significant Effects are identified will be required to proceed to Appropriate Assessment stage to determine whether the new Local Development Plan will result in Adverse Effects on Integrity (AEoI). At that stage, the Appropriate Assessment can take into account any mitigation, such as safeguards embedded within Local Development Plan policies.

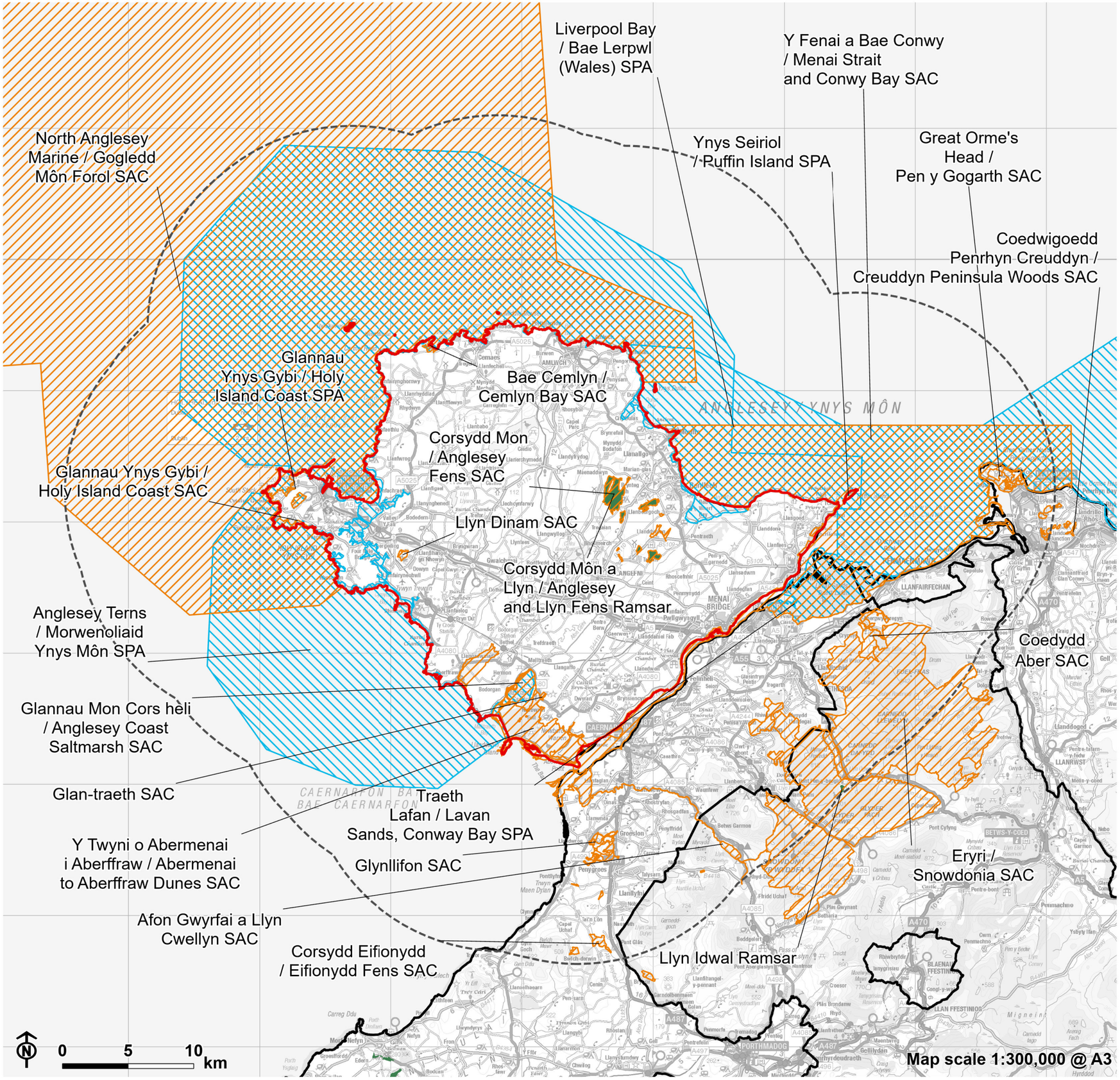
LUC
May 2025

Appendix A
Figures

Isle of Anglesey Habitat Regulation Assessment
Isle of Anglesey County Council

LUC

Figure 1: European sites within 15km of the Isle of Anglesey



- Isle of Anglesey
- Isle of Anglesey 15km buffer
- Local Planning Authority (LPA) boundary
- Special Area of Conservation (SAC)
- Special Protection Area (SPA)
- Ramsar

Isle of Anglesey Habitat Regulation Assessment
Isle of Anglesey County Council

LUC

Figure 2: Strategic Roads within 15km of the Isle of Anglesey

- Isle of Anglesey
- Isle of Anglesey 10km buffer
- Isle of Anglesey 15km buffer
- Local Planning Authority (LPA) boundary
- Special Area of Conservation (SAC)
- Special Protection Area (SPA)
- Ramsar
- A Road

ANGLESEY / YNYS MÔN

CAERNARFON BAY / BAE CAERNARFON

A5025 A5108 A5154 A5 A55 A4080 A5114 A5152 A4087 A545 A470 A546 A547 A4087 A487 A4244 A4086 A4085 A499 A4087

0 5 10 km

Map scale 1:300,000 @ A3

Appendix B

European Site Information

B.1 This appendix contains information about the European sites scoped into the HRA. Information about each site's area, the site descriptions, qualifying features and pressures and threats are drawn from Natural Resources Wales's Core Management Plans which include Conservation Objectives and the Standard Data Forms or Information Sheets on Ramsar Wetlands available from the JNCC website.

Llyn Dinam SAC

Site Description

Llyn Dinam (9.7ha) is the northernmost of the complex of lakes that form the Llynnau y Fali Site of Special Scientific Interest (SSSI) in west Anglesey. These lakes are shallow and characterised by relatively high nutrient levels. Llyn Dinam is the least impacted of the lakes and is managed by RSPB as a reserve.

The important features of the site include standing water and wetland habitats as well the population of otters *Lutra lutra.* Other features include aquatic plants such as common reed *Phragmites australis,* rigid hornwort *Ceratophyllum demersum* and marsh fern *Thelypteris palustris.* White and yellow water-lilies *Nymphaea alba* and *Nuphar lutea* also dominate in a sheltered arm on the west side. In addition, the lake is known to support breeding and overwintering birds.

Other habitats on site include dry grassland, humid and mesophile grassland and some broad-leaved deciduous woodland.

