Herefordshire Local Plan 2021-2041: Draft (Regulation 18) Local Plan

Habitats Regulations Assessment Report

Herefordshire Council

Final report
Prepared by LUC
March 2024

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Contents

Table of Tables

Table of Figures

Chapter 1

Introduction

1.1 LUC has been commissioned by Herefordshire Council to carry out a Habitats Regulations Assessment (HRA) of the Herefordshire Local Plan. This iteration of the HRA report assesses the impacts of the Draft (Regulation 18) Local Plan and should be read in conjunction with that document.

Background to the Herefordshire Local Plan

1.2 The new Herefordshire Local Plan 2021-2041 is being prepared to replace the current Herefordshire Local Plan (Core Strategy 2011-2031) which was adopted in October 2015. The review of the plan commenced in 2020, in line with the Government's expectation that local planning authorities consider whether their Local Plans need to be reviewed every five years. The new Local Plan will again cover the whole administrative area of Herefordshire and will cover the period 2021 - 2041.

1.3 The new Local Plan will set the formal legal framework for sustainable development patterns and will lay the foundations for enabling regeneration and economic growth, while protecting the most valuable built and natural environmental assets.

1.4 A number of earlier consultations have been carried out in relation to the emerging Local Plan as follows:

- Consultation on an initial set of **Spatial Options** for Herefordshire was undertaken between January and February 2022. Questions sought to explore the level of agreement over the vision and supporting objectives

that had been presented, and to identify preferences towards where future growth should be directed.

- Consultation on potential **Policy Options** was undertaken between April and May 2022. The consultation sought views on the type of policies to be included in the Local Plan review, with the recognition that these policies would ultimately be used to help determine planning applications across the county.
- Consultation on a set of **Place Shaping Options** was undertaken between June to July 2022. The consultation set out possible options and/or potential strategic development areas for the county. The first part of the consultation questionnaire considered Hereford and the county's market towns. The second half of the questionnaire focused on the county's rural areas and explored attitudes concerning the distribution of housing, including for settlements within the county's National Landscapes (formerly known as Areas of Outstanding Natural Beauty) and in those settlements with Conservation Areas.

1.5 The Draft (Regulation 18) Herefordshire Local Plan, which this HRA Report relates to, is being published for Regulation 18 consultation between March and May 2024.

The requirement to undertake HRA of development plans

1.6 The requirement to undertake HRA of development plans was confirmed by the amendments to the Habitats Regulations published for England and Wales in 2007 **[See reference** 1**]**; the currently applicable version is the Habitats Regulations 2017 **[See reference** 2**]**, as amended. When preparing the development plans, Herefordshire 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 this report) is then reported to and considered by the Herefordshire Council as the 'competent authority'. Herefordshire Council will consider this work and would usually only progress a

plan if it considers that the plan will not adversely affect the integrity **[See reference 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 the Government's online Planning Practice Guidance **[See reference 4]** (PPG).

1.7 HRA refers to the assessment of the potential effects of a development plan on one or more sites afforded the highest level of protection in the UK: SPAs and SACs. These were classified under European Union (EU) legislation but since 1 January 2021, are protected in the UK by the Habitats Regulations 2017 **[See reference 5]** (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 **[See reference 6]**) 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. Designation of SACs also has regard to the threats of degradation or destruction to which the sites are exposed and, before EU exit day, 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 **[See reference 7]**), and for regularly occurring migratory species not listed in Annex I.

1.8 The term 'European sites' was previously commonly used in HRA to refer to 'Natura 2000' sites **[See reference 8]** and Ramsar sites (international designated under the Ramsar Convention). However, a Government Policy Paper **[See reference 9]** on changes to the Habitats Regulations 2017 post-Brexit states that:

- Any references to Natura 2000 in the 2017 Regulations and in guidance now refers 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.

1.9 Although Ramsar sites do not form part of the new national site network, Government guidance **[See reference** 10**]** states that:

> "Any proposals affecting the following sites would also require an HRA because these are protected by government policy:
>
> - proposed SACs
> - potential SPAs
> - Ramsar sites - wetlands of international importance (both listed and proposed)
> - areas secured as sites compensating for damage to a European site."

1.10 Furthermore, the NPPF **[See reference** 11**]** and practice guidance **[See reference** 12**]** currently state that competent authorities responsible for carrying out HRA should treat Ramsar sites in the same way as SACs and SPAs. 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.

1.11 For simplicity, this report uses the term 'European site' to refer to all types of designated site for which Government guidance **[See reference** 13**]** requires an HRA.

1.12 The overall purpose of the HRA is to conclude whether or not a proposal or policy, or whole development 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.

Stages of HRA

1.13 The HRA of development 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.

1.14 LUC has been commissioned by Herefordshire Council to carry out HRA work on the Council's behalf, and the outputs will be reported to and considered by Herefordshire Council, as the competent authority, before adopting the Local Plan.

1.15 The HRA also requires close working with Natural England as the statutory nature conservation body **[See reference** 14**]** in order to obtain the necessary information, agree the process, outcomes and mitigation proposals. As Herefordshire borders Wales, Natural Resources Wales (NRW) is also being consulted. The Environment Agency, while not a statutory consultee for the HRA, is also in a strong position to provide advice and information throughout the process as it is required to undertake HRA for its existing licences and future licensing of activities.

Requirements of the Habitat Regulations Assessment

1.16 In assessing the effects of the Plan in accordance with Regulation 105 of the Conservation of Habitats and Species Regulations 2017 (as amended) (the 'Habitats Regulations'), there are potentially two tests to be applied by the

competent authority: a ‘Significance Test’, followed if necessary, by an Appropriate Assessment which will 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.

[Steps 1 and 2 are undertaken as part of Stage 1: HRA Screening, shown overleaf.]

- 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 England, and optional under Reg. 105(3) to take the opinion of the general public.

[This step is undertaken during Stage 2: Appropriate Assessment, shown overleaf.]

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

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).

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

Typical Stages

1.17 The section below summarises the stages and associated tasks and outcomes typically involved in carrying out a full HRA of a development plan, based on various guidance documents **[See reference** 15**]** **[See reference** 16**]** **[See reference** 17**]**.

Stage 1: HRA Screening

Tasks

- Description of the development 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 **[See reference** 18**]**.
- Assessment of likely significant effects of the development plan alone or in combination with other plans and projects, prior to consideration of avoidance or reduction (‘mitigation’) measures **[See reference** 19**]**.

Outcome

- 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: Appropriate Assessment (where Stage 1 does not rule out likely significant effects)

Task

- Information gathering (development plan and European sites **[See reference** 20**]**).
- Impact prediction.
- Evaluation of development 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’).

Outcome

- Appropriate Assessment report describing the plan, European site baseline conditions, the adverse effects of the plan on the European site, how 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

Task

- Identify and demonstrate ‘imperative reasons of overriding public interest’ (IROPI).
- Demonstrate no alternatives exist.
- Identify potential compensatory measures.

Outcome

- This stage should be avoided if at all possible. The test of IROPI and the requirements for compensation are extremely onerous.

1.18 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 changes

1.19 This HRA has been 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).

1.20 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."

1.21 In light of the above, the HRA screening stage does not rely upon avoidance or mitigation measures to draw conclusions as to whether the Herefordshire Local Plan could result in likely significant effects on European sites. Instead, any such measures are considered at the Appropriate Assessment stage as relevant.

1.22 This HRA also considers the Holohan v An Bord Pleanala (November 2018) CJEU judgment 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.

1.23 In undertaking this HRA, LUC has considered 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 European site, but which may be important in supporting the ecological processes of the qualifying features, has also been considered in this HRA.

1.24 Similarly, effects on both qualifying and supporting habitats and species on functionally linked land (FLL) or habitat have been considered in the HRA, in line with the High Court judgment in RSPB and others v Secretary of State and London Ashford Airport Ltd [2014 EWHC 1523 Admin] (paragraph 27), which stated that:

> "There is no authority on the significance of the non-statutory status of the FLL. However, the fact that the FLL was not within a protected site does not mean that the effect which a deterioration in its quality or function could have on a protected site is to be ignored. The indirect effect was still protected. Although the question of its legal status was mooted, I am satisfied …. that while no particular legal status attaches to FLL, the fact that land is functionally linked to protected land means that the indirectly adverse effects on a protected site, produced by effects on FLL, are scrutinised in the same legal framework just as are the direct effects of acts carried out on the protected site itself. That is the only sensible and purposive approach where a species or effect is not confined by a line on a map or boundary fence. This is particularly important where the boundaries of designated sites are drawn tightly as may be the UK practice".

1.25 In addition to this, the HRA takes into consideration the 'Wealden' judgment from the CJEU.

1.26 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.

1.27 In light of this judgment, the HRA therefore considers traffic growth based on the effects of development from the Herefordshire Local Plan in combination with other drivers of growth such as development proposed in neighbouring districts and demographic change.

1.28 The HRA also takes into account the Grace and Sweetman (July 2018) judgment 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"

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

HRA work carried out to date

1.30 An HRA Scoping Report was prepared by LUC on behalf of Herefordshire Council in February 2023. The HRA Scoping Report was prepared in order to undertake early consultation with Natural England and Natural Resources Wales on the scope of the HRA, including the European sites to be included and the types of effects that will be considered. The HRA methodology was set out in the report, including the assumptions that would be applied during the screening stage. The HRA Scoping Report was sent to Natural England and Natural Resources Wales for consultation in March 2023 and a record of the responses received and how they have been responded to in this report, is provided in Appendix A.

Structure of this report

1.31 This chapter described the background to the production of the Herefordshire Local Plan and the requirement to undertake HRA. The remainder of the report is structured as follows:

- **Chapter 2**: **Draft (Regulation 18) Herefordshire Local Plan** summarises the content of the plan, which is the subject of this report.
- **Chapter 3**: **Method** sets out the approach used, and the specific tasks undertaken during the Screening and Appropriate Assessment stages of the HRA.
- **Chapter 4**: **Screening Assessment** describes the findings of the screening stage of the HRA.
- **Chapter 5**: **Appropriate Assessment** describes the findings of the Appropriate Assessment stage of the HRA.
- **Chapter 6**: **Conclusions and Next Steps** summarises the HRA conclusions for the Draft (Regulation 18) Local Plan and describes the next steps to be undertaken.
- **Appendix A: Scoping Consultation comments** summarises the comments received from Natural England and Natural resources Wales during the HRA Scoping Report consultation.
- **Appendix B: Figures** contains figures that show European sites within a 15km radius of Herefordshire, the key strategic roads in Herefordshire and the site allocations within the Draft (Regulation 18) Local Plan.
- **Appendix C: Attributes of European Sites** provides details on the European sites within a 15km radius of Herefordshire.
- **Appendix D: Screening Assessment** summarises the HRA Screening undertaken in relation to the place shaping and strategic policies.
- **Appendix E: Suitability of allocations for qualifying bird species** summarises the suitability of site allocations for the qualifying bird species of Severn Estuary SPA and Ramsar site and Walmore Common SPA and Ramsar site.

Chapter 2

Draft (Regulation 18) Herefordshire Local Plan

2.1 This chapter summaries the contents of the Draft (Regulation 18) Herefordshire Local Plan, including the vision, objectives, and the strategic and place-based policies and site allocations that will deliver this vision.

2.2 Herefordshire Council adopted its current Local Plan (Core Strategy) in October 2015. The review of the plan commenced in 2020, in line with the Government's expectation that local planning authorities consider whether their Local Plans need to be reviewed every five years. The Local Plan review will again cover the whole administrative area of Herefordshire and will cover the period 2021 - 2041. It will provide the basis for all planning decisions that are made in the county and a framework within which town and parish councils can prepare their own neighbourhood development plans. It will set out the spatial policies, guidance, land use designations and site allocations against which all planning applications and development proposals across Herefordshire will be assessed. It will set the formal legal framework for sustainable development patterns and lay the foundations for enabling regeneration and economic growth, while protecting the most valuable built and natural environmental assets. The Local Plan will provide the policies that will contribute to the achievement of sustainable development including the provision of homes, employment land and other forms of development, identifying and delivering supporting infrastructure whilst also protecting and enhancing the natural and historic environment.

2.3 The Draft (Regulation 18) Local Plan has been produced taking account of the National Planning Policy Framework, Planning Practice Guidance, up-to-date evidence base studies and ensuring close co-operation with neighbouring local authorities on cross-boundary issues. Regard has also been given to other plans and strategies produced by Herefordshire Council and other organisations.

Contents of the Draft (Regulation 18) Herefordshire Local Plan

Vision

2.4 The vision sets the scene for how Herefordshire County will be at 2041. The overall vision for Herefordshire County is:

Environment

Herefordshire will be carbon neutral, and nature rich. The county's distinctive landscape, cultural heritage and natural environment will be protected and enhanced for the benefit of people and wildlife. The county's residents' quality of life will be enhanced by ensuring they are able to live in more environmentally sustainable ways.

Community

The county will have resilient, well connected communities where new development is beautifully designed and inclusive. The health and wellbeing of the county's residents will be enhanced by everyone having the opportunity to live in a decent home with access to community facilities and services.

Economy

Herefordshire will be prosperous, with a diverse, and sustainable economy. The county's farming heritage and sustainable tourism sectors will continue

to play an important role in the rural economy. Hereford and the market towns will be thriving centres and popular places to live, work and visit. Hereford will be recognised as a centre for education as well as a place where innovative businesses can invest and thrive."

Objectives

2.5 The objectives reflect the issues that the plan is seeking to address and they form the basis for the strategic policies. There are a total of 27 objectives split into environment objectives, community objectives and economic objects. The environment objectives cover reducing energy use from fossil fuels; improving water quality; improving air quality; enhancing biodiversity and natural capital; minimising use of natural resources; development of sustainable buildings; and protection of the Wye Valley and Malvern Hills National Landscapes. The community objectives seek to improve connectivity and infrastructure; ensure access to services; support health and wellbeing; support good health and wellbeing; create attractive places to live and work; reduce crime; enhance access to cultural heritage; and improve education provision. Finally, the economic objectives aim to support sustainable economic growth; a net zero economy; strengthen the role of Hereford City; enhance digital infrastructure; improve employment opportunities; and support tourism and the hospitality sector.

2.6 The Herefordshire Local Plan sets a housing requirement of 9,608 homes between 2021 and 2041. The Local Plan also identifies 172 hectares of employment land across Herefordshire. While some development will take place in rural areas, most development is to be focused at the main settlements:

- Hereford
- Leominster
- Kington
- Bromyard

- Ledbury
- Ross-on-Wye

2.7 Each of the housing allocations has been mapped and is presented as a policy within the Local Plan. There are a total of 50 policies within the Local Plan covering topics such as climate change, biodiversity, historic environment, infrastructure, housing, communities, employment and site allocations.

Draft Local Plan (Regulation 18) policies

Tackling climate change

- Policy CC1: A carbon Herefordshire

Protecting and enhancing the natural, built and historic environment: A high quality Herefordshire

- Policy EE1: Protecting and enhancing the quality of the natural environment
- Policy EE2: Protecting and enhancing the quality of the historic environment and its setting
- Policy EE3: Enhancing the quality of the built environment

Accommodating future growth

- Policy AG1: Accommodating housing growth
- Policy AG2: Strategic rural housing distribution
- Policy AG3: Rural housing growth in Hubs and Service Settlements

- Policy AG4: Rural settlement exceptions for affordable housing, entry level homes and affordable, self and custom build housing and small scale affordable Traveller sites
- Policy AG5: Open countryside
- Policy AG6: Gypsies, Travellers and Travelling Show People

Creating balanced communities

- Policy BC1: Housing mix and range
- Policy BC2: Affordable housing – thresholds and targets
- Policy BC3: Diversity of housing delivery

Creating healthy and sustainable communities

- Policy HSC1: Community facilities
- Policy HSC2: Infrastructure delivery
- Policy HSC3: Green and Blue Infrastructure
- Policy HSC4: Herefordshire and Gloucestershire Canal

Promoting a prosperous economy

- Policy PE1: Accommodating economic growth
- Policy PE2: Principles for economic growth
- Policy PE3: Enhancing town centre vitality
- Policy PE4: Sustainable tourism
- Policy PE5: Supporting a strong rural economy

Hereford

- Policy HERE1: Strategic development for Hereford
- Policy HERE2: Supporting the vitality of Hereford city centre
- Policy HERE3: Supporting jobs in Hereford
- Policy HERE4: Supporting movement in and around Hereford
- Policy HERE5: Sustainable urban expansion at Holmer North
- Policy HERE6: Sustainable urban expansion at Three Elms
- Policy HERE7: Sustainable urban expansion at Lower Bullingham
- Policy HERE8: Supporting education and community facilities in Hereford
- Policy HERE9: Supporting greening of the city in Hereford

Bromyard

- Policy BROM1: Strategic development for Bromyard
- Policy BROM2: Land at Hardwick Bank
- Policy BROM3: Land west of Linton Trading Estate

Kington

- Policy KING1: Strategic development for Kington
- Policy KING2: Land east of Kingswood Road

Ledbury

- Policy LEDB1: Strategic development for Ledbury
- Policy LEDB2: Land to the south of Ledbury
- Policy LEDB3: Land south of Little Marcle Road

- Policy LEDB4: Lawnside and Market Street Regeneration Area

Leominster

- Policy LEOM1: Strategic development for Leominster
- Policy LEOM2: Land south of the primary school
- Policy LEOM3: Land south of Leominster Enterprise Park

Ross-on-Wye

- Policy ROSS1: Strategic development for Ross-on-Wye
- Policy ROSS2: Land to the east of Ross-on-Wye

Rural

- Policy RURA1: Housing growth within Rural Hubs
- Policy RURA2: Housing growth within Service Settlements
- Policy RURA3: Rural strategic site allocations
- Policy RURA4: Rural strategic transport
- Policy RURA5: Rural strategic mitigation schemes

Chapter 3

Method

3.1 The HRA of the Local Plan consists of two stages:

- Screening
- Appropriate Assessment

3.2 The approach taken to each of these stages is outlined below.

Screening Assessment

3.3 HRA Screening of the Local Plan was undertaken in line with current available guidance and sought to meet the requirements of the Habitats Regulations. The tasks that were undertaken during the Screening stage of the HRA are described in detail below and the conclusions are presented in Chapter 4.