Qualifying Features

- 3150 Natural eutrophic lakes with Magnopotamion or Hydrocharition-type vegetation
- 7140 Transition mires and quaking bogs (only listed as a qualifying feature under the JNCC Standard Data Form)
- 1355 Eurasian otter *Lutra lutra* (only listed as a qualifying feature under the JNCC Standard Data Form)

Key Vulnerabilities

- Modification of cultivation practices and fertilisation: intensive agriculture covers 75% of the catchment and as a result there is risk of fertiliser run-off into the lake and impact on nearby habitats, as well as impacts from abattoir waste on farmland. The lake was listed in a survey completed in 2016 to have 'either a ‘quite certain’ or ‘very certain’ confidence of eutrophication impact.'[35]
- Water pollution (to surface water and groundwater): Llyn Dinam is likely affected by eutrophication. Nutrients predominantly come from diffuse sources.[35] Other sources of inputs to the lake may be point sources such as septic tanks. There is evidence of elevated phosphorus at Llyn Dinam, with potential ecological impacts on the freshwater plant and diatom communities.
- Invasive non-native species: the presence of water fern *Azolla filiculoides* and duckweed such as *Lemna minuta* is unfavourable under JNCC Common Standards Monitoring (CSM) guidelines. Other invasive non-native species are unlikely to become established in open water due to wind-stress, but they do pose a threat to small, sheltered pools within the extensive reed swamp to the south and east of the lake. Pondweed *Elodea canadensis* is present, but remains at low cover values.[36]

Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats
- The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

The Eurasian otter, a qualifying species of this SAC, is dependent on freshwater habitats and other species. This means consideration should be given to these habitats and species, although non-qualifying, as they impact a qualifying feature.

[35] Natural Resources Wales (2016) Evidence Review of Lake Eutrophication in Wales. Accessible at: https://www.gov.wales/sites/default/files/consultations/2018-01/160929-evidence-review-of-welsh-lake-nitrate-vulnerable-zones-en.pdf
[36] Natural Resources Wales (2018) Ecological Surveys of Welsh Lakes. Accessible at: https://naturalresourceswales.gov.uk/media/689953/nrw-evidence-report-no-343-ecological-surveys-of-welsh-lakes-2018.pdf

Llyn Dinam SAC

This includes the prey species e.g., fish and amphibians on which otters feed, and the food chain in its entirety. In addition, otters rely on an abundance of dense bankside vegetation for refugia, as well as protected areas to support breeding and resting within the site. The quality of supporting freshwater habitat should be maintained and improved where possible, and there should be no significant artificial barriers to the safe passage and movement of otters into, within and away from the site.

Natural eutrophic lakes with Magnopotamion or Hydrocharition-type vegetation, a qualifying habitat of this SAC, are characterised by higher nutrient levels and productivity than other waterbodies and the presence of particular plant communities such as pondweeds *Potamogeton* spp., spiked water-milfoil *Myriophyllum spicatum*, yellow water-lily *Nuphar lutea*, and occasionally by associations of stoneworts *Chara* spp. The over-enrichment of this habitat, however, can lead to hypertrophic conditions and a decline in species richness.

Transition mires can be characterised by core vegetation in the United Kingdom including bottle sedge *Carex rostrata,* peat moss *Sphagnum recurvum,* spiky bog-moss *Sphagnum squarrosum*, fen peatmoss *Sphagnum warnstorfii* etc. The protection of these plant communities is vital as they influence the condition of the mires.

Cemlyn Bay SAC

Site Description

Cemlyn Bay (25ha) supports a relatively diverse set of species, several of which are specific to lagoons, including the bryozoan *Conopeum seurati*, the lagoon cockle *Cerastoderma glaucum* and the lagoonal mud-snail *Ventrosia ventrosa*. A number of uncommon plant species are also found within the lagoon, including the brackish water-crowfoot *Ranunculus baudotii* and beaked tasselweed *Ruppia maritima*.

The site is designated for its coastal lagoon, for which this is considered to be one of the best areas in the United Kingdom, and perennial vegetation of stony banks for which the area is considered to support a significant presence. Other habitats include sea cliffs, islets, tidal rivers, estuaries, mud flats, sand flats, humid grassland and mesophile grassland.

The site is largely owned by the National Trust and is managed by North Wales Wildlife Trust. It forms part of Ynys Feurig, Cemlyn Bay & The Skerries Special Protection Area (SPA), also known as Anglesey Terns SPA, which is considered separately in this report. As a result, for this site, only the qualifying features of the SAC will be covered with the knowledge that any impacts on birds from the new Local Development Plan that apply to Anglesey Terns SPA will also apply to Cemlyn Bay SAC.

Qualifying Features

- 1150 Coastal lagoons
- 1220 Perennial vegetation of stony banks

Key Vulnerabilities

- Fertilisation: the prevalence of agriculture in Anglesey means there is risk of fertiliser run-off as well as impacts from abattoir waste on farmland that can impact habitats at Cemlyn Bay SAC.
- Human induced changes in hydraulic conditions: this is often referred to as inappropriate water levels and encompasses a range of issues which relate to water and flood management, agriculture and land management such as drainage, historic water abstraction infrastructure and abstraction itself, as well as erosion control.

Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats
- The structure and function (including typical species) of qualifying natural habitats, and

Cemlyn Bay SAC

- The supporting processes on which qualifying natural habitats rely.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

The plant community of stony banks will be influenced by several factors including the salinity of the water in the lagoon and the physical landscape which could affect exposure to waves and/or salt spray. For example, where wave energy causes movement of the shingle, the plant communities have affinities with 1210 Annual vegetation of drift lines and where sea spray is blown over the shingle, plant communities with salt-tolerant species such as thrift *Armeria maritima* and sea campion *Silene uniflora* occur. Plant communities can also be influenced by natural cycles of degeneration and regeneration of the vegetation.

Anglesey Fens SAC and Anglesey and Llyn Fens Ramsar

Site Description

Anglesey Fens (465ha) is the second largest area of calcareous fen in the United Kingdom and comprises several designated sites including Cors Erddreiniog SSSI, Cors Goch SSSI, Cors Bodeilio SSSI, Cors y Farl SSSI, Gwenfro Rhos y Gad SSSI, Waun Eurad SSSI and Caeau Talwrn SSSI. The site also includes some of the best examples of alkaline fen in Wales along with oligotrophic (nutrient-poor) lakes. Other habitats include heathland, dry grassland, mixed woodland, bogs, and marshes.

Anglesey Fens SAC overlaps with Anglesey and Llyn Fens, a Ramsar site, and therefore these sites share a Core Management Plan, as well as encompassing many of the same habitats. Anglesey and Llyn Fens comprises wetland habitats notable as the best sites in Wales for stoneworts such as *Nitella tenuissima,* a species that thrives in calcareous, freshwater environments.

Anglesey Fens supports a variety of species, many of which are qualifying features of the SAC, including one of the largest known populations of Geyer's whorl snail *Vertigo geyeri* in calcareous fen at low altitude and Eurasian otters *Lutra lutra*. Anglesey and Llyn Fens Ramsar has two qualifying features shared with the SAC and these are alkaline fens and calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae.*

Qualifying Features

- 3140 Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp.
- 4010 Northern Atlantic wet heaths with *Erica tetralix*
- 4030 European dry heaths
- 6410 *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils
- 7210 Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* (also a Ramsar feature)
- 7230 Alkaline fens (also a Ramsar feature)
- 1044 Southern damselfly *Coenagrion mercuriale*
- 1065 Marsh fritillary butterfly *Euphydryas aurinia*
- 1355 Eurasian otter *Lutra lutra*
- 1166 Great crested newt *Triturus cristatus*
- 1013 Geyer's whorl snail *Vertigo geyeri*

Key Vulnerabilities

- Pollution to surface waters and groundwater: as discussed above for Llyn Dinam SAC, pollution in wetland habitats which is likely caused by agricultural run-off of nitrate and phosphate for this site, increase the risks of eutrophication.

Anglesey Fens SAC and Anglesey and Llyn Fens Ramsar

This can disrupt vegetation growth and have trophic-level impacts, particularly for species which are adapted for nutrient-poor environments.

- Human induced changes in hydraulic conditions: past attempts at drainage and the maintenance of lowered water levels in parts of the site damaged some areas of fen, a qualifying feature of this site.
- Mowing/cutting of grassland: The management of grassland is important to prevent the fen from becoming dominated by *Cladium mariscus*. A light grazing regime by heavy livestock rather than mechanical mowing is considered to be most effective for the site to maintain areas of open sward.

Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats
- The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

As discussed above for Llyn Dinam SAC, otters are dependent on freshwater habitats, suitable vegetated areas to provide refugia and the prey species on which they feed such as fish and amphibians, as well as the food chain in its entirety.

Great crested newts require both suitable terrestrial and freshwater habitat. Breeding ponds should be extensively vegetated with a submerged plant cover of about two thirds of the pond and emergent/floating vegetation cover of one quarter to one half of a pond.[37] Less vegetated areas are also important to facilitate male displays during the mating season. Furthermore, terrestrial habitats should include dense ground cover such as rough grassland, leaf litter and woodland. The newts also depend on the invertebrate species on which they feed and as a result, the connected habitats/species on which the prey species depend on.

Southern damselflies, as with all damselflies, feed on insects such as mosquitoes, butterflies and moths. They rely on shallow freshwater habitats for breeding, with particular preferences for alkaline conditions.

The marsh fritillary butterfly is found in a range of habitats in which its larval food plant, devil's-bit scabious *Succisa pratensis*, occurs. Optimal marsh fritillary breeding habitat will be characterised by grassland where the vegetation height is 10-20cm, and includes marshy grassland and damp pastures and heaths.

The Geyer's whorl snail can be found in alkaline and calcareous fens, with preferred habitats comprising dense cover of low-growing grasses and sedges relatively free from *Sphagnum* and other mosses. Species that have been found in these habitats are black bog-rush *Schoenus nigricans* and yellow sedge *Carex viridula*.

European dry heaths typically occur on freely-draining, acidic to circumneutral soils with generally low nutrient content and ericaceous dwarf-shrubs as the dominant vegetation. The most common is heather *Calluna vulgaris*, which often occurs in combination with gorse *Ulex* spp., bilberry *Vaccinium* spp. or bell heather *Erica cinerea*, though other dwarf-shrubs are important locally. Similarly, wet heaths also usually occur on acidic, nutrient-poor substrates, such as shallow peats or sandy soils, however with impeded drainage. The vegetation is typically dominated by mixtures of cross-leaved heath *Erica tetralix*, heather, grasses, sedges and *Sphagnum* bog-mosses.

Molinia meadows on calcareous, peaty or clayey-silt laden soils depend on moist and moderately alkaline conditions within the peat and are often components of wet pastures or fens. Purple moor-grass *Molinia caerulea* amongst other species can be found in this habitat. Other qualifying habitats on this site such as hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp., calcareous fens and alkaline fens are also characterised by their alkaline conditions.

Calcareous fens are a rare habitat in the United Kingdom, with small areas scattered throughout, however the majority of area is within East Anglia and Anglesey. These habitats are species-rich with great fen-sedge *Cladium mariscus* present and are often found in mosaics with other fen types such as alkaline fens.

[37] Froglife (2001) Great Crested Newt Conservation Handbook. Available at: https://www.froglife.org/wp-content/uploads/2013/06/GCN-Conservation-Handbook_compressed.pdf

Abermenai to Aberffraw Dunes SAC

Site Description

Abermenai to Aberffraw Dunes (1869ha) is designated for the various dune habitats on site, many of which are considered to be one of the best areas for these habitats in the United Kingdom. The dunes support different plant communities including petalwort *Petalophyllum ralfsii* and shore dock *Rumex rupestris*, qualifying features of this site. Other habitats on site include sand beaches, shingle, sea cliffs, islets, inland water bodies, bogs, marshes, fens, heath and coniferous woodland.

Abermenai to Aberffraw Dunes SAC is adjacent to and in some areas overlaps with Glan-traeth SAC and Anglesey Coast: Saltmarsh SAC. As a result, a single Core Management Plan covers all three European sites, however they are reported on separately. Parts of the Abermenai to Aberffraw Dunes SAC are also within the Anglesey Terns Special Protection Area (SPA) which is also reported on separately. For this site, only the qualifying features of the SAC will be covered with the knowledge that any impacts on birds from the new Local Development Plan that apply to Anglesey Terns SPA will also apply to Abermenai to Aberffraw Dunes SAC.

Qualifying Features

- 2110 Embryonic shifting dunes
- 2120 Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes")
- 2130 Fixed coastal dunes with herbaceous vegetation ("grey dunes")
- 2150 Atlantic decalcified fixed dunes (*Calluno-Ulicetea*)
- 2170 Dunes with *Salix repens ssp. argentea* (*Salicion arenariae*)
- 2190 Humid dune slacks
- 3150 Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation
- 7140 Transition mires and quaking bogs
- 1395 Petalwort *Petalophyllum ralfsii*
- 1441 Shore dock *Rumex rupestris*
- 1166 Great crested newt *Triturus cristatus* (only listed as a qualifying feature under the JNCC Standard Data Form)

Key Vulnerabilities

- Changes in abiotic conditions: coastal habitats are at particular risk of changes related to climate change. This includes rises in sea level and changes to groundwater tables which impact dunes and dune slacks.
- Forest planting on open ground: afforestation of non-native conifers on dune systems have altered the ecological development of dunes, however offer suitable terrestrial habitats for great crested newt.

Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats
- The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

The different qualifying dunes are dependent on vegetation to create and support dune structures, as well as specialised plants such as marram grass *Ammophila arenaria* which tolerate sand inundation and trap further sand. As dune soils are

Abermenai to Aberffraw Dunes SAC

low in nutrients/fertility, vegetation in these habitats are adapted for these conditions. In addition, dune slacks are dependent on the groundwater table, and the distribution and conditions of these habitats are affected by water.

As discussed above for Llyn Dinam SAC, transition mires and quaking bogs can be characterised by core vegetation and these plant communities are integral to the conditions of the mires. Natural eutrophic lakes with Magnopotamion or Hydrocharition-type vegetation are characterised by higher nutrient levels and productivity than other waterbodies and the presence of particular plant communities. These habitats are at risk of pollution causing hypertrophic conditions.

Petalworts depend on open, damp (but not water-filled) calcareous dune slacks and have occasionally also been found on banks and coastal grassland with similar conditions. Interestingly, recreational pressure on some sites have increased numbers as a result of trampling and soil compaction.

The shore dock plant grows on rocky, sandy and raised beaches, shore platforms and the lower slopes of cliffs, requiring a constant source of freshwater, whether running or static. Populations are known to fluctuate with the severity of winter storms and the plant is sensitive to the impacts of recreational pressure.