3.4 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 clear information about the parts of the plan that will require Appropriate Assessment.

Identifying European sites that may be affected and their conservation objectives

3.5 In order to initiate the search of European sites that could potentially be affected by a development, it is established practice in HRA to consider sites within the local planning authority area covered by the plan, and other sites that may be affected beyond this area.

3.6 A distance of 15km from the boundary of the plan area is typically used in the first instance to identify European sites with the potential to be affected by the proposals within a development plan. Consideration is then given to whether any more distant European sites may be connected to the plan area via effects pathways, for example through hydrological links or recreational visits by residents. The 15km distance has been agreed with Natural England for HRAs elsewhere in the UK and is considered precautionary. All European sites within 15km were assessed in this HRA.

3.7 The assessment also takes into account areas that may be functionally linked to the European sites. The term ‘functional linkage’ is used to refer to the role or ‘function’ that land beyond the boundary of a European site might fulfil in terms of supporting the species populations for which the site was designated or classified. Such an area is therefore ‘linked’ to the site in question because it provides a (potentially important) role in maintaining or restoring a protected population at favourable conservation status.

3.8 While the boundary of a European site will usually be drawn to include key supporting habitat for a qualifying species, this cannot always be the case where the population for which a site is designated or classified is particularly mobile. Individuals of the population will not necessarily remain in the site all the time. Sometimes, the mobility of qualifying species is considerable and may

extend so far from the key habitat that forms the SAC or SPA that it would be entirely impractical to attempt to designate or classify all the land or sea that may conceivably be used by the species **[See reference** 21**]**. HRA therefore considers whether any European sites make use of functionally linked habitats, and the impacts that could affect those habitats.

3.9 European sites identified for inclusion in the HRA are listed below in Table 3.1 and are shown in Figure B.1 in Appendix B. Detailed information about each European site is provided in Appendix C, described with reference to Standard Data Forms for the SPAs and SACs, and Natural England's Site Improvement Plans **[See reference** 22**]**. Natural England's conservation objectives **[See reference** 23**]** for the SPAs and SACs have also been reviewed. These state that site integrity must be maintained or restored by maintaining or restoring the habitats of qualifying features, the supporting processes on which they rely, and populations of qualifying species.

Table 3.1: European Sites within 15km of Herefordshire Council Boundary

European Site	Closest Distance / Location from Herefordshire boundary
Downton Gorge SAC	0m (within Herefordshire)
River Clun SAC	0m (within Herefordshire)
River Wye SAC	0m (partially within Herefordshire)
Wye Valley Woodlands SAC	0m (partially within Herefordshire)
Wye Valley and Forest of Dean Bat Sites SAC	271m south east
Rhos Goch SAC	1.6km west
River Usk SAC	3.4km south west
Coed y Cerrig SAC	4.2km south west
Sugar Loaf Mountains SAC	6.6km south west

European Site	Closest Distance / Location from Herefordshire boundary
Walmore Common SPA	9.0km south east
Walmore Common Ramsar site	9.0km south east
Severn Estuary SPA	13.3km south east
Severn Estuary Ramsar site	13.3km south east
Severn Estuary SAC	13.3km south east
Lyppard Grange Ponds SAC	13.4km north east
Llangorse Lake SAC	13.9km south west
Cwm Clydach Woodlands SAC	14.8km south west
Usk Bat Sites SAC	14.9km south west

Assessment of 'likely significant effects' of the Herefordshire Local Plan

3.10 As required under Regulation 105 of the Conservation of Habitats and Species Regulations 2017 **[See reference** 24**]** (as amended), an assessment has been undertaken of the 'likely significant effects' of the Herefordshire Local Plan. The assessment has been carried out in order to identify which policies would be likely to have a significant effect on European sites. The Screening assessment has been conducted without taking mitigation into account, in accordance with the 'People over Wind' judgment.

3.11 Consideration was given to the potential for the development proposed to result in significant effects associated with:

- Physical loss or damage to habitat.
- Non-physical disturbance (noise, vibration, and light pollution).
- Air pollution.

- Recreational pressure.
- Changes to hydrology, including water quantity and quality.

3.12 This thematic/ impact category approach allowed for consideration to be given to the cumulative effects of the policies rather than focussing exclusively on individual developments provided for by the plan.

3.13 A risk-based approach involving the application of the precautionary principle was adopted in the assessment, such that a conclusion of 'no significant effect' was only reached where it was considered unlikely, based on current knowledge and the information available, that a development plan policy would have a significant effect on the integrity of a European site.

3.14 A screening assessment was undertaken (Appendix D) to document consideration of the potential for likely significant effects resulting from each policy in the plan.

3.15 For some types of impacts, the potential for likely significant effects was determined on a proximity basis. This approach and the assumptions applied are described in more detail in Chapter 4.

Interpretation of 'likely significant effects'

3.16 Relevant case law helps to interpret when effects should be considered as a likely significant effect, when carrying out HRA of a land use plan.

3.17 In the Waddenzee case **[See reference** 25**]**, 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).

3.18 A relevant opinion delivered to the Court of Justice of the European Union 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."

3.19 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 "that 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'.

3.20 The HRA screening assessment therefore considers whether the Draft (Regulation 18) Local Plan policies could have likely significant effects either alone or in combination.

Mitigation provided by the Local Plan

3.21 Some of the potential effects of the plan could be mitigated through the implementation of other policies in the plan itself, such as the provision of green infrastructure within new developments (which 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 were considered at the Appropriate Assessment stage for impacts and policies where likely significant effects, either alone or in-combination, could not be ruled out.

Appropriate Assessment Methodology

3.22 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

3.23 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.

3.24 A conclusion needs to be reached as to whether or not the Herefordshire Local 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 Local 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.
- 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.

3.25 The conservation objectives for each European site (Appendix C**)** are generally to maintain the qualifying features in favourable condition. The Site Improvement Plans 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.

3.26 For each European site where an uncertain or likely significant effect is identified in relation to the Local Plan, 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.

3.27 The Government's National Infrastructure Planning website **[See reference** 26**]** will also be reviewed for major projects that could have significant effects in combination with those of the Herefordshire Local Plan.

Chapter 4

Screening Assessment

4.1 As described in the previous chapter, a screening assessment was carried out in order to identify the likely significant effects of the Herefordshire Local Plan on the scoped-in European sites. The full screening assessment, which sets out the decision-making process used for this stage of the HRA, can be found in Appendix D and the findings are summarised below.

HRA Screening of Policies

No 'likely significant effect' predicted

4.2 The following policies are not expected to result directly in development – while some include criteria that will apply if certain types of development are proposed, the policies do not themselves allocate development. These policies will therefore not result in significant effects on European sites:

- Policy EE2: Protecting and Enhancing the Quality of the Historic Environment and its Setting
- Policy EE3: Enhancing the Quality of the Built Environment
- Policy AG3: Rural housing growth in Hubs and Service Settlements
- Policy AG5: Open countryside
- Policy BC1: Housing Mix and Range
- Policy BC2: Affordable housing – thresholds and targets
- Policy BC3: Diversity of housing delivery
- Policy PE3: Enhancing town centre vitality
- Policy RURA2: Rural housing Growth in Service Settlements

4.3 The following policies will not result in development and will also contribute to ensuring the safeguarding of European sites (although their potential to provide mitigation has not affected the screening conclusions for any other policies, in accordance with the People over Wind judgment):

- Policy CC1: A carbon neutral Herefordshire
- Policy EE1: Protecting and Enhancing the Quality of the Natural Environment
- Policy HSC1: Promoting health and wellbeing
- Policy HSC3: Green and Blue Infrastructure
- Policy HSC4: Herefordshire and Gloucestershire Canal
- Policy HERE9: Supporting greening of the city in Hereford
- Policy RURA5: Rural strategic mitigation schemes

Likely significant effects possible

4.4 The following policies are highlighted as having potential impact pathways to European sites and likely significant effects cannot be ruled out:

- Policy AG1: Accommodating Housing Growth
- Policy AG2: Strategic rural housing distribution
- Policy AG4: Rural settlement exceptions for affordable housing, entry level homes, affordable, self and custom build housing and small scale affordable traveller sites
- Policy AG6: Gypsies, Travellers and Travelling Show People
- Policy PE1: Accommodating Economic Growth
- Policy PE2: Principles for economic growth
- Policy PE4: Sustainable tourism
- Policy PE5: Supporting a strong Rural economy

- Policy HSC2: Infrastructure delivery
- Policy HERE1: Strategic Development for Hereford
- Policy HERE4: Supporting movement in and around Hereford
- Policy KING1: Strategic Development for Kington
- Policy KING2: Land East of Kingswood Road
- Policy LEDB1: Strategic Development for Ledbury
- Policy LEDB2: Land to the South of Ledbury
- Policy LEDB3: Land south of Little Marcle Road
- Policy LEDB4: Lawnside and Market Street Regeneration Area
- Policy RURA4: Rural Strategic Transport
- Policy HERE2: Supporting the vitality of Hereford City Centre
- Policy HERE3: Supporting Jobs in Hereford
- Policy HERE5: Sustainable Urban Expansion at Homer North
- Policy HERE6: Sustainable Urban Expansion at Three Elms
- Policy HERE7: Sustainable Urban Expansion at Lower Bullingham
- Policy HERE8: Supporting education and community facilities in Hereford
- Policy BROM1: Strategic Development for Bromyard
- Policy BROM2: Land at Hardwick Bank
- Policy BROM3: Land west of Linton Trading Estate
- Policy LEOM1: Strategic Development for Leominster
- Policy LEOM2: Land south of the Primary School
- Policy LEOM3: Land south of Leominster Enterprise Park
- Policy ROSS1: Strategic Development for Ross-on-Wye
- Policy ROSS2: Land to the East of Ross-on-Wye
- Policy RURA1: Housing growth within rural Hubs

- Policy RURA4: Rural strategic transport
- Policy RURA3: Rural strategic site allocations

HRA Screening of Impacts

4.5 For some types of impacts, screening for Likely Significant Effects has been determined on a proximity basis, using GIS data to determine the proximity of potential development locations to the European sites that are the subject of the assessment. 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, during the screening stage a number of initial assumptions have been applied in relation to assessing the impact pathways and potential for Likely Significant Effects on European sites that may result from the Herefordshire Local Plan, as described below.

Physical damage and habitat loss (onsite)

4.6 Any development resulting from the Local Plan would take place within Herefordshire. Therefore, only European sites within the county boundary could be affected through direct physical damage or loss of habitat from within the European site's boundaries. River Wye SAC, River Clun SAC, Downton Gorge SAC and Wye Valley Woodlands SAC are located within the Herefordshire boundary and therefore have the potential to be affected by direct physical damage and/or loss from development.

4.7 No development proposed by the Local Plan lies within the boundaries of any of these European sites.

Therefore, no Likely Significant Effects are predicted as a result of physical damage or loss of habitat (onsite) at European sites.

Physical damage and habitat loss – functionally linked land (offsite)

4.8 Habitat loss from development in areas outside of the European site boundaries 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 that may provide offsite movement corridors or foraging and sheltering habitat for mobile species such as birds, bats, and fish. European sites susceptible to the indirect effects of habitat loss are restricted to those sites with qualifying species that rely on offsite habitat. These are identified as:

- River Wye SAC (otter, migratory fish)
- Lyppard Grange Ponds SAC (great crested newt (GCN))
- Wye Valley Woodlands SAC (bats)
- Wye Valley and Forest of Dean Bat Sites SAC (bats)
- River Usk SAC (otter, migratory fish)
- Usk Bat Sites SAC (bats)
- Walmore Common SPA and Ramsar site (birds)
- Severn Estuary SPA and Ramsar site (birds)
- Severn Estuary SAC (migratory fish)

4.9 For other European sites, the potential for this type of impact to occur has been screened out on account of the distance between Herefordshire and the European sites, the lack of susceptibility of the qualifying features and/or a lack of a source-pathway-receptor system by which an impact could occur. Other European sites were screened out of the assessment as they do not support qualifying features that are reliant on offsite functionally linked habitat.

Functionally Linked Land - Otter

4.10 The River Wye SAC and River Usk SAC are both designated for supporting otter. Otter is primarily found along riparian river corridors and is known to have home ranges that extend over tens of kilometres **[See reference 27]**.

River Wye SAC

4.11 The River Wye SAC is located within the boundaries of Herefordshire and as such it is considered likely that this species will utilise and depend on the availability and connectivity of suitable riparian and wetland habitat in the wider region.

4.12 A review of site allocations proposed in the Local Plan identified the following sites that are adjacent to the River Wye SAC or overlapping tributaries adjoining the SAC, which may be used by otter to forage, disperse and shelter:

- Policy HERE1: Strategic development for Hereford
- Policy HERE2: Supporting the vitality of Hereford City Centre
- Policy HERE3: Supporting Jobs in Hereford
- Policy HERE6: Sustainable urban expansion at Three Elms
- Policy HERE7: Sustainable Urban Expansion at Lower Bullingham
- Policy ROSS2: Land to the East of Ross-on-Wye
- Policy RURA3: Rural strategic site allocations

4.13 Additionally, Policy RURA4: Rural strategic transport has been screened in as this policy proposes works on the Hereford to Abergavenny line. The railway line out of Hereford passes over the River Wye and therefore there is the potential for likely significant effects in relation to the River Wye SAC. Additionally, Policy HERE4: Supporting movement in and around Hereford

proposes an additional river crossing to the east of Hereford and improvements to active travel measures which has the potential for likely significant effect in relation to River Wye SAC. Policy PE1: Accommodating economic growth, Policy PE2: Principles for economic growth, Policy PE4: Sustainable tourism, PE5: Supporting a strong Rural Economy, Policy AG1: Accommodating housing growth, Policy AG2: Strategic rural housing distribution, Policy AG4: Rural settlement exemptions for affordable housing, entry level homes, affordable, self and custom build housing and small scale Traveller sites; and, Policy AG6: Gypsies, Travellers and Travelling Show people have also been screened in as they support employment and residential development which has the potential for likely significant effect in relation to River Wye SAC. In addition, Policy HSC2: Infrastructure delivery could result in infrastructure development and has therefore been screened in due to the potential for likely significant effects in relation to the River Wye SAC.

4.14 As there is potential for impacts to arise from proposed development in the Local Plan, further consideration will be required at the Appropriate Assessment stage.

River Usk SAC

4.15 The River Usk SAC is located outside the boundaries of Herefordshire (3.4km South West). Due to a lack of hydrological connectivity and associated riparian corridors between the River Usk SAC and watercourses in the county of Herefordshire, it is considered unlikely that otter will utilise and depend on the availability and connectivity of suitable riparian and wetland habitat in the wider region. As a result, it is unlikely that impacts on the River Usk SAC will arise from proposed development as a consequence of loss of functionally linked land, and therefore can be screened out from further assessment.

Functionally Linked Land – Bats

4.16 The Wye Valley Woodlands SAC, Wye Valley and Forest of Dean Bat Sites SAC and Usk Bat Sites SAC are designated for qualifying bat species,

including lesser horseshoe (all sites) and greater horseshoe (Wye Valley and Forest of Dean Bat Sites SAC only). These are mobile species, which rely on habitat within the SAC and functionally linked habitat in the wider area, which provides important foraging habitat for this species.