Menai Strait and Conwy Bay SAC

Site Description

Menai Strait and Conwy Bay (26,502ha) covers a marine area between mainland Wales and Anglesey, designated for marine habitats such as sandbanks which are slightly covered by sea water all the time for which this is considered to be one of the best areas in the United Kingdom. Other qualifying habitats include mudflats and sandflats, estuaries, large shallow inlets and bays for which the site is considered to support a significant presence, reefs and submerged or partially submerged sea caves. Other habitats on site include lagoons, salt marshes, shingle, sea cliffs and islets. There are multiple qualifying species for this site, including grey seal *Halichoerus grypus* and migratory fish.

Qualifying Features

- 1110 Sandbanks which are slightly covered by sea water all the time
- 1130 Estuaries
- 1140 Mudflats and sandflats not covered by seawater at low tide
- 1160 Large shallow inlets and bays
- 1170 Reefs
- 1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
- 8330 Submerged or partially submerged sea caves
- 1102 Allis shad *Alosa alosa*
- 1103 Twaite shad *Alosa fallax*
- 1364 Grey seal *Halichoerus grypus*
- 1099 European river lamprey *Lampetra fluviatilis*
- 1095 Sea lamprey *Petromyzon marinus*

Key Vulnerabilities

- Fishing and harvesting aquatic resources: there is a history of fishing in this area which has previously impacted fish species such as shad through bycatch, and impacted boulder habitats from crab fishing.
- Invasive non-native species: these pose a threat to the reefs since they may smother the seabed or out-compete native species, resulting in changes to community structure.

Conservation Objectives

Menai Strait and Conwy Bay SAC

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats
- The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

The migratory fish species (allis shad, twaite shad, European river lamprey and sea lamprey) all depend on freshwater habitats to spawn while completing most, if not all, their life cycle in the sea. All species require clean gravel/rocky river substrates for spawning, and lampreys require marginal silt or sand for the burrowing juvenile ammocoetes, where they filter feed on diatoms, algae and bacteria. Both allis shad and twaite shad are dependent on marine crustaceans and small fish as a food source. All of these species are dependent on the habitats and species that affect their prey abundance. Pollution and physical barriers such as dams may impede migration and is therefore, an important consideration.

Grey seals spend most of the year at sea, and may range widely in search of prey species which are predominantly fish. They come ashore in autumn to form breeding colonies on rocky shores, beaches, in caves, occasionally on sandbanks, and on small largely uninhabited islands. In such locations they may spread some distance from the shore and ascend to considerable heights.

Atlantic salt meadows are characterised by salt-tolerant vegetation and can differ widely in terms of species composition with changes in climate, frequency and duration of tidal inundation, grazing influences and locations within the saltmarsh itself. *Juncus maritimus* communities are characteristic of Welsh saltmarshes.

Holy Island Coast SAC and SPA

Site Description

There are overlaps between Holy Island Coast SAC (464ha) and Holy Island Coast SPA (608ha) and as a result they are considered together. The SPA supports a significant number of breeding choughs *Pyrrhocorax pyrrhocorax*, for which the site is designated, and the SAC includes qualifying features such as wet and dry heaths, and vegetated sea cliffs. Other habitats include shingle, islets, bogs, marshes, water fringed vegetation, fens, scrub, humid grassland, mesophile grassland, inland rocks and screes. The nationally rare spotted rock-rose *Tuberaria guttata* occurs within the mosaic of heath and grassland communities above the cliffs.

Qualifying Features

- A346 Chough *Pyrrhocorax pyrrhocorax* (SPA qualifying feature)
- 1230 Vegetated sea cliffs of the Atlantic and Baltic Coasts
- 4030 European dry heaths
- 4010 Northern Atlantic wet heaths with Erica tetralix
- 1170 Reefs
- 8330 Submerged or partially submerged sea caves
- 1364 Grey seal *Halichoerus grypus*

Key Vulnerabilities

- Fire and fire suppression: there is a history of burning on site including both controlled burns and uncontrolled burns from third parties. Burning damages the bryophyte layer and encourages a vigorous re-growth of more competitive, fire-resistant species such as purple moor-grass.

Holy Island Coast SAC and SPA

- Grazing: the heath and grassland on site require light grazing to maintain a good open structure to support important plant species and to prevent the heath from becoming dominated by scrub, bracken and gorse.

Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats
- The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

Choughs are dependent on key habitats such as dry heath, sea cliffs for nesting and short grassland for foraging, as well as invertebrate species such as leatherjackets *Tipula* spp. on which they feed on.

Grey seals, as discussed above for Menai Strait and Conwy Bay SAC, depend on prey fish species as well as habitats to form breeding colonies such as shores, beaches, in caves, occasionally on sandbanks, and on small largely uninhabited islands.

Anglesey Coast: Saltmarsh SAC

Site Description

Anglesey Coast: Saltmarsh (1057ha) is adjacent to and in some areas overlaps with Glan-traeth SAC and Abermenai to Aberffraw Dunes SAC. As a result, a single Core Management Plan covers all three European sites.

Qualifying habitats include estuaries for which the area is considered to support a significant presence, *Salicornia* and other annuals colonising mud and sand, which are important for structural integrity in dune environments and for which this is considered to be one of the best areas in the United Kingdom, as well as Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) for which this site is also considered to be one of the best areas in the United Kingdom. Other habitats on site include lagoons, salt marshes, shingle and islets.

Qualifying Features

- 1130 Estuaries
- 1140 Mudflats and sandflats not covered by seawater at low tide
- 1230 Vegetated sea cliffs of the Atlantic and Baltic Coasts
- 1310 *Salicornia* and other annuals colonizing mud and sand
- 1320 Spartina swards (*Spartina maritima*)
- 1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)

Key Vulnerabilities

- Changes in abiotic conditions: coastal habitats are at particular risk of changes related to climate change. This includes rises in sea level and changes to groundwater tables which impact dunes and saltmarshes.

Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

Anglesey Coast: Saltmarsh SAC

- The extent and distribution of qualifying natural habitats
- The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

Atlantic salt meadows are characterised by salt-tolerant vegetation and can differ widely in terms of species composition with changes in climate, frequency and duration of tidal inundation, grazing influences and locations within the saltmarsh itself. *Juncus maritimus* communities are characteristic of Welsh saltmarshes.

Glan-traeth SAC

Site Description

Glan-traeth SAC (14ha) is adjacent to and in some areas overlaps with Anglesey Coast: Saltmarsh and Abermenai to Aberffraw Dunes SAC. As a result, a single Core Management Plan covers all three European sites.

This site is designated for its great crested newt population *Triturus cristatus*, for which it is considered one of the best areas in the United Kingdom. In addition, fixed coastal dunes are a qualifying feature of this site with other habitats also present such as sand beaches, dune slacks and inland water bodies, which support the population of great crested newts.

Qualifying Features

- 2130 Fixed coastal dunes with herbaceous vegetation ("grey dunes")
- 1166 Great crested newt *Triturus cristatus*

Key Vulnerabilities

- Ecological succession: the process of succession can often lead to the drying out of important terrestrial and freshwater habitats for great crested newt and if improperly managed could result in the loss of key dune slack or pond habitats which support egg-laying and lekking.

Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats
- The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

As discussed above for Abermenai to Aberffraw Dunes SAC, dune habitats are dependent on vegetation and a combination of wind/water for their development and structural integrity.

Great crested newts require both suitable terrestrial and freshwater habitat. Breeding ponds should be extensively vegetated with a submerged plant cover of about two thirds of the pond and emergent/floating vegetation cover of one quarter to one half of a pond.[37] Less vegetated areas are also important to facilitate male displays during the mating season. Furthermore, terrestrial habitats should include dense ground cover such as rough grassland, leaf litter and woodland. The newts also depend on the invertebrate species on which they feed and as a result, the connected habitats/species on which the prey species depend on.

North Anglesey Marine SAC

Site Description

North Anglesey Marine (324,949ha) is a large marine area extending north-west from the Isle of Anglesey into the Irish Sea and is designated for its harbour porpoise *Phocoena phocoena* populations, with the site providing good foraging habitat that may also be used for breeding and calving.

Qualifying Features

- 1351 Harbour porpoise *Phocoena phocoena*

Key Vulnerabilities

- Fishing and harvesting aquatic resources: there is risk of harbour porpoises having to compete with commercial fisheries for food, as well as the potential bycatch of harbour porpoises which would directly impact the species population within North Anglesey Marine.
- Contaminants: discharge/run-off from landfill and terrestrial/offshore industries could impact water quality and prey species, as well as the health of harbour porpoises.
- Other human intrusions and disturbances: these are particularly noise related such as through military activity and boating activity that could lead to physiological and behavioural impacts such as an inability or hindrance to navigate, socialise and detect predators, potentially leading to displacement.

Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats
- The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

Porpoises eat a variety of prey including gobies, sandeel, whiting, herring and sprat (some of which may have spawning grounds within the North Anglesey Marine site), and are therefore dependent on any processes that affect prey abundance. They have large ranges and can be found in both shallow and deeper waters.

Creuddyn Peninsula Woods SAC

Site Description

Creuddyn Peninsula Woods (118ha) comprises Gloddaeth SSSI, Marle Hall Woods SSSI, Coed Bron Garth SSSI and Pydew SSSI. The site is a woodland habitat on limestone bedrock with a primarily ash *Fraxinus excelsior* and sycamore *Acer pseudoplatanus* canopy with a calcareous understorey and ground flora. Characteristic species including dog's mercury *Mercurialis perennis*, hart's-tongue *Phyllitis scolopendrium* and spurge laurel *Daphne laureola*. Yew *Taxus baccata* dominates locally, and there are gradations to oak *Quercus petraea* woodland. In places there are also mosaics with rich calcareous grassland containing rare species, including orchids.

Lesser horseshoe bats *Rhinolophus hipposideros* are also a qualifying feature of this site.

Qualifying Features

- 9180 *Tilio-Acerion* forests of slopes, screes and ravines
- 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*)

Creuddyn Peninsula Woods SAC
■ 8240 Limestone pavements (only listed as a qualifying feature under the JNCC Standard Data Form) ■ 8310 Caves not open to the public (only listed as a qualifying feature under the JNCC Standard Data Form) ■ 9130 *Asperulo-Fagetum* beech forests (only listed as a qualifying feature under the JNCC Standard Data Form) ■ 91J0 *Taxus baccata* woods of the British Isles ■ 1303 Lesser horseshoe bat *Rhinolophus hipposideros* (only listed as a qualifying feature under the JNCC Standard Data Form)
Key Vulnerabilities
■ Mowing/cutting grassland: grassland is improperly managed and as a result areas of calcareous grassland are in unfavourable condition due to the presence of scrub and non-native species. Scrub removal should be carried out and mowing of the grassland as required. ■ Recreational pressure: some areas of the woodland are subject to trampling by walkers that damage the ground flora.
Conservation Objectives
Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; ■ The extent and distribution of qualifying natural habitats ■ The structure and function (including typical species) of qualifying natural habitats, and ■ The supporting processes on which qualifying natural habitats rely.
Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
Lesser horseshoe bats are cave-dwelling and are found in the caves and mine shafts present on site. However they are also found to roost within the roofs and cellars of buildings as well as tunnels. They feed on insects such as flies, moths, beetles and spiders and are dependent on processes that affect prey species, particularly after hibernation where energy demands are higher.[38]

Eifionydd Fens SAC
Site Description
Eifionydd Fens (144ha) comprises 4 SSSIs: Cors Graianog SSSI, Cors Gyfelog SSSI/NNR, Cors Llanllyfni SSSI and Cors y Wlad SSSI, with qualifying habitats including mires, bog woodland and other wetland habitats. The site supports the most significant population of marsh fritillary butterfly in North Wales and supports slender green feather-moss and Atlantic salmon, all of which are qualifying species for the site.
Qualifying Features
■ 7140 Transition mires and quaking bogs ■ 3260 Water courses of plain to montane levels with the *Ranunculion fluitantis* and Callitricho-Batrachion vegetation (only listed as a qualifying feature under the JNCC Standard Data Form) ■ 4010 Northern Atlantic wet heaths with *Erica tetralix* (only listed as a qualifying feature under the JNCC Standard Data Form)

[38] Bat Conservation Trust (2019) Lesser horseshoe bat. Available at: https://www.bats.org.uk/about-bats/what-are-bats/uk-bats/lesser-horsehoe.

Eifionydd Fens SAC

- 6410 *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinia caerulea*) (only listed as a qualifying feature under the JNCC Standard Data Form)
- 91D0 Bog woodland (only listed as a qualifying feature under the JNCC Standard Data Form)
- 1065 Marsh fritillary butterfly *Euphydryas aurinia*
- 1393 Slender green feather-moss *Hamatocaulis vernicosus*
- 1106 Atlantic salmon *Salmo salar* (only listed as a qualifying feature under the JNCC Standard Data Form)

Key Vulnerabilities

- Invasive non-native species: rhododendron is scattered over part of Cors Graianog, and removal is suggested by stem injection or cutting and stump treatment to prevent re-growth, seed production and further spread.

Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats
- The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

Marsh fritillary butterflies, as discussed above for Anglesey Fens SAC, are dependent on their larval food plant, devil's-bit scabious *Succisa pratensis*. Optimal marsh fritillary breeding habitat will be characterised by grassland where the vegetation height is 10-20cm, and includes marshy grassland and damp pastures and heaths.

Slender green feather-moss require open, wetland conditions where there is not excessive shading as well as alkaline conditions. The plants may grow with small sedges *Carex* spp., black bog-rush *Schoenus nigricans* and other characteristic mosses of base-rich flushes and fens, such as *Campylium stellatum.*

Similar to the migratory fish described above for Menai Strait and Conwy Bay SAC, Atlantic salmon spend most of their life cycle in the sea and return to rivers to spawn. Atlantic salmon return to their native river, and even the same stretch of the river from which they were born, highlighting the importance of conserving these habitats. Juveniles feed on insects, invertebrates and sometimes plankton and adult fish feed on smaller fish such as capelin *Mallotus villosus.* Salmon are also dependent on trees and vegetation on river banks to support upstream movement, and woody debris is important in the formation of new gravel beds, providing cover.

Great Orme's Head SAC

Site Description

Great Orme's Head (302ha) comprises vegetated sea cliffs, for which the site is designated as well as European dry heaths for which this site is considered to be one of the best areas in the United Kingdom. The limestone headland extends to nearly 8km and reaches a height of 207m, providing a range of habitats for flora and fauna alike. Habitats include acid heath, humid grassland, limestone grassland, improved grassland, shingle, islets, inland rocks, sands as well as interesting infrastructure due to the site's history as a former mining and industrial site.

The habitats support diverse plants species, the lesser horseshoe bat *Rhinolophus hipposideros* within the disused caves and mine workings, a qualifying species of this site, and grassland invertebrates such as weevil *Helianthemapion aciculare* and pollen beetle *Meligethes brevis*. In addition, the sea cliffs regularly support a large colony of breeding sea birds of kittiwake *Rissa tridactyla*, guillemot *Uria aalge* and razorbill *Alca torda.*

Great Orme's Head SAC

There is also an extensive area of CG2 *Festuca ovina – Avenula pratensis* grassland. This is one of only three selected sites in the UK where this *Xerobromion* grassland type occurs. .

Qualifying Features

- 1230 Vegetated sea cliffs of the Atlantic and Baltic Coasts
- 4030 European dry heaths
- 6130 Calaminarian grasslands of the *Violetalia calaminariae*
- 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*)
- 6410 *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinia caerulea*)
- 8240 Limestone pavements
- 8310 Caves not open to the public
- 9180 *Tilio-Acerion* forests of slopes, screes and ravines
- 1303 Lesser horseshoe bat *Rhinolophus hipposideros*

Key Vulnerabilities

- Fire and fire suppression: uncontrolled burning takes place in some areas, sometimes at inappropriate times of year often as a result of camping. If not used properly and linked to an appropriate grazing regime, it can lead to a vigorous re-growth of competitive, fire-resistant species such as western gorse *Ulex gallii.*

Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats
- The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

Lesser horseshoe bats are cave-dwelling and are found in the caves and mines present on site. However they are also found to roost within the roofs and cellars of buildings as well as tunnels. They feed on insects such as flies, moths, beetles and spiders and are dependent on processes that affect prey species, particularly after hibernation where energy demands are higher.[38]

Snowdonia SAC and Llyn Idwal Ramsar

Site Description

Snowdonia (19,733ha) encompasses a diverse range of habitats with significant presences and is designated as a SAC due to these habitats and several qualifying species, including wetland habitats such as standing water, bogs and marshes, and several grassland habitats supporting different plant communities, as well as species such as slender green feather-moss *Hamatocaulis vernicosus* and Atlantic salmon *Salmo salar.* Habitats of particular importance are montane habitats and species of particular importance are the associated arctic alpine plant communities and the Snowdon lily *Lloydia serotina*, which in the United Kingdom occurs only in Snowdonia, in rock cracks and crevices on calcareous and more siliceous substrates.

Llyn Idwal (13.5ha), a Ramsar site, sits within the mountains of Snowdonia and therefore, these sites share a Core Management Plan. Llyn Idwal is an oligotrophic lake with plant species suitable for these habitats present including six-

Snowdonia SAC and Llyn Idwal Ramsar
stamened waterwort *Elatine hexandra* which is nationally scarce and pillwort *Pilularia globulifera* which is vulnerable at a European level. The lake also supports several bird species.
Qualifying Features
■ 3130 Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea* ■ 4010 Northern Atlantic wet heaths with *Erica tetralix* ■ 4030 European dry heaths ■ 4060 Alpine and boreal heaths ■ 6130 Calaminarian grasslands of the *Violetalia calaminariae* ■ 6150 Siliceous alpine and boreal grasslands ■ 6170 Alpine and subalpine calcareous grasslands ■ 6230 Species-rich *Nardus* grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe ■ 6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels ■ 7130 Blanket bogs ■ 7140 Transition mires and quaking bogs ■ 7150 Depressions on peat substrates of the *Rhynchosporion* ■ 7220 Petrifying springs with tufa formation (*Cratoneurion*) ■ 7230 Alkaline fens ■ 7240 Alpine pioneer formations of the *Caricion bicoloris-atrofuscae* ■ 8110 Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*) ■ 8210 Calcareous rocky slopes with chasmophytic vegetation ■ 8220 Siliceous rocky slopes with chasmophytic vegetation ■ 91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles ■ 1393 Slender green feather-moss *Hamatocaulis vernicosus* ■ 1831 Floating water-plantain *Luronium natans* ■ 1106 Atlantic salmon *Salmo salar* (only listed as a qualifying feature under the JNCC Standard Data Form)
Key Vulnerabilities
■ Grazing of alpine plant communities: these communities are sensitive to damage from grazing stock and in some areas, particularly on ridges, from recreational pressures e.g. trampling by walkers. The more calcareous communities are highly palatable to stock and where accessible to sheep and goats are very susceptible to damage. The high altitude at which these habitats occur, in addition, makes recovery very slow. Other grazing pressures include feral goats on the upland oakwood as well as high levels of sheep grazing causing a decline of dwarf shrubs and *Racomitrium* moss. ■ Fishing: both Atlantic salmon and its prey species are susceptible to population impacts from fishing and as a result fishing in this area should be monitored.
Conservation Objectives

Snowdonia SAC and Llyn Idwal Ramsar

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats
- The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

Floating water-plantain have a consistent history of occurrence on this site, and can be found in freshwater habitats, which are predominantly nutrient-poor but can also be found in moderately nutrient-rich conditions. The plant thrives best in open situations with a moderate degree of disturbance, where the growth of emergent vegetation is held in check. Populations fluctuate greatly in size, often increasing when water levels drop to expose the bottom of the water body.

Atlantic salmon spend most of their life cycle in the sea and return to rivers to spawn. Atlantic salmon return to their native river, and even the same stretch of the river from which they were born. Juveniles feed on insects, invertebrates and sometimes plankton and adult fish feed on smaller fish such as capelin *Mallotus villosus.* Salmon are also dependent on trees and vegetation on river banks to support upstream movement, and woody debris is important in the formation of new gravel beds, providing cover.

Slender green feather-moss require open, wetland conditions where there is not excessive shading as well as alkaline conditions. The plants may grow with small sedges *Carex* spp., black bog-rush *Schoenus nigricans* and other characteristic mosses of base-rich flushes and fens, such as *Campylium stellatum.*

Coedydd Aber SAC

Site Description

Coedydd Aber (346ha) is the largest continuous area of old sessile oak *Quercus petraea* wood along the north Wales coast, and considered one of the best areas for this habitat in the United Kingdom. The main woodland extends along a valley, rising steeply from near sea level (a vertical transition from coast to open mountain).

The canopy consists largely of sessile oak and downy birch *Betula pubescens*, but there are intricate transitions to ash *Fraxinus excelsior* woodland and extensive areas of alder *Alnus glutinosa* woodland. The ground flora is diverse, reflecting complex edaphic and management variations. There is a rich lower-plant flora in particular, including the rare mosses *Fissidens rufulus* and *Philonotis rigida*, and the lichens *Degelia plumbea* and *Lobaria amplissima*. The site is also important for its breeding bird assemblage.