4.17 Following a review of data sources, it was identified that these species travel within a Core Sustenance Zone (CSZ) of 2km for the lesser horseshoe bat and 3km for the greater horseshoe bat **[See reference** 28**]**, and these distances have therefore been applied in this assessment. These CSZs were determined by an extensive literature review and refer to the area surrounding a bat roost for lesser horseshoe bats within which habitat availability and quality will have a significant influence on the resilience and conservation of the bat colony using the roost.

Wye Valley Woodlands SAC

4.18 Wye Valley Woodlands SAC is located within the boundaries of Herefordshire and as such it is considered likely that the qualifying bat species will utilise and depend on the availability and connectivity of habitat in the wider region. However, no site allocations area proposed within 2km of the SAC and therefore impacts from physical damage and loss to functionally linked land to designated bats species of this SAC can be screened out from further assessment.

Wye Valley and Forest of Dean Bat Sites SAC

4.19 Wye Valley and Forest of Dean Bat Sites SAC is located 271m south east from the Herefordshire border and as such it is considered likely that the qualifying bat species will utilise and depend on the availability and connectivity of habitat in the wider region. However, no site allocations are proposed within 2km of the SAC and therefore impacts from physical damage and loss to functionally linked land to designated bats species of this SAC can be screened out from further assessment.

Usk Bat Sites SAC

4.20 Usk Bat Sites SAC is located 14.9km south west of the Herefordshire border. Due to the distance of the Usk Bat Sites SAC from the county boundary, it is not expected that the qualifying bat species of this SAC rely on habitat within the Local Plan area and as such the SAC has been screened out from further assessment.

Functionally Linked Land – Great Crested Newt

Lyppard Grange Ponds SAC

4.21 Lyppard Grange Ponds SAC is designated for great crested newt (GCN). Whilst GCN is a transient species, regularly migrating between terrestrial and breeding habitats, the majority of a population will typically remain in relatively close proximity (<500m) of a breeding pond. The SAC is located 13.4km north east of the Herefordshire boundary and as such, no impacts upon Lyppard Grange Ponds SAC as result of offsite physical loss and damage are expected to arise and this site can be screened out from further assessment.

Functionally Linked Land - Birds

4.22 Walmore Common SPA and Ramsar site and the Severn Estuary SPA and Ramsar site support qualifying bird species. These are mobile species, which rely on habitat within the designated sites and functionally linked habitat in the wider area to forage and shelter.

4.23 These European sites are designated for the following species:

- Walmore Common SPA and Ramsar Site:

- Overwintering Bewick's swan (Cygnus columbianus bewickii), a species which regularly depends upon offsite habitat such as pastures, arable crop and stubble fields for foraging.

- Severn Estuary SPA and Ramsar Site:
  - Wetland birds, including Bewick's swan, on passage ringed plover (Charadrius hiaticula) and overwintering curlew (Numenius arquata), dunlin (Calidris alpina alpine), pintail (Anas acuta), redshank (Tringa tetanus), and shelduck (Tadorna tadorna). These species regularly depend upon offsite habitat such as pastures, arable crop, and stubble fields for foraging.

4.24 Natural England has previously advised that its recognised distance for the consideration of offsite functionally linked land for coastal wetland birds is generally 2km, but for certain species, including most notably, golden plover and lapwing, a greater distance of 15km may be appropriate **[See reference 29]**. Increased distances may also be appropriate where significant landscape scale features provide important functional linkages within European sites, for example, where river catchment flood plains and valleys extend considerable distances from a European site.

4.25 Walmore Common SPA and Ramsar and Severn Estuary SPA and Ramsar site are located over 2km from the Herefordshire boundary at 9km and 13.3km respectively. However, both European sites are located within the Severn and Avon Vale floodplain, which is considered to be a significant landscape scale feature for waterbirds, including Bewick's swan, widgeon, pintail, curlew and redshank for which these European sites are designated for. The Severn and Avon Vales is located in close proximity to the east and south of Herefordshire with qualifying bird species identified to be using offsite habitat to forage in the Wye Valley and Forest of Dean SAC at 271m south east of the Herefordshire boundary. Therefore, due to the proximity of the nearest offsite habitat and in line with a precautionary approach, these European sites have been screened in for further assessment.

Functionally Linked Land - Fish

4.26 The River Wye SAC, River Usk SAC and Severn Estuary SAC are designated for supporting qualifying fish species. These species can be highly mobile and use aquatic habitat outside of the European sites and as such have the potential to be affected by impacts from proposed development as a result of loss of functionally linked land.

River Wye SAC

4.27 The River Wye SAC supports a range of migratory fish, including white-clawed (or Atlantic stream) crayfish, sea lamprey, brook lamprey, river lamprey, twaite shad, Atlantic salmon and bullhead. As the River Wye SAC is located within the boundaries of the Herefordshire, it is considered likely that the qualifying fish species will utilise and depend on the availability and connectivity of aquatic habitat in the wider region.

4.28 A review of site allocations identified the following to support watercourse, which were hydrologically connected to the River Wye SAC:

- Policy ROSS2: Land to the East of Ross-on-Wye
- Policy HERE1: Strategic Development for Hereford
- Policy HERE2: Supporting the vitality of Hereford City Centre
- Policy HERE3: Supporting jobs in Hereford
- Policy HERE7: Sustainable Urban Expansion at Lower Bullingham
- Policy HERE6: Sustainable Urban Expansion at Three Elms

4.29 Additionally, Policy RURA4: Rural strategic transport has been screened in as this policy proposes works on the Hereford to Abergavenny line. The railway line out of Hereford passes over the River Wye and therefore there is the potential for likely significant effects in relation to the River Wye SAC. Additionally, Policy HERE4: Supporting movement in and around Hereford

proposes an additional river crossing to the east of Hereford and improvements to active travel measures which has the potential for likely significant effect in relation to River Wye SAC. Policy PE1: Accommodating economic growth, Policy PE2: Principles for economic growth, Policy PE4: Sustainable tourism, PE5: Supporting a strong Rural Economy, Policy AG1: Accommodating housing growth, Policy AG2: Strategic rural housing distribution, Policy AG4: Rural settlement exemptions for affordable housing, entry level homes and affordable, self and custom build housing and Policy AG6: Gypsies, Travellers and Travelling Show people have also been screened in as they support employment and residential development which has the potential for likely significant effect in relation to River Wye SAC. In addition, Policy HSC2: Infrastructure delivery could result in infrastructure development and has therefore been screened in due to the potential for likely significant effects in relation to the River Wye SAC.

4.30 As there is potential for impacts to arise from development proposed in the Local Plan, further consideration will be required at the Appropriate Assessment stage.

River Usk SAC

4.31 River Usk SAC is located 3.4km south west of the Herefordshire boundary. However, due to a lack of hydrological connectivity between the SAC and waterbodies in Herefordshire, no Likely Significant Effects are predicted in relation to physical damage and loss of functionally linked land as a result of proposed development in the plan and as such this European site has been screened out from further assessment.

River Severn SAC

4.32 The Severn Estuary SAC supports a range of migratory fish, including river lamprey, sea lamprey and twaite shad. The Severn Estuary SAC is located 13.3km south east of the Herefordshire boundary and is connected to the county via the River Wye SAC. Due to the hydrological connectivity of the

Severn Estuary SAC to the River Wye SAC and given the known use of rivers, such as the Wye for nurseries and spawning grounds, it is expected that these fish species will rely on offsite habitat in Herefordshire.

4.33 Therefore, it is expected that there is potential for Likely Significant Effects to arise from habitat damage and loss offsite from proposed development in Local Plan as identified in relation to the River Wye SAC above. Site allocations and policies identified include:

- Policy RURA4: Rural strategic transport
- Policy HERE4: Supporting movement in and around Hereford
- Policy PE1: Accommodating economic growth
- Policy PE2: Principles for economic growth
- Policy PE4: Sustainable tourism,
- Policy PE5: Supporting a strong Rural Economy
- Policy AG1: Accommodating housing growth
- Policy AG2: Strategic rural housing distribution
- Policy AG4: Rural settlement exemptions for affordable housing, entry level homes, affordable, self and custom build housing and small scale affordable Traveller sites
- Policy AG6: Gypsies, Travellers and Travelling Show people
- Policy HSC2: Infrastructure delivery
- Policy ROSS2: Land to the East of Ross-on-Wye
- Policy HERE7: Sustainable Urban Expansion at Lower Bullingham
- Policy HERE6: Sustainable Urban Expansion at Three Elms
- Policy HERE3: Supporting jobs in Hereford
- Policy HERE1: Strategic Development for Hereford
- Policy HERE2: Supporting the vitality of Hereford City Centre

Therefore, there is potential for Likely Significant Effects to occur in relation to physical damage and loss of offsite habitat of importance to qualifying species of the River Wye SAC, Walmore Common SPA and Ramsar Site and Severn Estuary SPA, SAC and Ramsar Site. All other European sites were screened out from further assessment as it was concluded that the Local Plan will not result in a Likely Significant Effect relating to offsite habitat damage or loss.

Non-physical disturbance

4.34 Noise and vibration effects, e.g., during the construction of new housing 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 street lamps, flood lighting and security lights) is most likely to affect bat populations and some nocturnal bird species, and therefore have an adverse effect on the integrity of European sites where bats, nocturnal birds, fish and GCN are a qualifying feature.

4.35 It has been assumed (on a precautionary basis and based on our experience of previous HRAs and consultation with Natural England) that the effects of noise, vibration and light pollution can cause an adverse effect if development takes place within 500m of a European site (or functionally linked habitat) with qualifying features sensitive to these disturbances.

Non-Physical Disturbance – onsite

4.36 The following European sites are located within Herefordshire or within 500m of the boundary at the closest point and support species likely to be significantly affected as a result of noise, vibration and light pollution, and so are screened in for further consideration during the Appropriate Assessment:

- River Wye SAC (white-clawed crayfish, sea lamprey, brook lamprey, river lamprey, allis shad, twaite shad, Atlantic salmon, bullhead and otter)

4.37 A review of site allocations identified the following to be located within 500m of the River Wye SAC and as such will require further consideration at the Appropriate Assessment:

- Policy PE1: Accommodating economic growth
- Policy PE2: Principles for economic growth
- Policy PE4: Sustainable tourism
- Policy PE5: Supporting a strong Rural Economy
- Policy AG1: Accommodating housing growth
- Policy AG2: Strategic rural housing distribution
- Policy AG4: Rural settlement exemptions for affordable housing, entry level homes, affordable, self and custom build housing and small scale Traveller sites
- Policy AG6: Gypsies, Travellers and Travelling Show people
- Policy HSC2: Infrastructure delivery
- Policy HERE2: Supporting the vitality of Hereford City Centre
- Policy HERE4: Supporting movement in and around Hereford
- Policy RURA4: Rural Strategic Transport

4.38 No site allocations are proposed within 500m of Wye Valley Woodlands SAC and Wye Valley and Forest of Dean Bat Sites SAC, and therefore these SACs have been screened out from further assessment.

4.39 The River Clun SAC and Downton Gorge SAC are both located within Herefordshire; however, these European sites do not support qualifying features (freshwater pearl mussel and mixed woodland on rocky slopes, respectively) which are susceptible to impacts from non-physical disturbance and, therefore, these SACs have been screened out from further assessment.

4.40 All other European sites can be screened out from further assessment due to their location beyond 500m from the boundary of Herefordshire.

Therefore, there is potential for Likely Significant Effects to occur in relation to non-physical disturbance to the River Wye SAC.

Non-Physical Disturbance – Functionally Linked Habitat

4.41 Non-physical disturbance may also adversely affect qualifying species at functionally linked habitat. It was established in the Physical Damage and Habitat Loss – Functionally Linked Habitat section above that the following qualifying species may use functionally linked habitat within the Herefordshire boundary:

- Otter and migratory fish species of River Wye SAC
- Migratory fish species of Severn Estuary SAC.
- Lesser horseshoe bat of Wye Valley Woodlands SAC
- Lesser and greater horseshoe bats of Wye Valley and Forest of Dean Bat Sites SAC
- Bird species of Severn Estuary SPA and Ramsar Site and Walmore Common SPA and Ramsar site.

River Wye SAC

4.42 The River Wye SAC is located within Herefordshire and as such it is considered likely that otters and migratory fish will utilise and depend on the availability and connectivity of suitable riparian, wetland habitat and aquatic habitat in the wider region.

4.43 A review of site allocations identified the following to be located within 500m of the River Wye SAC and supporting watercourse, which were hydrologically connected to the River Wye SAC as such will require further consideration at the Appropriate Assessment stage:

- Policy ROSS2: Land to the East of Ross- on- Wye
- Policy HERE1: Strategic Development for Hereford
- Policy HERE2: Supporting the vitality of Hereford City Centre
- Policy HERE7: Sustainable Urban Expansion at Lower Bullingham
- Policy HERE6: Sustainable Urban Expansion at Three Elms
- Policy HERE4: Supporting movement in and around Hereford
- Policy HERE3: Supporting Jobs in Hereford
- Policy RURA4: Rural Strategic Transport
- Policy PE1: Accommodating economic growth
- Policy PE2: Principles for economic growth
- Policy AG1: Accommodating housing growth
- Policy AG2: Strategic rural housing distribution
- Policy AG4: Rural settlement exemptions for affordable housing, entry level homes, affordable, self and custom build housing and small scale affordable Traveller sites
- Policy AG6: Gypsies, Travellers and Travelling Show people
- Policy HSC2: Infrastructure delivery
- Policy PE1: Accommodating economic growth
- Policy PE4: Sustainable tourism
- Policy PE5: Supporting a strong Rural Economy

4.44 As there is potential for impacts to arise from proposed development in the Local Plan, further consideration will be required at the Appropriate Assessment stage.

Severn Estuary SAC

4.45 The Severn Estuary SAC is located 13.3km south east of Herefordshire and is connected to the county via the River Wye SAC. Due to the hydrological connectivity of the Severn Estuary SAC to the River Wye SAC and given the known use of rivers such as the Wye for nurseries and spawning grounds, it is expected that these fish species will rely on offsite habitat in Herefordshire.

4.46 Therefore, it is expected that there is potential for Likely Significant Effects to arise from non-physical disturbance from proposed development in Local Plan as identified in relation to the River Wye SAC above. Site allocations identified include:

- Policy ROSS2: Land to the East of Ross- on- Wye
- Policy HERE7: Sustainable Urban Expansion at Lower Bullingham
- Policy HERE6: Sustainable Urban Expansion at Three Elms
- Policy HERE1: Strategic Development for Hereford
- Policy HERE2: Supporting the vitality of Hereford City Centre
- Policy HERE4: Supporting movement in and around Hereford
- Policy HERE3: Supporting Jobs in Hereford
- Policy RURA4: Rural Strategic Transport
- Policy PE1: Accommodating economic growth
- Policy PE4: Sustainable tourism
- Policy PE1: Accommodating economic growth
- Policy PE2: Principles for economic growth
- Policy PE4: Sustainable tourism
- Policy PE5: Supporting a strong Rural Economy
- Policy AG1: Accommodating housing growth
- Policy AG2: Strategic rural housing distribution

- Policy AG4: Rural settlement exemptions for affordable housing, entry level homes, affordable, self and custom build housing and small scale affordable Traveller sites
- Policy AG6: Gypsies, Travellers and Travelling Show people
- Policy HSC2: Infrastructure delivery

Wye Valley Woodlands SAC

4.47 Wye Valley Woodlands SAC is located within Herefordshire and as such it is considered likely that the qualifying bat species will utilise and depend on the availability and connectivity of habitat in the wider region. As detailed above for physical damage and loss of functionally linked land for this SAC, a buffer of 2km has been applied. This is based on a review of data sources, which has identified that this species travels within a CSZ of 2km.

4.48 No site allocations area proposed within 500m of the 2km buffer around the SAC and therefore impacts from non-physical disturbance to functionally linked land to designated bats species of this SAC can be screened out from further assessment.

Wye Valley and Forest of Dean Bat Sites SAC

4.49 Wye Valley and Forest of Dean Bat Sites SAC is located 271m south east of the Herefordshire border and as such it is considered likely that the qualifying bat species will utilise and depend on the availability and connectivity of habitat in the wider region. As detailed above for physical damage and loss of functionally linked land for this SAC, a buffer of 2km has been applied. This is based on a review of data sources, which has identified that this species travels within a CSZ of 2km.

4.50 No site allocations area proposed within 500m of the 2km buffer from the SAC and therefore impacts from non-physical disturbance to functionally linked

land to designated bats species of this SAC can be screened out from further assessment.

Walmore Common SPA and Ramsar site / Severn Estuary SPA and Ramsar site

4.51 Walmore Common SPA and Ramsar site supports the Bewick Swan which regularly depends upon offsite habitat such as pastures, arable crop and stubble fields for foraging. Severn Estuary SPA and Ramsar site supports an assemblage of birds which regularly depends upon offsite habitat such as pastures, arable crop and stubble fields for foraging. Walmore Common SPA and Ramsar and Severn Estuary SPA and Ramsar site are located 9km and 13.3km respectively from the Herefordshire boundary. However, both European sites are located within the Severn and Avon Vale floodplain, which is considered to be a significant landscape scale feature for waterbirds, including Bewick's swan, widgeon, pintail, curlew and redshank for which these European sites are designated for. The Severn and Avon Vales is located in close proximity to the East and South of Herefordshire with qualifying bird species identified to be using offsite habitat to forage in the Wye Valley and Forest of Dean SAC at 271m south east of the Herefordshire boundary. Therefore, due to the proximity of the nearest offsite habitat and in line with a precautionary approach, these European sites have been screened in for further assessment.

4.52 All other European sites can be screened out of further assessment given that they (and any offsite habitat associated with the sites) are located beyond 500m of the Herefordshire boundary and/or are not susceptible to impacts from non-physical disturbance.

Therefore, there is potential for Likely Significant Effects to occur in relation to non-physical disturbance to functionally linked land (offsite) in relation to the River Wye SAC, Walmore Common SPA and Ramsar Site, Severn Estuary SAC, SPA and Ramsar Site.

Non-Toxic Contamination

4.53 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.

4.54 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 LUC's experience, provides a robust assessment of effects in plan-level HRA and meets with the agreement of Natural England.

4.55 The following European sites are located within the Herefordshire boundary or within 500m of the boundary at the closest point and support qualifying habitats or species which rely on habitat that is susceptible to impacts from non-toxic contamination. As such there is potential for the following European sites to be significantly affected as a result of non-toxic contamination:

- River Wye SAC
- River Clun SAC
- Downton Gorge SAC
- Wye Valley Woodlands SAC
- Wye Valley and Forest of Dean Bat Sites SAC

4.56 A review of site allocations identified the following within 500m of the River Wye SAC, meaning the potential for effects will require further consideration at the Appropriate Assessment:

- Policy HERE2: Supporting the vitality of Hereford City Centre

- Policy HERE4: Supporting movement in and around Hereford
- Policy ROSS2: Land to the East of Ross-on-Wye
- Policy RURA4: Rural Strategic Transport

4.57 No site allocations are proposed within 500m of River Clun SAC, Downton Gorge SAC, Wye Valley Woodlands SAC and Wye Valley and Forest of Dean Bat Sites SAC, and therefore these SACs have been screened out from further assessment.

4.58 All the other European sites can be screened out of further assessment given that they are located beyond 500m from the Herefordshire boundary and/or are not susceptible to impacts from non-toxic contamination.

Therefore, the potential for the Local Plan to result in likely significant effects on a European Site as a result of non-toxic contamination needs to be considered further during the Appropriate Assessment stage in relation to the River Wye SAC.

Air pollution

4.59 Air pollution is most likely to affect European sites where plant, soil and water habitats are the qualifying features, but some qualifying animal species may also be affected, either directly or indirectly, by any deterioration in habitat as a result of air pollution. Deposition of pollutants to the ground and vegetation can alter the characteristics of the soil, affecting the pH and nitrogen (N) availability that can then affect plant health, productivity, and species composition.

4.60 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 **[See reference** 30**]** to determine whether concentrations of NOx at the European sites are currently exceeding critical loads or not.

4.61 Based on the Highways Agency Design Manual for Road and Bridges (DMRB) Document LA105: Air Quality **[See reference** 31**]** (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.

4.62 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 10km/hr or more; or
- Peak hour speed will change by 20km/hr or more; or
- Road alignment will change by 5m or more.

4.63 In line with the Wealden judgment **[See reference** 32**]**, Natural England now expects 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.

4.64 It was initially assumed that only those roads forming part of the primary road network (motorways and 'A' roads) might be likely to experience any significant increases in vehicle traffic as a result of development (i.e., greater than 1,000 AADT etc.).

4.65 There are a number of 'A' roads and two motorways (M5 and M50) within the Herefordshire boundary (+15km) as illustrated in Figure B.2 in **Appendix B**. The European sites which are situated within 200m of these strategic roads are listed below:

- River Wye SAC (A438, A49, A40, A4103, A417, A479, A4079, A44, A466, A470, A481, A483, A488, A4081, A4136, A4137, A4078)
- River Clun SAC (A4113)
- Wye Valley Woodlands SAC (A40, A466, A4136)
- Wye Valley and Forest of Dean Bat Sites SAC (A4136)
- Usk Bat Sites SAC (A465)
- River Usk SAC (A4143, A472, A479, A40, A4042, A4077, A465)
- Cwm Clydach Woodlands SAC (A465)
- Walmore Common SPA & Ramsar (A48).

4.66 Following consultation with Natural England on the HRA Scoping Report **[See reference** 33**]**, it was advised that "*potential impacts from increase in traffic on any road should be considered*". Therefore, as part of this screening assessment, a review of additional roads within 200m of the European sites scoped into the assessment was undertaken. This identified the following, which were considered to significantly contribute to the road network for Herefordshire:

- River Wye SAC (B4399, B4224, B4350, B4229, B4260, B4234, B4352, B4164, B4228, B4348, B4356, B4594, B4351, B4520, B4567) River Clun SAC (B4385)
- Wye Valley & Forest of Dean Bat Sites SAC (B4228, B4231)
- Wye Valley Woodlands SAC (B4164, B4228, B4164)

- Usk Bat Sites SAC (B4560)
- River Usk SAC (B4558, B4560, B4598, B4269)
- Rhos Goch SAC (B4594)

4.67 Other European sites have been screened out due to their distance of over 200m from either a motorway or an “A” road, or a more minor road considered to be a key part of the Herefordshire road network.

Therefore, the potential for the Local Plan to result in likely significant effects on a European Site as a result of air pollution needs to be considered further at the Appropriate Assessment stage in relation to the River Wye SAC, River Clun SAC, Wye Valley Woodlands SAC, Wye Valley and Forest of Dean Bat Sites SAC, Usk Bat Sites SAC, River Usk SAC, Cwm Clydach Woodlands SAC and Walmore Common SPA and Ramsar site.

Recreational Pressure

4.68 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.

4.69 The Local Plan will result in housing growth and associated population increase within Herefordshire. Where increases in population are likely to result in significant increases in recreation at a European site, the potential for likely significant effects will require assessment. The Herefordshire Local Plan sets a housing requirement of 16,100 homes over the plan period.

4.70 European sites with qualifying bird species are likely to be particularly susceptible to recreational disturbances from walking, dog walking, angling, illegal use of off-road vehicles and motorbikes, wildfowling, and water sports. An increase in recreational pressure from development therefore has the potential to disturb bird populations of SPA and Ramsar sites as a result of both terrestrial and water-based recreation.

4.71 In addition, recreation can physically damage habitat as a result of trampling and also through erosion associated with boat wash and terrestrial activities such as use of vehicles.

4.72 Each European site will 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 (although such sites are not relevant to Herefordshire).

4.73 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 not to have the same draw as coastal sites and with recreational activities more easily managed and directed to alternative greenspace in the area.

4.74 Using a precautionary approach and based on the findings of the Monitor of Engagement with the Natural Environment (MENE) survey **[See reference** 34**]**, a ZOI of 8km has been applied to all non-coastal European sites where alternative ZOI is not available. The 8km ZOI derived from the MENE data relates to the distance of ‘3 to 5 miles’ that approximately 12% of visitors from the Herefordshire travel to reach a natural environment. ZOIs are typically based on the distance that 75% of visitors travel from; therefore, given that 78%

of visitors travelled from “less than 1 mile” up to the distance of “3 to 5 miles”, 8km is deemed appropriate to use as a precautionary ZOI in this assessment.

4.75 The following European sites are located within 8km of Herefordshire:

- River Wye SAC (within the county)
- River Clun SAC (within the county)
- Downton Gorge SAC (within the county)
- Wye Valley Woodlands SAC (within the county)
- Wye Valley and Forest of Dean Bat Sites SAC (0.27km)
- Rhos Goch SAC (1.6km)
- River Usk SAC (3.4km)
- Coed y Cerrig SAC (4.2km)
- Sugar Loaf Woodlands SAC (6.6km)

4.76 For the Severn Estuary SAC, SPA and Ramsar site, detailed visitor studies have been undertaken which have defined a ZOI of 10.4km **[See reference** 35**]**. This ZOI has therefore been applied in this assessment. As advised by Natural England following consultation on the HRA Scoping Report, any updated information on the application of this ZOI through discussions with other Gloucestershire Local Planning Authorities will be applied in the next iteration of this assessment. Given the location of these European sites at 13.3km from the boundary of Herefordshire, no Likely Significant Effects are expected in relation to increased recreational pressure as a result of development proposed in the Local Plan and as such the Severn Estuary SAC, SPA and Ramsar site have been scoped out of the assessment.

4.77 The remaining European sites, including Usk Bat Sites SAC, Lyppard Grange Ponds SAC, Llangorse Lake SAC, Cwm Clydach Woodlands SAC and Walmore Common SPA and Ramsar site, are located more than 8km from the Herefordshire boundary and so have been screened out of the assessment.

River Wye SAC

4.78 The River Wye SAC is known to be popular location for a wide range of recreational activities, including canoeing, angling and walking, which may increase as a result of a growing nearby population.

4.79 The River Wye SAC is designated for its migratory fish species, including Atlantic salmon, twaite shad and allis shad. Generally, it is the adults travelling up the river to the spawning grounds, which are susceptible to the impacts of fishing. These species are fished in large numbers and recreational fishing has been identified as one of the main reasons for their population declines in relation to salmon. Otter is another qualifying feature of the River Wye SAC. There are potential for impacts on otter populations from dog walkers and other recreational activities. However, this is unlikely to be significant given that otter is a nocturnal animal and therefore predominantly active when recreational activities typically are not taking place.

4.80 A number of site allocations are proposed in and around Hereford, which the River Wye runs through. Due to the proximity of these site allocations, it is considered that there is potential for Likely Significant Effects to occur as a result of increased development in the Local Plan and therefore this issue needs to be considered further at the Appropriate Assessment stage.

River Clun SAC

4.81 The River Clun SAC is primarily designated for the freshwater pearl mussel. The freshwater pearl mussel is known to be vulnerable to disturbance from human activities, such as pearl extraction, water-based activities resulting in disturbance of the mussel beds and reduction in salmonid populations from factors such as overfishing. The latter relates to a key aspect of this species lifecycle is the freshwater pearl mussel larvae relies on the process of attaching to the gills of salmon and trout for up a number of months before detaching and settling in the riverbed gravels where they grow to adulthood.

4.82 A review of site allocations in the Local Plan has identified the nearest allocation to be located 18.2km to the north of Leominster, which comprises a development of 200 houses. A further site allocation was noted at Leominster, which is approximately 18.9km from the SAC. However, this site is designated for employment development. Due to the distance from the River Clun and the nature of the recreational activities, which is primarily restricted to fishing, which requires specific licencing and membership to a fishing club, no Likely Significant Effect is predicted in relation to increased recreational pressure from development proposed in the Local Plan.

Downton Gorge SAC

4.83 Downton Gorge SAC is located in the north of Herefordshire and is designated for its Tilio-Acerion forests of slopes, screes and ravines. This site is inaccessible to the public with exception to a limited number of guided walks lead by Natural England staff and volunteers during April and May **[See reference** 36**]**. Due to this, no Likely Significant Effects are predicted as a result of increased recreational pressure from development proposed in the Local Plan.

Wye Valley Woodlands SAC

4.84 Wye Valley Woodlands SAC is designated for its woodland habitat and for supporting lesser horseshoe bat. Natural England's Site Improvement Plan has identified recreational impacts to be a key threat to this SAC with key impacts resulting from erosion and damage to ground flora from walkers and damage to cliff face communities from climbing. In addition to this, lesser horseshoe bats are particularly vulnerable to disturbance whilst breeding and during hibernation as this species roosts in underground sites within the SAC.

4.85 There are a number of Public Rights of Way, which run through parts of the woodland providing visitors with access to the SAC. Additionally, the SAC falls within the Wye Valley National Landscape, which is likely to draw increase

numbers of visitors to the site. Ross-on-Wye is expected to accommodate 1,800 new homes which will result in a population growth within the ZOI for Wye Valley Woodlands SAC. Therefore, it is predicted that there is potential for Likely Significant Effects to occur in relation to increased recreational pressure from proposed development in the Local Plan.

4.86 In relation to bats, it is understood the majority of entrances to the underground roost sites are blocked by grills, which are designed to deter and minimise access by people **[See reference** 37**]**. It is therefore considered that disturbance will be limited and restricted those gaining unauthorised access for activities, such as caving. Therefore, it is expected that increases in recreational pressure as a result of proposed development in the Local Plan will not result in Likely Significant Effect and can be screened out from further assessment in relation to this species.

Wye Valley and Forest of Dean Bat Sites SAC

4.87 Wye Valley and Forest of Dean Bat Sites SAC is designated for supporting greater and lesser horseshoe bats. These species are vulnerable to disturbance during breeding and hibernation as this species roosts in underground sites within the SAC. It is understood the majority of entrances to the underground roost sites are blocked by grills, which are designed to deter and minimise access by people **[See reference** 38**]**. It is therefore considered that disturbance will be limited and restricted to those gaining unauthorised access for activities, such as caving. Therefore, it is expected that increases in recreational pressure as a result of proposed development in the Local Plan will not result in Likely Significant Effect and can be screened out from further assessment.

Rhos Goch SAC

4.88 Rhos Goch SAC is designated for its bogs, wet woodlands and Molinia meadows. There is currently a Core Management Plan in place for Rhos Goch

SAC **[See reference** 39**]**, which outlines that approximately 95% of the site is wetland habitats and as such access for recreational activities is considered to be limited. In addition, there is no car parking or formal footpath through the site itself further restricting access. Due to this and given the distance of the SAC from the nearest proposed development within Herefordshire County at 12.1km, no Likely Significant Effect is predicted as a result of increased recreational pressure from proposed development in the Local Plan.

River Usk SAC

4.89 The River Usk SAC is primarily designated for its migratory fish species, including Atlantic salmon, Twaite Shad and Allis Shad. Generally, it is the adults travelling up the river to the spawning grounds, which are susceptible to the impacts of fishing. Atlantic Salmon, Twaite Shad and Allis Shad have seen numbers decline due to fishing. Relating to Atlantic salmon, a seasonal catch restriction is already imposed by Natural Resources Wales, which requires mandatory catch and release of all salmon and mandatory catch and release of all sea trout caught before 1st May **[See reference** 40**]**. Additionally, the fishing of Twaite Shad and Allis Shad is illegal within the UK **[See reference** 41**]**.

4.90 Otter is another qualifying feature of the River Usk SAC. There is potential for impacts on otter populations from dog walkers and other recreational activities. However, this is unlikely to be significant given that otter is a nocturnal animal and therefore predominantly active when recreational activities typically are not taking place.

4.91 Due to the location of the SAC in relation to proposed development in Herefordshire, with the closest site allocation proposed at 26.2km from the SAC (Policy HERE7: Sustainable Urban Expansion at Lower Bullingham), impacts from increases in recreation as a result of the Local Plan is considered unlikely. Therefore, no Likely Significant Effect is predicted and impacts on this SAC have been screened out from further assessment.

Coed y Cerrig SAC

4.92 Coed y Cerrig SAC is designated for its wet woodland (alluvial forests). The site is located within the Brecon Beacons National Park and is a known location for people to visit. The Core Management Plan **[See reference** 42**]** for the Coed y Cerrig SAC highlights that recreational access may result in impacts from trampling. However, due to the nature of the SAC as a wet woodland, the site is permanently waterlogged and as such access is restricted to the boardwalks, which has been installed by Countryside Council for Wales **[See reference** 43**]** and waymarked footpaths.

4.93 A review of proposed development in the Local Plan identified the nearest site allocation to be located 26km from the SAC (Policy HERE7: Sustainable urban expansion at Lower Bullingham). Due to the restricted and managed access to the SAC and the distance from development in the Local Plan, no Likely Significant Effect is predicted as a result of increased recreational pressure from development in the plan.

Sugar Loaf Woodlands SAC

4.94 Sugar Loaf Woodland SAC is designated for its woodland habitat. The area encompassing the Sugar Loaf Woodlands SAC is managed by the National Trust. The SAC is located within the Brecon Beacons National Park and is a known and popular location recreation destination. The community app outdoor active shows that 40 visitor routes (varying in length from 0.9 to 32.5 miles) have been mapped within and near the SAC woodland parcels. Furthermore, the National Trust website advertises the Sugar Loaf circuit walking trail, which starts in the town centre of Abergavenny, leads through SAC woodland, Sugar Loaf summit and back to Abergavenny.