Other habitats on site include inland water bodies, humid grassland and coniferous woodland.

Qualifying Features

- 3260 Water courses of plain to montane levels with the *Ranunculion* fluitantis and *Callitricho-Batrachion* vegetation (only listed as a qualifying feature under the JNCC Standard Data Form)
- 91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles
- 91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*)
- 1355 Eurasian otter *Lutra lutra* (only listed as a qualifying feature under the JNCC Standard Data Form)
- 1106 Atlantic salmon *Salmo salar* (only listed as a qualifying feature under the JNCC Standard Data Form)

Key Vulnerabilities

- Dutch elm disease has been recorded in this area and has impacted elm trees on site.

Conservation Objectives

Coedydd Aber SAC

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats
- The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

Atlantic salmon spend most of their life cycle in the sea and return to rivers to spawn. Juveniles feed on insects, invertebrates and sometimes plankton and adult fish feed on smaller fish such as capelin *Mallotus villosus.* Salmon are also dependent on trees and vegetation on river banks to support upstream movement, and woody debris is important in the formation of new gravel beds, providing cover.

Otters are dependent on freshwater habitats, suitable vegetated areas to provide refugia and the prey species on which they feed such as fish and amphibians, as well as the food chain in its entirety.

Glynllifon SAC

Site Description

Glynllifon (187ha) comprises large areas of mixed (deciduous and conifer) woodland, and structures such as buildings and old mine workings which are known to support both maternity and hibernating roosts of the lesser horseshoe bat *Rhinolophus hipposideros*, a qualifying species for this site. These roosts are stated as one of the largest known roosts in Europe for the species. The bats use a much wider area, however, within the SAC and outside, for feeding and commuting. These important habitats include the woodland on site, as well as tree lines and hedgerows. In addition, known linked roosts have been recorded outside of the SAC boundary.

Waterbodies on site also support Eurasian otters *Lutra lutra,* a qualifying species for this site.

Qualifying Features

- 1355 Eurasian otter *Lutra lutra* (only listed as a qualifying feature under the JNCC Standard Data Form)
- 1303 Lesser horseshoe bat *Rhinolophus hipposideros*

Key Vulnerabilities

- A487 – this trunk road has been linked to disturbance of the flight lines for lesser horseshoe bats and any changes/development should consider lesser horseshoe bats.

Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats
- The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

Lesser horseshoe bats are typically cave-dwelling and are found in the buildings and mine shafts present on site. They feed on insects such as flies, moths, beetles and spiders and are dependent on processes that affect prey species, particularly after hibernation where energy demands are higher.

Afon Gwyrfai a Llyn Cwellyn SAC

Site Description

Afon Gwyrfai a Llyn Cwellyn (112ha) is designated for its water bodies within the landscape of the mountains of Snowdonia. These include Llyn Cwellyn, an oligotrophic glacial lake, much larger and deeper than Llyn Idwal Ramsar (Llyn Cwellyn has an average depth of 23m), as well as smaller steeper watercourses, some of which are dominated by slightly acidic rock. These watercourses support diverse flora including floating water-plantain *Luronium natans,* a qualifying species of this site and a feature that makes this site internationally significant, as well as migratory fish species and otter *Lutra lutra*, also qualifying species of this site. In addition, Llyn Cwellyn supports one of the few native Welsh populations of Arctic charr *Salvelinus alpinus.*

Qualifying Features

- 3130 Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea*
- 3260 Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation
- 1099 European river lamprey *Lampetra fluviatilis* (only listed as a qualifying feature under the JNCC Standard Data Form)
- 1096 Sea lamprey *Petromyzon marinus* (only listed as a qualifying feature under the JNCC Standard Data Form)
- 1831 Floating water-plantain *Luronium natans*
- 1355 Eurasian otter *Lutra lutra*
- 1106 Atlantic salmon *Salmo salar*

Key Vulnerabilities

- Invasive non-native species: this has been a regular issue with the site, whereby Himalayan balsam and Japanese knotweed have been identified along river banks. The removal of invasive non-native species is being managed but remains a key issue for the site.
- There has been a slight acidification of Llyn Cwellyn, which requires further research and management but is thought to have arisen either as a result of background levels or through forestry operations within the catchment. It is important to reverse the acidification as this could have consequences for species reliant on this habitat, and cause changes in the species composition of the lake.
- Pollution: diffuse pollution and siltation from agriculture, including fertiliser run-off, livestock manure, silage effluent and soil erosion should be monitored. The most intensively used areas such as heavily trampled gateways and tracks can be especially significant sources of polluting run-off.

Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats
- The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

The Atlantic salmon population is largely unexploited and has a characteristically late run. Salmon require trees and vegetation on river banks to support upstream movement, and woody debris is important in the formation of new gravel beds, providing cover and a source of food for invertebrates, a prey species for juveniles. The salmon are also dependent on other prey species and the interactions and processes that affect prey abundance.

Afon Gwyrfai a Llyn Cwellyn SAC

Like the salmon, European river lamprey and sea lamprey depend on freshwater habitats to spawn while completing most, if not all, their life cycle in the sea. They require clean gravel/rocky river substrates for spawning and marginal silt or sand for the burrowing juvenile ammocoetes, where they filter feed on diatoms, algae and bacteria.

Floating water-plantain can be found in freshwater habitats, which are predominantly nutrient-poor but can also be found in moderately nutrient-rich conditions. The plant thrives best in open situations with a moderate degree of disturbance, where the growth of emergent vegetation is held in check. Populations fluctuate greatly in size, often increasing when water levels drop to expose the bottom of the water body. The diversity of growth forms and their range across the Cwellyn-Gwyrfai makes this an internationally significant site for the species.

The abundance of prey and widespread availability of undisturbed resting and breeding sites including vegetated areas, allows an otter population to thrive. They are found along the entire length of the river and its main tributaries.

Puffin Island SPA

Site Description

Puffin Island (31ha) is designated as a SPA supporting breeding populations of great cormorant *Phalacrocorax carbo*. The site is a carboniferous limestone block rising to 55m with steep cliffs on all sides and comprises other habitats such as shingle, sea cliffs, islets, heath, scrub and humid grassland. Other nesting seabirds also breed on the cliffs and open grassland areas, including guillemot *Uria aalge* and puffins *Fratercula arctica.*

Qualifying Features

- A017 Great cormorant *Phalacrocorax carbo*

Key Vulnerabilities

- Interspecific faunal relations: this includes interspecific competition between breeding birds and seabirds that use the site, including predation pressures and food availability.

Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats
- The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

Great cormorants are dependent on the site for breeding and foraging habitat in the surrounding marine areas outside of the SPA, as well as the prey fish species which form their diet.

Anglesey Terns SPA

Site Description

Anglesey Terns (101,931ha) is designated for supporting significant numbers of breeding populations of roseate, common, Arctic and sandwich terns. The site is largely a marine area with a small area of the site within the Isle of Anglesey. Typical coastal habitats are present within the SPA include estuaries, tidal rivers, sea cliffs, islets, shingle as well as salt marshes, bogs, heath and scrub. The site includes various SSSIs and Cemlyn Bay SAC, which is considered separately in this report.