4.95 A review of proposed development in the Local Plan identified the nearest site allocation to be located 28.3km from the SAC (Policy HERE7: Sustainable Urban Expansion at Lower Bullingham). Due to the distance of the SAC from proposed development in the Local Plan, no Likely Significant Effect is

predicted as a result of increased recreational pressure from development in Herefordshire.

Therefore, the potential for the Local Plan to result in likely significant effects on a European Site as a result of increased recreational pressure is restricted to River Wye SAC and Wye Valley Woodlands SAC (in relation to the woodland habitat only).

Water Quantity and Quality

4.96 An increase in demand for water abstraction and treatment resulting from any growth to be proposed in the Local Plan 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.

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

- River Wye SAC*
- River Clun SAC*
- Rhos Goch SAC
- River Usk SAC
- Llangorse Lake SAC
- Usk Bat Sites SAC
- Lyppard Grange Ponds SAC
- Severn Estuary SAC, SPA and Ramsar site

- Walmore Common SPA and Ramsar site

* These sites were considered in relation to both water quantity and quality as they support habitats or species that rely on water and have been identified by Natural England to be susceptible to impacts from nutrient pollution from Herefordshire. All other sites were considered in relation to water quantity only.

4.98 All other European sites were screened out as their qualifying features are not sensitive to changes in water quantity or quality.

Water Quantity

4.99 The majority of Herefordshire is located within the catchment of the River Wye, with the majority of the county's drinking water obtained from the river and its tributaries. Mains water in Herefordshire is supplied by Welsh Water (Dwr Cymru), which predominantly supplies water from reservoirs and lowland river sources, such as the River Wye, and in part by Severn Trent Water, which supplies one-third of water from groundwater sources and two-thirds from rivers, streams and reservoirs. Only 5-10% of Herefordshire's population use private water supply for domestic purposes.

4.100 Changes in water quantity due to increased demand for water supply is therefore considered a potential issue for the following sites that have qualifying features that are sensitive to changes in water levels and are hydrologically linked to the plan area:

- River Wye SAC
- River Clun SAC
- Rhos Goch SAC
- River Usk SAC
- Usk Bat Sites SAC
- Severn Estuary SAC, SPA and Ramsar site

4.101 These European sites have the potential to be affected by impacts in relation to water quantity and as such have been screened in for further assessment at the Appropriate Assessment stage.

4.102 River Usk SAC and the Usk Bat Sites SAC are located 3.4km south west and 14.9km south west of the Herefordshire boundary respectively. However, due to a lack of hydrological connectivity between the SACs and waterbodies in Herefordshire, no Likely Significant Effects are predicted in relation to changes in water quantity as a result of proposed development in the plan and as such these European sites have been screened out from further assessment.

4.103 Rhos Goch SAC is located 1.6km west of the Herefordshire boundary. However, due to a lack of hydrological connectivity between the SAC and waterbodies in Herefordshire, no Likely Significant Effects are predicted in relation to changes in water quantity as a result of proposed development in the plan and as such this European site has been screened out from further assessment.

4.104 The River Clun SAC is located within Herefordshire. The nearest site allocation to the River Clun SAC is located 12.5km to the north of Leominster (land opposite Holgate Farm, Kingsland, allocated through Policy RURA3: Strategic Site Allocations). However, due to a lack of hydrological connectivity between the SAC and waterbodies in Herefordshire, no Likely Significant Effects are predicted in relation to changes in water quantity as a result of proposed development in the plan and as such this European site has been screened out from further assessment.

4.105 All other European sites can be screened out from further assessment given that they do not have hydrological connectivity to the Local Plan area.

River Wye SAC / Severn Estuary SAC, SPA and Ramsar site

4.106 The Site Improvement Plan **[See reference** 44**]** for the River Wye SAC identified water abstraction as a threat to the SAC. Urban drainage and new development can affect the hydrology of the River Wye. The conservation objectives **[See reference** 45**]** of the qualifying fish species within the River Wye SAC state that entrainment in water abstractions directly impacts on population dynamins caused by lower survival rates. Also, the bogs and transition mires which are a qualifying feature are vulnerable to changes in hydrological processes through drainage or groundwater abstraction. The Local Plan proposes a range of development which will result in an increase in abstraction of water.

4.107 Being hydrologically connected with, and therefore also dependent on the River Wye SAC, the Severn Estuary SAC is highly vulnerable to changes in water flow rates for several reasons. Firstly, changes in the water flow rate are likely to lead to increases in sediment erosion or accretion respectively, to which the seagrass in the estuary is highly sensitive. The Severn Estuary SAC contains a number of migratory fish such as brook and sea Lamprey which swim upstream to breed. In addition, the Severn Estuary SPA and Ramsar site contain a number of migratory birds such as Greater white-fronted goose and Gadwell that rely on the River Wye for feeding. It is unlikely that changes in the water flow rate would affect any of the qualifying species (e.g. Bewick's swans) directly, because there is no linking impact pathway. However, an altered hydrological regime would likely affect their supporting habitats, including the Atlantic salt meadows, and the mud- and sandflats. Water abstraction for the public water supply in Herefordshire from the main rivers supplying the Severn Estuary SAC, might lead to decreased freshwater input and could, ultimately, increase salinity levels in the estuary.

4.108 In addition, the conservation objectives for the River Wye SAC indicates there has been a reduction in eel population which otters rely on. It is likely that changes in the eel population is as a result of further impacts within the sea but any changes in water quantity could affect the Severn Estuary which is

hydrologically linked. The Atlantic ocean and Bristol Channels flows into the Severn Estuary and therefore, maintaining the water quantity of the Severn Estuary is key to ensuring that young eels travel into the river networks.

4.109 The water supply in Herefordshire comes mainly from Dwr Cymru Welsh Water (DCWW). DCWW's latest Water Resources Management Plan (WRMP) which covers the period 2020-2050 was published in 2019 **[See reference** 46**]**. Herefordshire is covered by the Hereford, Ross-on-Wye and Whitbourne water resource zones (WRZs), which are all predicted to have a surplus water supply over the period 2020 to 2050. However, the Vowchurch WRZ adjacent to the Hereford WRZ has a vulnerability to severe droughts, and already relies on small imports of water from the Hereford WRZ. The WRMP plans to improve the resilience of this zone through increasing the capacity of the existing link between the Vowchurch and Herefordshire zones, which will involve laying a new c. 12km pipeline between Broomy Hill water treatment works and Kingstone service reservoir together with an upgrade to Broomy Hill water pumping station. The Revised Draft Water Resources Management Plan 2024 **[See reference** 47**]** was sent to Welsh Government on 23rd June 2024. The Hereford, Ross-on-Wye, Whitbourne and Vowchurch WRZ have been identified as having surplus water supply up to 2050.

4.110 However, given that the latest Water Resources Management Plan and the Revised Draft Water Resources Management Plan 2024 both state that there is a surplus of water supply between 2020 and 2050 and with the Local Plan period running between 2021-2041, there is not likely to be a significant impact on water levels in the River Wye SAC. Therefore, the River Wye SAC and the functionally linked Severn Estuary SAC, SPA and Ramsar site are not likely to experience significant effects as a result of changes in water quantity from development within Herefordshire.

Therefore, no Likely Significant Effects are predicted as a result of water quantity to European sites.

Water Quality

4.111 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.

4.112 Nutrient pollution is an environmental issue for many areas across England, including Herefordshire. Increased levels of nitrogen and phosphorus entering aquatic environments via surface water and groundwater can severely threaten these sensitive habitats and species within a European site. The elevated levels of nutrients can cause eutrophication, leading to algal blooms which disrupt normal ecosystem function and cause major changes in the aquatic community. These algal blooms can result in reduced levels of oxygen within the water, which in turn can affect the populations of many aquatic organism including invertebrates and fish. In freshwater habitats and estuaries, poor water quality due to nutrient enrichment from elevated nitrogen and phosphorus levels is one of the primary reasons for habitats sites being in unfavourable condition.

4.113 Nutrient neutrality is a means of ensuring that a plan or project does not add to existing nutrient burdens so there is no net increase in nutrients as a result of the plan or project. Where nutrient neutrality is properly applied and the existing land use does not undermine the conservation objectives, Natural England considers that an adverse effect on integrity alone and in combination can be ruled out during Appropriate Assessment. Any development within the catchment of a European site with nutrient issues will be considered further during the Appropriate Assessment stage of this HRA.

4.114 Where sites are already in unfavourable condition, extra wastewater from new developments exacerbate the issue and undermine ongoing efforts to

recover these sites. However, when development is designed alongside suitable mitigation measures, that additional damage can often be avoided.

4.115 In Herefordshire, Natural England has confirmed that the River Wye (the River Lugg component only), is in unfavourable condition as a result of poor water quality from nutrient enrichment exceeding its phosphate targets. The River Lugg component of the River Wye SAC is a nutrient neutrality area. In addition to high phosphate levels, there is also high nitrogen concentration levels. Therefore, any additional development that will result in an increase in the population served by the wastewater system, which discharges into the River Lugg catchment, which is located upstream of its confluence with the River Wye, will result in a likely significant effect on the River Wye SAC. This is also likely to impact other areas of the River Wye catchment and not just the River Lugg sub-catchment. It is also understood that the Wye is also at risk of being in unfavourable status and therefore any increase in nutrients along this area of the SAC has potential to result in a Likely Significant Effect. As there is potential for proposed development from the Local Plan to result in a Likely Significant Effect from impacts relating to water quality, this European site as a whole has been screened in for assessment at the Appropriate Assessment. The following strategic policies could result in development within the Lower Wye sub-catchment area as part of the River Wye catchment:

- Policy ROSS2: Land to the East of Ross-on-Wye
- Policy RURA3: Rural strategic site allocations
- Policy HERE7: Sustainable Urban Expansion at Lower Bullingham
- Policy HERE3: Supporting Jobs in Hereford
- Policy HERE6: Sustainable Urban Expansion at Three Elms
- Policy HERE5: Sustainable Urban Expansion at Holmer North
- Policy AG1: Accommodating housing growth
- Policy PE1: Accommodating economic growth
- Policy PE4: Sustainable tourism
- Policy PE5: Supporting a strong Rural Economy

- Policy HERE4: Supporting movement in and around Hereford Policy PE1: Accommodating economic growth
- Policy PE2: Principles for economic growth
- Policy AG2: Strategic rural housing distribution
- Policy AG4: Rural settlement exemptions for affordable housing, entry level homes, affordable, self and custom build housing and small scale affordable Traveller sites
- Policy AG6: Gypsies, Travellers and Travelling Show people

4.116 The following policies could result in development within the Lugg sub-catchment area as part of the River Wye catchment:

- Policy RURA3: Rural strategic site allocations
- Policy LEOM2: Land south of the Primary School
- Policy LEOM3: Land south of Leominster Enterprise Park
- Policy BROM2: Land at Hardwick Bank
- Policy BROM3: Land west of Linton Trading Estate
- Policy KING2: Land East of Kingswood Road
- Policy AG1: accommodating housing growth
- Policy PE1: Accommodating economic growth
- Policy PE4: Sustainable tourism
- Policy PE5: Supporting a Rural Economy
- Policy HERE4: Supporting movement in and around Hereford Policy PE1: Accommodating economic growth
- Policy PE2: Principles for economic growth
- Policy AG2: Strategic rural housing distribution
- Policy AG4: Rural settlement exemptions for affordable housing, entry level homes, affordable, self and custom build housing and small scale affordable Traveller sites
- Policy AG6: Gypsies, Travellers and Travelling Show people

4.117 Natural England also identified the River Clun SAC as being in unfavourable condition as a result of increased levels of nitrogen and phosphorus. This SAC requires consideration as part of the HRA as nutrient neutrality may be a potential solution to enable development to proceed in Herefordshire. As there is potential for proposed development from the Local Plan to result in a likely significant effect from impacts relating to water quality, this European site has been screened in for further consideration at the Appropriate Assessment stage.

Therefore, the potential for the Local Plan to result in likely significant effects on the River Wye SAC and River Clun SAC needs to be considered further in the Appropriate Assessment.

Summary of HRA Screening Conclusions

4.118 A summary of the HRA Screening conclusions is provided in Table 4.1.

Table 4.1: Summary of screening conclusions

European site	Physical damage / loss of habitat	Non-physical disturbance	Non-toxic contamination	Air pollution	Recreational pressure	Water quantity	Water quality
River Wye SAC	Potential LSE (offsite only)	Potential LSE (onsite and offsite)	Potential LSE	Potential LSE	Potential LSE	No LSE	Potential LSE
River Clun SAC	No LSE	No LSE	No LSE	Potential LSE	No LSE	No LSE	Potential LSE
Downton Gorge SAC	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
Wye Valley Woodlands SAC	No LSE	No LSE	No LSE	Potential LSE	Potential LSE	No LSE	No LSE
Wye Valley and Forest of Dean Bat Sites SAC	No LSE	No LSE	No LSE	Potential LSE	No LSE	No LSE	No LSE
Coed y Cerrig SAC	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
Sugar Loaf Woodlands SAC	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE

European site	Physical damage / loss of habitat	Non-physical disturbance	Non-toxic contamination	Air pollution	Recreational pressure	Water quantity	Water quality
Rhos Goch SAC	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
River Usk SAC	No LSE	No LSE	No LSE	Potential LSE	No LSE	No LSE	No LSE
Llangorse Lake SAC	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
Usk Bat Sites SAC	No LSE	No LSE	No LSE	Potential LSE	No LSE	No LSE	No LSE
Cwm Clydach Woodlands SAC	No LSE	No LSE	No LSE	Potential LSE	No LSE	No LSE	No LSE
Lyppard Grange Ponds SAC	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
Severn Estuary SPA, SAC and Ramsar site	Potential LSE (offsite only)	Potential LSE (offsite only)	No LSE	No LSE	No LSE	No LSE	No LSE
Walmore Common SPA and Ramsar site	Potential LSE (offsite only)	Potential LSE (offsite only)	No LSE	Potential LSE	No LSE	No LSE	No LSE

Chapter 5

Appropriate Assessment

5.1 Following the screening stage, the plan-making authority is required under Regulation 105 of the Habitats Regulations 2017 (as amended) to make an 'Appropriate Assessment' of the implications of the plan for European sites, in view of their conservation objectives.

5.2 European Commission Guidance **[See reference** 48**]** 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.

5.3 This stage seeks to determine whether implementation of the Herefordshire Local Plan will result in an adverse effect on the integrity of the whole European site in question (many European sites are made up of a number of fragments of habitat). Consideration was given to mitigation measures that may be included in the Herefordshire Local Plan to reduce the likelihood and significance of effects on European sites.

5.4 A European 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 European site's conservation objectives is realised and where the European site is capable of self-repair and renewal with a minimum of external management support.

5.5 This chapter sets out the findings of the Appropriate Assessment stage of the HRA of the Draft (Regulation 18) Herefordshire Local Plan. Likely significant effects arising from the Local Plan were identified in the previous chapter for the following European sites and impact types:

- Physical damage and loss of habitat (functionally linked only) – in relation to River Wye SAC; Walmore Common SPA and Ramsar site; and Severn Estuary SAC, SPA and Ramsar Site.
- Non-physical disturbance including functionally linked - in relation to River Wye SAC (both onsite and offsite) and Walmore Common SPA and Ramsar site and Severn Estuary SPA, SAC and Ramsar site (offsite only).
- Non-toxic contamination - in relation to River Wye SAC
- Air pollution – in relation to River Wye SAC; River Usk SAC; Usk Bat Sites SAC; Cwm Clydach Woodlands SAC; Walmore Common SPA and Ramsar site; Wye Valley Woodlands SAC; and Wye Valley and Forest of Dean Bat Sites SAC.
- Recreational pressure - in relation to River Wye SAC and Wye Valley Woodlands SAC.
- Water quality - in relation to River Wye SAC and River Clun SAC.

Physical Damage and Loss – Functionally Linked Land (Offsite) – Otter / Fish

River Wye SAC / Severn Estuary SAC and Ramsar site

5.6 The River Wye SAC is designated for otter and migratory fish species and the hydrologically connected Severn Estuary is designated for migratory fish species, which are susceptible to impacts from physical damage and loss. The Local Plan proposes development adjacent to the River Wye SAC and overlapping adjoining tributaries, which may be used by these species as offsite functionally linked land. A review of proposed site allocations at the screening stage identified the following allocations either adjacent to the SAC or

overlapping tributaries adjoining the SAC, which support watercourses and riparian corridors that may be utilised by these species:

- Policy HERE1: Strategic Development for Hereford
- Policy HERE2: Supporting the vitality of Hereford City Centre
- Policy HERE3: Supporting Jobs in Hereford
- Policy HERE6: Sustainable Urban Expansion at Three Elms
- Policy HERE7: Sustainable Urban Expansion at Lower Bullingham
- Policy ROSS2: Land to the East of Ross-on-Wye
- Policy RURA3: Rural strategic site allocations

5.7 Additionally, Policy RURA4: Rural Strategic Transport was screened in for further consideration at the Appropriate Assessment stage as this policy supports a new station or parkway along the Hereford to Abergavenny line. The railway line out of Hereford passes over the River Wye and therefore there is the potential for Likely Significant Effects in relation to the River Wye SAC. Additionally, Policy HERE4: Movement in and around Hereford proposes an additional river crossing to the east of Hereford and improvements to active travel measures which has the potential for Likely Significant Effects in relation to the River Wye SAC. Policy PE1: Accommodating economic growth, Policy PE2: Principles for economic growth, Policy PE4: Sustainable tourism, Policy PE5: Supporting a strong Rural Economy Policy AG1: Accommodating housing growth, Policy AG2: Strategic rural housing distribution, Policy AG4: Rural settlement exemptions for affordable housing, entry level homes, affordable, self and custom build housing and small scale affordable Traveller sites; and Policy AG6: Gypsies, Travellers and Travelling Show people have also been screened in as they support economic and tourism development which has the potential for Likely Significant Effects in relation to the River Wye SAC. In addition, Policy HSC2: Infrastructure delivery could result in infrastructure development and has therefore been screened in due to the potential for likely significant effects in relation to the River Wye SAC.

5.8 Proposed development in the Local Plan has the potential to result in adverse effects as a result of physical damage and loss of functionally linked

land. To provide certainty that there are no adverse effects the following avoidance and mitigation measures will be required.

Avoidance and Mitigation

5.9 The impacts from proposed development on habitat adjacent to the River Wye SAC or overlapping tributaries adjoining the SAC is considered to be small-scale and unlikely to result in a significant adverse effect on the integrity. However, to provide certainty that the proposed development will not adversely affect the integrity of the River Wye SAC and Severn Estuary SAC and Ramsar site, it is recommended that the following safeguard measures are implemented:

- The site specific HRAs for the allocations made in Policy HERE6: Sustainable Urban Expansion at Three Elms; Policy HERE7: Sustainable Urban Expansion at Lower Bullingham; and, Policy ROSS2: Land to the East of Ross-on-Wye should require detailed protected species surveys for otter to determine any site specific mitigation and protection measures such as timing of works and disturbance buffers.
- This requirement (for project-level/site specific HRA and targeted ecological surveys) should also be required for future proposals within Policy HERE2: Supporting the vitality of Hereford City Centre; Policy HERE1: Strategic Development for Hereford; Policy HERE3: Supporting jobs in Hereford; Policy RURA3: Rural strategic site allocations; Policy RURA4: Rural Strategic Transport; and Policy HERE4: Supporting movement in and around Hereford; Policy PE1: Accommodating economic growth; Policy PE4: Sustainable tourism; Policy AG1: Accommodating housing growth; Policy PE2: Principles for economic growth; Policy PE4: Sustainable tourism; Policy PE5: Supporting a strong Rural Economy; Policy AG2: Strategic rural housing distribution; Policy AG4: Rural settlement exemptions for affordable housing, entry level homes, affordable, self and custom build housing and small scale affordable Traveller sites; Policy AG6: Gypsies, Travellers and Travelling Show people and, Policy PE5: Supporting a strong Rural Economy.

5.10 Other policies within the Herefordshire Local Plan will provide safeguards from physical damage and loss of habitats. Policy EE1: Protecting and Enhancing the Quality of the Natural Environment specifies that development should:

2. protect, conserve and enhance statutory and locally designated landscape, ecological and geological sites;

3. protect and conserve priority habitats and protected species;

4. protect, conserve and enhance landscape features, habitats and ecological connectivity, extending Herefordshire's natural capital, green and blue infrastructure, and nature recovery networks;

5. protect and enhance key natural assets of agricultural soils, water, and wetlands, woodlands, river meadows, or any scheme that could impact habitat diversity.

Conclusion

Providing the above mitigation measures and additional recommendations are incorporated into the Herefordshire Local Plan, and implemented successfully, adverse effects on the integrity of the River Wye SAC will be avoided.

Physical Damage and Loss – Functionally Linked Land (Offsite) – Birds

Severn Estuary SPA and Ramsar Site / Walmore Common SPA and Ramsar Site

5.11 The plan proposes development in areas where qualifying SPA and Ramsar bird species may make use of offsite habitat for foraging, roosting and loafing. Proposed allocations with potential to result in a likely significant effect as a result of physical damage and loss were identified in the screening assessment and are presented in Appendix D.

5.12 The Severn Estuary SPA and Ramsar Site and Walmore Common SPA and Ramsar Site are designated for waterbird species, which rely on offsite habitat to forage and for loafing detailed within Natural England's Conservation Objectives for each European Site. Due to the overlap of bird species designated for Walmore Common SPA and Ramsar site with the Severn Estuary SPA and Ramsar site and its location with the Severn and Avon Vale, these sites are considered to be linked and impacts are considered in conjunction with each other.

5.13 As detailed in the screening assessment, there is detailed evidence available as part of the work undertaken by Natural England (Identification of wintering and passage roosts on functionally linked land of the Severn Estuary – Gloucestershire and Worcestershire (Phase 5) (2022)) on the use of functionally linked land for qualifying bird species of the Severn Estuary SPA and Ramsar site **[See reference** 49**]**. From this, it has been identified that many of the species for which the SPA and Ramsar site is designated for rely on functionally linked land in the wider Severn and Avon landscape, which is subject to extensive flooding by the River Severn and River Avon. The

floodplain of the Vale is a critical habitat underpinning many of these bird species. A review of mapping provided in this study showing known movements of these bird species identified movement of birds to areas to the east of Herefordshire with occasional movements within the eastern portion of county itself.

5.14 National Character Area (NCA) profiles created by Natural England are used to define the specific combination of landscape, geodiversity, biodiversity, history, culture and economic activity in the area **[See reference** 50**]**. Herefordshire is located to the north and east of the Severn and Avon Vale, which is characterised low-lying agricultural landscape and sparse woodland habitat. In contrast, the majority of Herefordshire falls within the Herefordshire Lowlands, which is characterised by its farming landscape on undulating hills with woodland being a key landscape feature. These two character areas are dissected by Malvern Hills, South Herefordshire and Over Severn and Forest of Dean and Lower Wye, which are characterised by large ridge and prominent hills associated with the Malvern Hills and Herefordshire and Over Severn, river corridors with narrow floodplains and a mosaic of woodlands and open ground.

5.15 The Severn and Avon Vale provides floodplain habitat **[See reference** 51**]**, which is considered a vital resource for the species of the Severn SPA and Ramsar site. Given the contrasting landscape between the Severn and Avon Vale and the character areas within Herefordshire, it is considered unlikely that the habitats present within the county are a key resource for these species. However, given the proximity of the Severn and Avon Vale, there is potential for these species to occasionally utilise and disperse through habitat within the county. Therefore, in line with the precautionary approach, a desk-based study was undertaken to identify potential impacts from proposed allocations on offsite habitat used by the qualifying bird species. The desk-based study relied on a sequential approach, whereby if a site's suitability for qualifying bird species was considered negligible or low for a specific reason (e.g. distance or habitat type) no further investigations for that allocation were carried out. If, following the initial review of distance and habitat, a site's potential suitability for qualifying bird species could not be ruled out, a more detailed assessment including mapping of existing relevant bird records may be required. The initial desk study included the following components to inform the assessment:

- Identification of the bird species which are susceptible to the loss of the habitat types affected and ruling out those species unlikely to utilise the habitat types located within the site allocations (e.g. species restricted to marine habitats).
- A review of aerial imagery and Magic Map Application to identify main habitat types and land use within each site allocation and establish their potential value for qualifying birds.
- Recognition of factors likely to affect suitability of allocations for bird species, including openness, size, shape, proximity of negative factors such as tall boundary features and urban environs, and potential existing sources of disturbance.
- Consideration of the site's location within the landscape. For example, is there direct functional connectivity along flight lines between the allocation and the European sites? Are there landscape scale features which would reduce the suitability of the allocation, e.g. urban areas located along flight lines?
- A review of the site's location within flood risk zones, because many of the SPA bird species favour sites which do or do not flood.

Bird Habitat Preferences

5.16 Bird habitat preferences were cross referenced against the habitat types present within each allocation to determine the suitability of site allocations for qualifying species. Known habitat preferences are summarised below, which were taken from Birds of the Western Palearctic and British Trust for Ornithology. Whether each bird species is susceptible to the loss of habitats located within the site allocations was assessed.

Typical Habitat preferences of Qualifying Bird Species of Severn Estuary SPA and Ramsar site

Gadwall *Anas strepera* (Wintering)

- Species Habitat Preferences (relative to season of designation):
  - They visit gravel pits, lakes, reservoirs and coastal wetlands and estuaries in winter. They tend to breed in the shallow edges of lakes and gravel pits where there is vegetation.
- Susceptible to loss of offsite habitat as a result of the plan:
  - Yes – may use flooded fields

Greater white-fronted goose *Anser albifrons albifrons* (Wintering)

- Species Habitat Preferences (relative to season of designation):
  - They breed in the tundra near wetlands, rivers, and ponds. During migration they forage in wet sedge meadows, tidal mudflats, ponds, lakes, and wetlands. In the winter they frequently roost on open lakes and ponds at night.
- Susceptible to loss of offsite habitat as a result of the plan:
  - Yes – may use flooded fields.

Dunlin *Calidris alpina alpina* (Wintering)

- Species Habitat Preferences (relative to season of designation):
  - A common winter visitor to our coasts. They breed in a wide variety of habitats including boggy tundra, moorland often close to pools, wet coastal grassland and salt marshes, tussock tundra and peat-hummock in Arctic. After breeding, it frequents tidal mudflats, freshwater lakes,

brackish lagoons, sandy beaches and flooded fields, and also estuarine mudflats.

- Susceptible to loss of offsite habitat as a result of the plan:
  - Yes – may use flooded fields.

Bewick's Swan *Cygnus columbianus bewickii* (Wintering)

- Species Habitat Preferences (relative to season of designation):
  - During breeding season, they are found on Arctic tundra landscapes, using lakes, pools and ponds. Winter habitats include marshlands, grasslands, and cultivated fields, particularly in coastal areas or around estuaries.
- Susceptible to loss of offsite habitat as a result of the plan:
  - Yes – may use flooded fields and pasture / arable fields.

Shelduck *Tadorna Tadorna* (Wintering)

- Species Habitat Preferences (relative to season of designation):
  - In winter, they are commonly found on muddy estuaries and coastal wetlands, and most often live on salt or brackish water, although will also visit fresh water to drink. Breeding habitats are found increasingly further inland, with sites such as gravel pits, reservoirs, lakes, and farmlands offering ideal nesting locations. They frequently lay their eggs in abandoned rabbit burrows, so rural land with sandy soils can offer a perfect setting.
- Susceptible to loss of offsite habitat as a result of the plan:
  - Yes – may use flooded fields.

Redshank *Tringa tetanus* (Wintering)

- Species Habitat Preferences (relative to season of designation):

- During the winter they are largely coastal, occupying rocky, muddy and sandy beaches, saltmarshes, tidal mudflats, saline and freshwater coastal lagoons, tidal estuaries and sewage farms. They breed on coastal saltmarshes, inland wet grasslands, including cultivated meadows, grassy marshes, swampy heathlands and wet moors, typically returning to the same nesting area year after year. The nest is characteristically a shallow scrape or hollow on a hummock or at the base of a tuft of grass, often well-hidden.

- Susceptible to loss of offsite habitat as a result of the plan:
  - No – habitats affected are of low importance to this species.

Black-tailed Godwit *Limosa limosa islandica* (Wintering)

- Species Habitat Preferences (relative to season of designation):
  - During breeding, typically favours marshy hummocky moorland but changes in land management have created new habitat and poorly drained pastures, damp heaths free of scrub, or border of reedy wetland are of primary importance. But other grasslands managed as meadows, especially when grazed and hay-cut and flooded in winter are also used. Outside the breeding season, favoured habitats include sewage farms, lake margins, tidal marshes, mudflats and sheltered coastal inlets.
- Susceptible to loss of offsite habitat as a result of the plan:
  - Yes – despite a preference for coastal habitat outside the breeding period this species may use flooded pasture and other grasslands for feeding.

Eurasian whimbrel *Numenius phaeopus* (Migratory)

- Species Habitat Preferences (relative to season of designation):
  - They live on the tundra in breeding season. In the winter, it can be found in coastal areas on mudflats, marshes, and shorelines.

- Susceptible to loss of offsite habitat as a result of the plan:
  - No – habitats affected are of low importance to this species.

Wigeon *Anas Penelope* (Wintering)

- Species Habitat Preferences (relative to season of designation):
  - They live on coastal marshes, freshwater and brackish lagoons, estuaries, bays. They can also live on inland wetlands, lakes, rivers and turloughs.
- Susceptible to loss of offsite habitat as a result of the plan:
  - Yes – may use flooded fields.

Teal *Anas crecca* (Wintering)

- Species Habitat Preferences (relative to season of designation):
  - On passage or in winter will frequent open habitats such as shallow tidal coasts, large estuaries, saltmarshes, and lagoons, brackish or saline, flooded fields, and artificial waters such as reservoirs devoid of vegetation.
- Susceptible to loss of offsite habitat as a result of the plan:
  - Yes – may use flooded fields.

Mallard *Anas platyrhynchos* (Resident)

- Species Habitat Preferences (relative to season of designation):
  - They can live anywhere where there is a suitable wetland habitat which can include urban areas.
- Susceptible to loss of offsite habitat as a result of the plan:
  - Yes – may use flooded fields and urban wetland.

Pintail *Anas acuta* (Wintering)

- Species Habitat Preferences (relative to season of designation):
  - They tend to live at sheltered coasts and estuaries. They can also live on lakes, ponds, wetlands and marshes.
- Susceptible to loss of offsite habitat as a result of the plan:
  - Yes – may use flooded fields.

Shoveler *Anas clypeata* (Wintering)

- Species Habitat Preferences (relative to season of designation):
  - They use shallow wetlands with submerged vegetation during the breeding season, nesting along the margins and in the neighbouring grassy fields. Outside of the breeding season they forage in saltmarshes, estuaries, lakes, flooded fields, wetlands, agricultural ponds, and wastewater ponds.
- Susceptible to loss of offsite habitat as a result of the plan:
  - Yes – may use flooded fields.

Pochard *Aythya farina* (Wintering)

- Species Habitat Preferences (relative to season of designation):
  - They use large lakes, estuaries, slow-flowing rivers, reservoirs, marshes and flooded gravel pits.
- Susceptible to loss of offsite habitat as a result of the plan:
  - Yes – may use flooded fields.

Tufted Duck *Aythya fuligula* (Resident)

- Species Habitat Preferences (relative to season of designation):

  - They use lakes, reservoirs and flooded gravel pits.
- Susceptible to loss of offsite habitat as a result of the plan:
  - Yes – may use flooded fields.

Grey Plover *Pluvialis squatarola* (Wintering)

- Species Habitat Preferences (relative to season of designation):
  - They are found only along coasts, preferring large muddy and sandy estuaries.
- Susceptible to loss of offsite habitat as a result of the plan:
  - No – habitats affected are of low importance to this species.

Lapwing *Vanellus vanellus* (resident)

- Species Habitat Preferences (relative to season of designation):
  - They will live on all types of farmland but prefer mixed farming systems and extensively managed wet grasslands.
- Susceptible to loss of offsite habitat as a result of the plan:
  - Yes – may use arable / pasture fields.

Whimbrel *Numenius phaeopus* (Migratory)

- Species Habitat Preferences (relative to season of designation):
  - They mainly live on open tundra, beaches, and mudflats. However, as a passage migrant, they can live on inland wetlands.
- Susceptible to loss of offsite habitat as a result of the plan:
  - Yes – may use flooded fields.

Curlew *Numenius arquata* (Wintering)

- Species Habitat Preferences (relative to season of designation):
  - They use tidal mudflats, saltmarshes and nearby farmland.
- Susceptible to loss of offsite habitat as a result of the plan:
  - Yes – may use arable / pasture fields.

Spotted Redshank *Tringa erythropus* (Wintering)

- Species Habitat Preferences (relative to season of designation):
  - They live mainly on coastal wetlands and estuaries.
- Susceptible to loss of offsite habitat as a result of the plan:
  - No – habitats affected are of low importance to this species

Typical Habitat preferences of Qualifying Bird Species of Walmore Common SPA and Ramsar site

Bewick's Swan *Cygnus columbianus bewickii* (Winter)

- Species Habitat Preferences (relative to season of designation):
  - During breeding season, they are found on Arctic tundra landscapes, using lakes, pools and ponds. Winter habitats include marshlands, grasslands, and cultivated fields, particularly in coastal areas or around estuaries.
- Susceptible to loss of offsite habitat as a result of the plan:
  - Yes – may use flooded fields and pasture / arable fields.