Anglesey Terns SPA

The SPA was extended recently to take into account the species' protection requirements at sea, noting that the United Kingdom's obligations to identify SPAs applies equally to the land and sea area. The extension includes an area off the east coast of Anglesey which lies within the Liverpool Bay SPA.

Qualifying Features

- A192 Roseate tern *Sterna dougallii*
- A193 Common tern *Sterna hirundo*
- A194 Arctic tern *Sterna paradisaea*
- A191 Sandwich tern *Sterna sandvicensis*

Key Vulnerabilities

- There is a possibility of competition between terns and gulls for nesting areas. Expansion of the area occupied by breeding gulls has the potential to reduce the viability of the tern colony through direct occupation of nesting areas.
- Changes in abiotic conditions: long-term changes in sea-surface temperature may be partly responsible for the consistent and continued decline of fish stocks, which would become less available to terns.

Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats
- The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

Terns have a diet of predominately sand eels, sprats and whiting. Any impacts on prey abundance will therefore impact terns, such as unsustainable fishing of prey species. There is also some evidence that cetaceans can be significant in driving fish to the surface where they are available to terns. Changes in cetacean numbers or behaviour might therefore have a knock-on effect on terns.

Liverpool Bay SPA

Site Description

Liverpool Bay (252,758ha) lies in both English and Welsh territorial waters and in offshore UK waters and forms part of the National Sites Network. As a result, information from Natural England was also used for this site.

The site is designated for breeding populations of common tern *Sterna Hirundo* and little tern *Sterna albifrons* and non-breeding populations of little gull *Larus minutus*, red-throated diver *Gavia stellata* and common scoter *Melanitta nigra*. A small area of the SPA is within the Isle of Anglesey, encompassing habitats such as mud flats, sandflats, lagoons and estuaries, however the majority of the site is the surrounding marine area.

Liverpool Bay protects the largest aggregation of common scoters, supports the second largest known population of little gulls in the United Kingdom, and the third largest aggregation of red-throated divers. It also supports foraging areas for nearly 7% of the United Kingdom population of little terns, and nearly 2% of the population of common terns. Generally the site is important for sea birds, and another feature, while not qualifying, is the waterbird assemblage which includes great cormorants and red-breasted merganser *Mergus serrator*.

The site is adjacent to other European sites including Lavan Sands, Conwy Bay SPA, and overlaps with European sites such as Puffin Island SPA (which it also entirely surrounds) and Anglesey Terns SPA.

Liverpool Bay SPA
basins)
Qualifying Features
■ A001 Red-throated diver *Gavia stellata* ■ A177 Little gull *Larus minutus* ■ A065 Common scoter *Melanitta nigra* ■ A195 Little tern *Sterna albifrons* ■ A193 Common tern *Sterna hirundo*
Key Vulnerabilities
■ The seabirds on site are particularly sensitive to disturbance and displacement as a result of human presence, fishing vessels and wind farms which is discussed within the main body of the report. ■ Predation from foxes, kestrels, carrion crows and magpies, are widely reported to cause colony failure or at least severe reduction to breeding success, and should be managed. ■ Natural erosion and encroachment of vegetation have in many places reduced the area of suitable nesting habitat, particularly for little terns which habitually nest very close to the high-water mark. Tidal inundation during storm surges, as a result, is a frequent cause of nest loss. Furthermore, given predictions of future sea level rise and increase in storminess, these threats would be expected to become increasingly prevalent.
Conservation Objectives
Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; ■ The extent and distribution of qualifying natural habitats ■ The structure and function (including typical species) of qualifying natural habitats, and ■ The supporting processes on which qualifying natural habitats rely.
Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
Red-throated divers are wintering birds on this site, dependent on the prey species on which they feed on, including various flatfish, herring, gobies, sand eels and sprat, and the habitats on which the prey species utilise. These include the sandbanks of Liverpool bay and both shallow and deep waters. Common scoters are also wintering birds on this site, wintering at numbers which are of European significance. These birds tend to prefer shallow waters and utilise seabeds to feed predominantly on cockles, clams and other bivalves. As a result, they are sensitive to any impacts on their main food source. They also feed on a variety of molluscs, crustaceans and worms. Little gulls are also wintering birds on this site and roost at sea within Liverpool Bay. There is limited information on the diets of little gulls but they have been found to consume insects, crustaceans, comb jellies and molluscs, and therefore depend on the habitats of these prey species and any impacts on them. Common terns breed on site and use intertidal habitats when inundated, as well as the deeper water column for foraging. Key foraging areas within the SPA include shallow subtidal waters, generally within 18km of breeding colonies. They feed on small fish as well as invertebrates with sprat, herring and sand eels of particular importance. Little terns usually nests on beaches and lagoon islands of shingle, sand, or shells sometimes only metres from the high tide mark. This makes them susceptible to predation, human disturbance, and tidal inundation and they are known to abandon nests when pressures are high. Little terns feed on small fish and crustaceans caught inshore, and occasionally from coastal freshwater bodies. In addition, feeding tends to occur within 5km which makes them especially susceptible to impacts on prey species. The coastal waters of the SPA are also used for a wide range of maintenance activities such as bathing and preening.

Lavan Sands, Conwy Bay SPA
Site Description
Lavan Sands, Conwy Bay (2703ha) lies in the south of Anglesey comprising mud flats, sand flats, lagoons, salt marshes and other habitats typical of coastal areas. The site is designated for the overwintering population of Eurasian oystercatchers *Haematopus ostralegus*, great crested grebes *Podiceps cristatus* which gather to moult on the site, as well as several other birds such as red-breasted mergansers *Mergus serrator*, Eurasian curlews *Numenius arquata*, and common redshanks *Tringa tetanus*, all of which are qualifying features of the SPA.
Qualifying Features
■ A130 Eurasian oystercatcher *Haematopus ostralegus* ■ A069 Red-breasted merganser *Mergus serrator* (only listed as a qualifying feature under the JNCC Standard Data Form) ■ A160 Eurasian curlew *Numenius arquata* (only listed as a qualifying feature under the JNCC Standard Data Form) ■ A005 Great crested grebe *Podiceps cristatus* (only listed as a qualifying feature under the JNCC Standard Data Form) ■ A162 Common redshank *Tringa tetanus* (only listed as a qualifying feature under the JNCC Standard Data Form)
Key Vulnerabilities
■ The main risk to the population of oystercatchers arises from human disturbance associated with the cockle fishery. Human disturbance and recreational pressures, generally, is a threat to all the qualifying species.
Conservation Objectives
Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; ■ The extent and distribution of qualifying natural habitats ■ The structure and function (including typical species) of qualifying natural habitats, and ■ The supporting processes on which qualifying natural habitats rely.
Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
Eurasian oystercatchers are dependent on their main food source, cockles, and the habitats and species which impact their abundance, as well as the impacts of overfishing. This applies to all the qualifying species, whereby great-crested grebes and red-breasted mergansers are dependent on the fish species on which they feed on, and curlews and redshanks are dependent on worms, shellfish and shrimps, their main food source.