5.17 The review of habitat types located within the site allocations, in light of individual bird species preferences, identified the following bird species as being potentially susceptible to the loss of offsite habitat associated with site allocations proposed within the Plan. This included:

- Gadwall
- Greater White-fronted Goose
- Bewick's Swan
- Shelduck
- Black-tailed Godwit
- Teal
- Dunlin
- Wigeon
- Pintail
- Shoveler
- Tufted Duck

Assessment of Site Allocations

5.18 Following the establishment of typical habitat preferences for each species, each site allocation proposed in the plan was assessed for its suitability in supporting the qualifying bird species listed above. The assessment was based on a number of parameters, as described below. Typically, site allocations displayed varying combinations of the parameters outlined below and findings on suitability for SPA/Ramsar qualifying birds were therefore subject to professional judgement. The findings of the assessment of site allocations are set in Appendix E with a summary set out below in relation to bird species that are qualifying features of both Severn Estuary SPA and Ramsar site and Walmore Common SPA and Ramsar site.

Suitability for SPA and Ramsar Birds

- High
  - Large sites; area of suitable habitat (e.g. wet grasslands, permanent pastures, arable) capable of supporting significant numbers of SPA birds; absence of any notable negative factors such as ProW and edge features; land parcel functionally linked with wider habitat and directly linked to SPA/Ramsar via green corridor; site may be prone to flooding; typically close to SPA/Ramsar and coast.
- Moderate
  - Sites support large areas of functionally linked suitable habitat capable of attracting numbers of SPA birds which by themselves are unlikely to be significant, but which may contribute to supporting significant numbers of birds in-combination with other sites. Likely to be further from SPA/Ramsar and coast, and with presence of some limiting factors.
- Low
  - Smaller or fragmented sites; habitats present may be suitable for supporting low numbers of SPA birds on occasion but limited by negative factors such as size, distance from SPA/Ramsar; absence of sight lines and reductions in 'openness' as a result of edge features such as trees, scrub, and buildings; edge features likely to be close to centre of site; suitability may be compromised by existing recreational use; may be isolated within urban areas.
- Negligible
  - Habitats present are entirely unsuitable for SPA birds, for example existing developed land or small urban infill sites.

5.19 Appendix E details the assessment of the suitability of allocations for qualifying bird species of the Severn Estuary SPA and Ramsar site and Walmore Common SPA and Ramsar site. The desk-based review of site allocations identified that the majority of site allocations have low or negligible potential to support significant numbers of SPA/Ramsar qualifying bird species,

either alone or cumulatively with other allocations, and were therefore discounted from further consideration in terms of offsite functional land.

5.20 Three site allocations (Policy ROSS2: Land to the east of Ross-on-Wye, Policy LEDB3: Land south of Little Marcle Road and Policy HERE7: Sustainable urban expansion at Lower Bullingham) were identified with moderate potential to support these qualifying bird species. The sites identified above provide suitable offsite foraging habitat for qualifying bird species in the form of farmland. No sites with high potential to support qualifying bird species were identified.

5.21 Uncertainty remains under the precautionary principle as to whether the loss of habitats within these site allocations will, cumulatively with each other and in-combination with the loss of habitat with other plans and projects, adversely affect the integrity of the SPA and Ramsar site in relation to the qualifying species. Given the dependency of these species on functionally linked land, inclusion and implementation of appropriate safeguards and mitigation will be required in Local Plan to provide certainty that there will be no adverse effect on the integrity of the SPA and Ramsar site.

Avoidance and Mitigation

5.22 To provide certainty that the loss of offsite functional habitat will not adversely affect the integrity of Severn Estuary SPA and Ramsar site or Walmore Common SPA and Ramsar site, it is recommended that the following safeguard measures are implemented at the project level:

- Wintering or and breeding bird surveys are required for sites with moderate suitability (Policy ROSS2: Land to the east of Ross-on-Wye; Policy LEDB3: Land south of Little Marcle Road and Policy HERE7: Sustainable urban expansion at Lower Bullingham) to support these qualifying bird species to determine their individual and cumulative importance for these species and inform mitigation proposals.
- A commitment to mitigation is required within the plan, dependent on the findings of bird surveys. In the unlikely but possible event that cumulative

numbers of SPA and Ramsar birds affected are likely to exceed thresholds of significance (i.e. >1% of the population of associated European Site), appropriate mitigation in the form of habitat creation and management in perpetuity, either on-site or through provision of strategic sites for these species elsewhere on the Island, will be required. If required, mitigation will need to create and manage suitably located habitat which maximises feeding productivity for these SPA and Ramsar species, and such mitigatory habitat would need to be provided and be fully functional prior to development which would affect significant numbers of SPA and Ramsar birds.

5.23 In addition, policies within the Herefordshire Local Plan will provide safeguards from physical damage and loss of habitat. Policy EE1: Protecting and enhancing the quality of the natural environment specifies that development should:

2. protect, conserve and enhance statutory and locally designated landscape, ecological and geological sites;

3. protect and conserve priority habitats and protected species;

4. protect, conserve and enhance landscape features, habitats and ecological connectivity, extending Herefordshire's natural capital, green and blue infrastructure, and nature recovery networks;

5. protect and enhance key natural assets of agricultural soils, water, and wetlands, woodlands, river meadows, or any scheme that could impact habitat diversity.

5.24 It is recommended that the wording of Policy EE1 is further strengthened to include additional wording that ensures the protection of functionally linked land that qualifying birds of the Severn Estuary SPA and Ramsar site and

Walmore Common SPA and Ramsar site rely on. This could include the following wording:

"Any plan or development which is considered to have a likely significant effect upon a European and/or Ramsar site will be subject to an Appropriate Assessment under the Habitats Regulations Assessment in order to ascertain whether an adverse effect on the site integrity can be excluded. This should consider any avoidance, mitigation or compensatory measures."

5.25 This will ensure that development as a result of the Herefordshire Local Plan, especially when considering Policy ROSS2, Policy LEDB3 and Policy HERE7, will not have a negative impact on functionally linked land that the qualifying features of Severn Estuary SPA and Ramsar site and Walmore Common SPA and Ramsar site rely on.

Conclusion

Providing the above mitigation measures and additional recommendations are incorporated into the Herefordshire Local Plan, and implemented successfully, adverse effects on the integrity of the Severn Estuary SPA and Ramsar site and Walmore Common SPA and Ramsar site will be avoided.

Non-physical Disturbance, including functionally linked land

River Wye SAC / Severn Estuary SAC and Ramsar Site

5.26 The River Wye SAC is designated for otter and migratory fish species and the hydrologically connected Severn Estuary is designated for migratory fish species, which are susceptible to impacts from non-physical disturbance. Due to the hydrological connectivity of the Seven Estuary SAC and Ramsar site to the River Wye, it is considered likely that fish species for which it is designated will rely on offsite habitat associated with the River Wye and it adjoining tributaries.

5.27 A review of proposed site allocations at the screening stage identified the following allocations within 500m of the River Wye SAC and its associated tributaries:

- Policy ROSS2: Land to the East of Ross-on-Wye
- Policy HERE1: Strategic Development for Hereford
- Policy HERE2: Supporting the vitality of Hereford City Centre
- Policy HERE7: Sustainable Urban Expansion at Lower Bullingham;
- Policy HERE6: Sustainable Urban Expansion at Three Elms
- Policy HERE4: Supporting movement in and around Hereford
- Policy RURA4: Rural Strategic Transport
- Policy HERE3: Supporting Jobs in Hereford
- Policy PE1: Accommodating economic growth
- Policy PE4: Sustainable tourism

- Policy AG1: Accommodating housing growth
- Policy PE5: Supporting a strong Rural Economy
- Policy PE1: Accommodating economic growth
- Policy PE2: Principles for economic growth
- Policy AG2: Strategic rural housing distribution
- Policy AG4: Rural settlement exemptions for affordable housing, entry level homes, affordable, self and custom build housing and small scale affordable Traveller sites
- Policy AG6: Gypsies, Travellers and Travelling Show people

5.28 Due to the proximity of these proposed site allocations to the River Wye SAC and/or functionally linked land associated with the River Wye and hydrologically connected Severn Estuary SAC, appropriate mitigation measures will be required to ensure no adverse effects on integrity.

Severn Estuary SPA and Ramsar Site / Walmore Common SPA and Ramsar Site

5.29 The Severn Estuary SPA and Ramsar site and Walmore Common SPA and Ramsar site are designated for supporting for waterbird species, which are susceptible to impacts from non-physical disturbance.

5.30 As outlined above in relation to impacts to the Severn Estuary SPA and Ramsar site and Walmore Common SPA and Ramsar site, it is considered unlikely for Herefordshire to present a key resource of functionally linked land for these bird species to rely on. However, due to the proximity of the Severn and Avon Vale, which provides a vital resource of functionally linked land for these bird species, there is potential for these species to utilise and disperse through habitat in the county and as such a precautionary approach has been applied. To provide certainty that proposed development in Herefordshire from the Local Plan will not adversely affect the integrity of the Severn Estuary SPA

and Ramsar site and Walmore Common SPA and Ramsar site, the safeguards and mitigation measures as detailed below will be required.

Avoidance and Mitigation

5.31 Potential effects associated with non-physical disturbance could be avoided and mitigated through a commitment to best practice working measures and maintaining appropriate buffers between operations and the River Wye SAC; Severn Estuary SAC, SPA and Ramsar site; and Walmore Common SPA and Ramsar site. However, to provide sufficient certainty that potential harmful effects to River Wye SAC; Severn Estuary SAC, SPA and Ramsar site; and, Walmore Common SPA and Ramsar site can be prevented, the following additional avoidance and mitigation measures are recommended for inclusion in the Herefordshire Local Plan in relation to non-physical disturbance:

- Project-level/site specific HRA and targeted ecological surveys should be required for future proposals within Policy HERE1: Strategic development for Hereford; Policy HERE2: Supporting the vitality of Hereford City Centre; Policy RURA4: Rural strategic transport; Policy HERE3: Supporting jobs in Hereford; and Policy HERE4: Supporting movement in and around Hereford; Policy PE1: Accommodating economic growth; Policy PE4: Sustainable tourism; Policy PE2: Principles for economic growth; Policy AG1: Accommodating housing growth; Policy AG2: Strategic rural housing distribution; Policy AG4: Rural settlement exemptions for affordable housing, entry level homes, affordable, self and custom build housing and small scale affordable Traveller sites; Policy AG6: Gypsies, Travellers and Travelling Show people; Policy HSC2: Infrastructure delivery; and, Policy PE5: Supporting a strong Rural Economy.
- Additional wording should be added to the below policies to ensure that no artificial lighting will be introduced that could have an adverse impact on qualifying fish species given that the sites are located within 500m of the River Wye SAC:
    - Policy ROSS2: Land to the East of Ross-on-Wye

- Policy HERE1: Strategic development for Hereford
- Policy HERE2: Supporting vitality of Hereford City Centre
- Policy HERE6: Sustainable Urban Expansion at Three Elms
- Policy HERE7: Sustainable Urban Expansion at Lower Bullingham

5.32 The Local Plan already includes wording in Policy EE1 Protecting and Enhancing the Quality of the Natural Environment, which specifies:

> All development proposals should provide and consider their effect upon the following aspects:
>
> 2. protect, conserve and enhance statutory and locally designated landscape, ecological and geological sites;
>
> 12. promote, maintain and increase the intrinsically dark landscapes and dark skies of the county. Schemes should avoid superfluous outdoor lighting to help to reduce light pollution and protect dark skies and night-time environment, improving air quality to ensure wildlife and natural habitats thrive;
>
> 13. avoid and minimise air, water and noise pollution and manage effects on habitats and species;

5.33 The additional wording proposed above and the avoidance and mitigation measures proposed are considered to provide sufficient mitigation to ensure that no adverse effects on integrity will occur in relation to non-physical disturbance on these European sites.

Conclusion

Providing the above mitigation measures and additional recommendations are incorporated into the Herefordshire Local Plan, and implemented successfully, adverse effects on the integrity of the River Wye SAC, Severn Estuary SAC, SPA and Ramsar site and Walmore Common SPA and Ramsar Site as a result of non-physical disturbance including functionally linked land will be avoided.

Non-toxic Contamination

River Wye SAC

5.34 As described in the screening assessment, non-toxic contamination during the construction phase of new development may create dust and sediment which can be harmful to qualifying features of European sites, for example through smothering which can limit natural processes such as photosynthesis or affect the turbidity and temperature of water. Chapter 3 identified that the potential for non-toxic contamination as a result of the Herefordshire Local Plan, which relates primarily to dust creation, is restricted to sites in proximity (<500m) of the River Wye SAC.

5.35 A review of proposed site allocations identified the following within 500m of the SAC:

- Policy HERE2: Supporting the vitality of Hereford City Centre
- Policy HERE4: Supporting movement in and around Hereford
- Policy ROSS2: Land to the East of Ross- on- Wye
- Policy RURA4: Rural Strategic Transport

5.36 Due to the proximity of these proposed site allocations to the SAC, appropriate mitigation measures will be required to ensure no adverse effects on integrity.

Avoidance and Mitigation

5.37 Potential effects associated with non-toxic contamination could be avoided and mitigated through a commitment to best practice working measures and maintaining appropriate buffers between operations and the River Wye SAC. However, to provide sufficient certainty that potential harmful effects to the SAC can be prevented, the following additional avoidance and mitigation measures are recommended for inclusion in the Local Plan in relation to non-toxic contamination:

- The site specific HRA for Policy ROSS2: Land to the East of Ross-on-Wye should require appropriate best practise construction measures to reduce any impacts on qualifying species, for example from dust during construction of the development.
- This requirement (for project-level/site specific HRA and targeted ecological surveys) should also be required for future proposals within Policy HERE2: Supporting the vitality of Hereford City Centre; Policy RURA4: Rural Strategic Transport; and Policy HERE4: Supporting movement in and around Hereford.

5.38 The plan already includes wording in Policy EE1: Protecting and Enhancing the Quality of the Natural Environment, which specifies:

> All development proposals should provide and consider their effect upon the following aspects:
>
> 2. protect, conserve and enhance statutory and locally designated landscape, ecological and geological sites;

13. avoid and minimise air, water and noise pollution and manage effects on habitats and species;

5.39 The mitigation and avoidance measures proposed is considered to provide sufficient mitigation to ensure that no adverse effects on integrity will occur in relation to non-physical disturbance on these European sites.

Conclusion

Providing the above mitigation measures and additional recommendations are incorporated into the Local Plan, and implemented successfully, adverse effects on the integrity of the River Wye SAC as a result of non-toxic contamination, will be avoided.

Air Pollution

River Wye SAC

5.40 Natural England's advice on assessing road traffic emissions recommends that consideration is initially given to the extent to which the qualifying features of the European site in question will be exposed to emissions resulting from the plan.

5.41 Natural England's Site Improvement Plan identifies air pollution, and specifically the effect of atmospheric nitrogen deposition as a threat to the River Wye SAC. It specifies that it is the transition mire component of the SAC which is vulnerable to the effects of air pollution. This component habitat of the SAC is limited to areas within Wales, located several kilometres outside of the

Herefordshire County boundary at locations unlikely to be affected by changes in traffic as a result of the Local Plan.

5.42 The initial assessment determined that the following roads were within 200m of the River Wye SAC: A438, A49, A40, A4103, A417, A479, A4079, A44, A466, A470, A481, A483, A488, A4081, A4136, A4137 and A4078. The A49, A438, A40 and A465 are the main routes into Hereford from within and outside of Herefordshire.

5.43 Each of these locations is typically characterised by a road intersecting the River Wye SAC via a bridge, or running adjacent to the meander of the river which increases its proximity to the road at a given location. Therefore, the parts of the SAC where primary roads are within 200m of the SAC are focused at discrete locations. Each of these locations is characterised by the fluvial river component of the SAC, and the locations are generally separated from the river by broadleaved woodlands which are likely to act as a buffer to the effects of emissions. The river component of the SAC, together with the qualifying species likely to occur at these locations (otter and fish), are less susceptible to the effect of emissions. The effects of air pollution at these locations would need to degrade habitats to such an extent for habitat changes or effects on water quality to occur. The River Wye SAC has been identified has having poor water quality and as such an additional impacts that may arise from air pollution may adversely affect the qualifying features of the SAC. None of the above locations support the transition mire habitat which is identified as being sensitive to the effects of air pollution.

5.44 In addition to vehicle traffic, air pollution may also be caused by an increase in vehicle movements associated with development proposed in the Herefordshire Local Plan. Development is mainly proposed along the main routes within Herefordshire which include the A40, A49, A438, A49 and A417. However, development proposed away from these key routes could also increase the level of vehicle movements within Herefordshire. A minimum of 16,100 new dwellings are proposed within the plan period in Herefordshire through Policy AG1: Accommodating housing growth. Additionally, a total of 172ha of employment land is proposed through Policy PE1: Accommodating

economic growth. This will add a significant level of vehicle movements to the roads within Herefordshire, including potentially HGVs.

5.45 To provide certainty that proposed development in Herefordshire from the Local Plan will not adversely affect the integrity of the River Wye SAC, AADT traffic modelling data will be required to understand the change in traffic movements as a result of the Local Plan.

Wye Valley Woodlands SAC

5.46 The woodland habitats for which the Wye Valley Woodlands SAC is designated are particularly sensitive to the effects of air pollution. Deposition of pollutants to the ground and vegetation can alter the characteristics of the soil, affecting the pH and nitrogen availability that can then affect plant health, productivity and species composition. 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.

5.47 As identified in Chapter 3, increases in vehicle flows of 200 AADT or more have the potential to result in likely significant effects as a result of increases in air pollution. Development within Herefordshire could generate additional traffic. Critical loads for nitrogen have been established for certain habitats dependent on low nitrogen levels and are expressed in deposition units of kg N/ha/yr, and are reported in DMRB guidance and on the Air Pollution Information System (APIS) database. Data from APIS have been used to identify those European sites in and around Herefordshire where levels of particular pollutants are already exceeding critical loads, indicating that any increases could have adverse impacts.

5.48 The Wye Valley Woodlands SAC lies within 200m of the A40, A466 and A4136. The Wye Valley Woodlands SAC contains qualifying habitats that are sensitive to deposition of nitrogen and are currently exceeding critical loads, including broadleaved and coniferous woodland. Therefore, proposed

development in the Local Plan has the potential to adversely affect the qualifying features of the SAC.

5.49 To provide certainty that proposed development in Herefordshire from the Local Plan will not adversely affect the integrity of the Wye Valley Woodlands SAC, AADT traffic modelling data will be required to understand the change in traffic movements as a result of the Local Plan.

Wye Valley Woodlands and Forest of Dean SAC

5.50 Only a small part of the Wye Valley and Forest of Dean Bat Sites SAC is located adjacent to the A4136. Other parts of the Wye Valley and Forest of Dean Bat Sites SAC are located adjacent to or near B roads. The A136 is accessed off the A40 with the SAC lying approximately 6.2km from the A136 and A40 junction. The A136 is accessed off the A40 with the SAC lying approximately 6.2km from the A136 and A40 junction.

5.51 The qualifying features for the Wye Valley and Forest of Dean Bat Sites SAC include the Greater and Lesser Horseshoe Bat. The Greater and Lesser Horseshoe Bat has not been identified as vulnerable to changes in air quality and pollution. However, Greater and Lesser Horseshoe Bat rely on woodland habitat which are particularly sensitive to the effects of air pollution. Deposition of pollutants to the ground and vegetation can alter the characteristics of the soil, affecting the pH and nitrogen availability that can then affect plant health, productivity and species composition. In addition, deposition of nitrogen compounds may lead to both soil and freshwater acidification.

5.52 Development is proposed along the A40 around Ross-on-Wye and Weston under Penyard including Policy RURA3: Land opposite playing fields, Weston under Penyard and Policy ROSS2: Land to the East of Ross-on-Wye. The total indicative housing numbers is currently unknown but Land to the East of Ross-on-Wye is a mixed-use sustainable urban extension compromising of a minimum of 1,000 homes and 33 ha of employment land. This could result in an

increase in vehicle movements on the A40 and the adjoining A136 adversely impacting air quality.

5.53 To provide certainty that development proposed in Herefordshire through the Local Plan will not adversely affect the integrity of the Wye Valley Woodlands and Forest of Dean SAC, AADT traffic modelling data will be required to understand the change in traffic movements as a result of the Local Plan.

River Clun SAC

5.54 The River Clun SAC is located within 200m of the A4113. The A4113 passes through the settlements of Bromfield and Leintwardine before heading west into Wales. The qualifying feature of the River Clun SAC is the Freshwater Pearl. Impacts of air pollution have the potential to affect the water habitat that the Freshwater mussels relies on as increasing air pollution can result in pollutants entering the water environment. The SSSI condition survey confirmed that the Freshwater Pearl is in unfavourable – declining condition partly due to water pollution. Therefore, development proposed in the Local Plan has the potential to adversely affect the qualifying features of the SAC.

5.55 To provide certainty that proposed development in Herefordshire from the Local Plan will not adversely affect the integrity of the River Clun SAC, AADT traffic modelling data will be required to understand the change in traffic movements as a result of the Local Plan.

River Usk SAC

5.56 The screening assessment determined that the following roads were within 200m of the River Usk SAC: A4143, A472, A479, A40, A4042, A4077 and A465. The River Usk runs alongside part of the A40 which is the main route into Herefordshire from Gloucester. The River Usk SAC supports a number of migratory fish including Lamprey, Shad and Atlantic Salmon as well as Otter.

The qualifying species of the River Usk SAC rely on the water environment as a habitat which could be impacted by air pollution. An increase in air pollution could result in more pollutants entering the water environment reducing water quality and inhibit the movement of fish species. Water pollution can also have a major impact on otter populations and is known to result in a decline in populations. The SSSI condition survey found that the SSSI's within the SAC are generally in unfavourable condition. However, the exact reason for the condition of the SSSI's condition is unknown. Therefore, proposed development in the Local Plan has the potential to adversely affect the qualifying features of the SAC.

5.57 To provide certainty that proposed development in Herefordshire from the Local Plan will not adversely affect the integrity of the River Usk SAC, AADT traffic modelling data will be required to understand the change in traffic movements as a result of the Local Plan.

Walmore Common SPA / Ramsar site

5.58 Walmore Common SPA and Ramsar site is located within 200m of the A48. The A48 runs to the south of Herefordshire providing a link from Gloucester to Wales. Walmore Common SPA and Ramsar site is located approximately 7.9km from the A48 and A40 junction.

5.59 The qualifying feature for the Walmore Common SPA and Ramsar site is the Bewick Swan. The Bewick Swan has not been identified as vulnerable to changes in air quality and pollution. However, an increase in air pollution from new development proposed through the Herefordshire Local Plan could result in more pollutants entering the water environment reducing water quality. The Walmore Common SSSI is currently within unfavourable condition with half the site in unfavourable – recovering condition. This is as a result of water and freshwater pollution which is leading to a reduction in water quality as a result of nitrate and phosphate concentrations.

5.60 A number of site allocations are located along the A40 around Ross-on-Wye and Weston under Penyard including Policy RURA3: Land opposite playing fields, Weston under Penyard and Policy ROSS2: Land to the East of Ross-on-Wye. The total indicative housing numbers is currently unknown but Land to the East of Ross-on-Wye is a mixed-use sustainable urban extension compromising a minimum of 1,000 homes and 33 ha of employment land. An increase in vehicle movements as a result of the Local Plan could impact air pollution resulting in an increasing number of pollutants entering the water environment.

5.61 To provide certainty that proposed development in Herefordshire from the Local Plan will not adversely affect the integrity of the Walmore Common SPA and Ramsar site, AADT traffic modelling data will be required to understand the change in traffic movements as a result of the Local Plan.

Cwm Clydach Woodlands SAC

5.62 The A465 is one of the key routes out of Hereford towards Wales. Cwm Clydach Woodlands SAC is located within 200m of the A465. Cwm Clydach Woodlands SAC contains beech forest as a qualifying feature. These woodland habitats are particularly sensitive to the effects of air pollution. Deposition of pollutants to the ground and vegetation can alter the characteristics of the soil, affecting the pH and nitrogen availability that can then affect plant health, productivity and species composition. Nitrogen oxides (NOx, i.e. NO and NO2) are considered to be the key pollutants from vehicle traffic. The SSSI condition survey indicates that Cwm Clydach Woodlands is in favourable condition.

5.63 There is no proposed development along the A465 within Herefordshire. Therefore, there is unlikely to be a significant increase in vehicle traffic and movements along the A465. Barriers are in place at the SAC to reduce vehicles access to the Cwm Clydach Woodlands SAC due to its position along the A465 and because roads runs through the SAC. However, given that woodland habitat is sensitive to effects of air pollution, proposed development in the Local Plan has the potential to adversely affect the qualifying features of the SAC.

5.64 To provide certainty that proposed development in Herefordshire from the Local Plan will not adversely affect the integrity of the Cwm Clydach Woodlands SAC, AADT traffic modelling data will be required to understand the change in traffic movements as a result of the Local Plan.

Usk Bat Sites SAC

5.65 Usk Bat Sites SAC is located within 200m of the A465 which provides a key route out of Hereford towards Wales. The A465 passes through the southern end of the Usk Bat Sites SAC. The Usk Bat Sites SAC is designated for having Lesser horseshoe bat which relies on wooded areas for feeding. Wooded areas are sensitive to changes in air quality and in particular Nitrogen oxides which could increase as a result of increased vehicle traffic due to development. Usk Bat Sites is generally in favourable condition apart from the qualifying features, blanket bog, degraded raised bogs and dry heaths which are in unfavourable condition.

5.66 To provide certainty that proposed development in Herefordshire from the Local Plan will not adversely affect the integrity of the Usk Bat Sites SAC, AADT traffic modelling data will be required to understand the change in traffic movements as a result of the Local Plan.

Avoidance and Mitigation

5.67 Policies already contained within the Local Plan will provide a degree of mitigation in relation to air quality effects. These include Policy EE1: Protecting and Enhancing the Quality of the Natural Environment, which outlines the requirement to protect European sites and specifies the need for development to improve air quality. Policy CC1: A Carbon Neutral Herefordshire also outlines that development will seek to encourage active travel and to improve air quality.

5.68 However, to fully understand the impacts of increased development resulting from the Local Plan, AADT traffic modelling data, which calculates the

change in trips that would result from the Local Plan over the plan period to 2041, is required to inform the Appropriate Assessment. If increases exceed the threshold of 1,000 AADT, air quality modelling will be required to understand whether the Local Plan will result in adverse effect on the integrity and whether avoidance and mitigation measures can be applied which would prevent an adverse effect. This data is required for the following routes: A438, A49, A40, A4103, A417, A479, A4079, A44, A466, A470, A481, A483, A488, A4081, A4136, A4137, A4078, A4113, A465, A4143, A472, A479, A4042, A48 and A4077.

Conclusion

In light of the above and in accordance with the precautionary principle, a conclusion of no adverse effect on integrity cannot be reached at this stage in relation to the effect of air pollution on either River Wye SAC, River Clun SAC, Wye Valley Woodlands SAC, Wye Valley and Forest of Dean Bat Sites SAC, Usk Bat Sites SAC, River Usk SAC, Cwm Clydach Woodlands SAC and Walmore Common SPA and Ramsar site. Further road traffic analysis and / or air quality modelling will be required to inform this assessment and ensure that no adverse effect as a result of air pollution.

Recreational pressure

River Wye SAC

5.69 The River Wye SAC is known to be popular location for a wide range of recreation activities, including canoeing, angling and dog walking, which may increase as a result of a growing nearby population.

5.70 Natural England's Site Improvement Plan outlines that the river is subject to high levels of use by canoeists and anglers, which can lead to damage and disturbance of habitat, such as the gravel bars and beds and through cutting of water crowfoot beds for navigation. In addition, the River Wye is a popular destination for walkers and their dogs with Public Rights of Way following the course of the river. Dog walking is a key threat as this can result in disturbance to otter using the river and associated riparian habitat to forage and shelter. Although, otters are nocturnal and sleep in holts or couches along the river corridor during the day, there is the potential for them to be disturbed while they are sleeping. These activities have the potential to adversely affect qualifying species of the SAC and the habitats which they rely on.

5.71 Some activities such as canoeing and fishing are restricted and therefore are more controlled. A valid fishing license and permit is required to fish on the River Wye. In relation to canoeing, there is a public right of navigation which allows easy travelling down the River Wye but launching and landing a canoe requires permission from the landowner along the riverbank **[See reference** 52**]**. The number of people involved in these activities is not likely to significantly increase as a result of development proposed through the Herefordshire Local Plan given that they are likely to be controlled and managed by fishing and canoeing organisations.

5.72 The Local Plan will result in housing growth and associated population increase within Herefordshire. The Herefordshire Local Plan sets a housing requirement of 16,100 homes between 2021 and 2041.

5.73 Therefore, to provide certainty that proposed development in Herefordshire from the Local Plan will not adversely affect the integrity of the River Wye SAC appropriate mitigation will be required.

Wye Valley Woodlands SAC

5.74 Wye Valley Woodlands SAC is designated for its woodland habitat and for supporting lesser horseshoe bat. Natural England's Site Improvement Plan has

identified recreational impacts to be a key threat to this SAC. This is in relation to erosion and damage to ground flora from walkers and damage to cliff face communities from climbing. However, the majority of the woodland in the SAC is within favourable condition. The lesser horseshoe bats are particularly vulnerable to disturbance whilst breeding and during hibernation as this species roosts in underground sites within the SAC. The majority of the underground roosts are blocked by grills to deter and minimise access by people. This will reduce disturbance to underground bat roosts and limit those gaining unauthorised access for activities, such as caving. In addition, a Core Management Plan is in place for the Wye Valley Woodlands SAC.

5.75 Wye Valley Woodlands SAC falls within the Wye Valley Area of National Landscape covering a total of 2.8% of the National Landscape. There are also a number of Public Rights of Way, which run through parts of the woodland. The National Landscape and the Public Rights of Way both encourage and allow access to the SAC. A Management Plan is in place for the Wye Valley National Landscape **[See reference** 53**]** to support conserving and enhancing the National Landscape. The Management Plan aims to promote the improvement of the visitor experience to the National Landscape without conflicting with the special qualities of the SACs within the National Landscape. The nearest site allocation to the Wye Valley Woodlands SAC is located approximately 7.9km away at Ross-on-Wye. However, given the wider attraction of the National Landscape which Wye Valley Woodlands SAC falls within, appropriate mitigation measures will be required to ensure no adverse effects on integrity.

Avoidance and Mitigation

5.76 Policies in the plan will provide some degree of mitigation. Policy EE1: Protecting and Enhancing the Quality of the Natural Environment specifies:

> All development proposals should provide and consider their effect upon the following aspects:

2. protect, conserve and enhance statutory and locally designated landscape, ecological and geological sites;

3. protect and conserve priority habitats and protected species;

4. protect, conserve and enhance landscape features, habitats and ecological connectivity, extending Herefordshire's natural capital, green and blue infrastructure, and nature recovery networks;

14. encourage and support the long term management of all features in the natural environment.

5.77 The provision of alternative natural green space and green infrastructure represents an important aspect of mitigation for European sites, such as River Wye SAC and Wye Valley Woodlands SAC. Therefore, the strategic approach to incorporating protective measures specified in the plan is considered likely to provide an effective contribution in mitigating significant effects associated with recreation. This mitigation is provided in the plan through Policy HSC3: Green and Blue Infrastructure, which outlines:

To ensure that the county is able to maximise the benefits delivered by green and blue infrastructure for people and wildlife, developments are expected to:

2. Create new and protect and enhance existing green and blue infrastructure on-site, and link to existing green and blue infrastructure nearby. New green and blue infrastructure, such as open space and/or recreational space, should be designed and managed to attract walkers and dog walkers. This will minimise adverse impacts on the River Wye SAC and Wye Valley Woodlands SAC;

3. Help provide better links between urban and rural landscapes, creating accessible and attractive places for communities to make regular contact with the natural environment;

4. Address the aspects of 'People', 'Place' and 'Nature'. Ensure that green and blue infrastructure is designed to support the delivery of wider landscape-scale green networks including through tree planting, Biodiversity Net Gain enhancements, and natural and semi-natural green space provision;

6. Allow, where applicable, for blue infrastructure to take account of existing wetland habitats, watercourses and ground water, as well as new proposals for surface and foul water drainage.

5.78 In addition to the above, Policy HERE9: Supporting Greening of the City in Hereford supports development proposals that will enhance opportunities to increase and improve the natural environment of Hereford. This will include the creation of green and blue infrastructure including at Bartonsham Meadows and the establishment of the Essex Arms wetland.

5.79 As well as the above, the following policies also require new green infrastructure including open space and/or recreational space to be delivered as part of the development reducing recreational pressure:

- Policy HERE5: Sustainable Urban Expansion at Holmer North
- Policy HERE6: Sustainable urban expansion at Three Elms
- Policy HERE7: Sustainable Urban Expansion at Lower Bullingham
- Policy BROM2: Land at Hardwick Bank
- Policy KING2: Land East of Kingswood Road
- Policy LEDB1: Strategic Development for Ledbury
- Policy LEDB2: Land South of Ledbury

- Policy LEDB4: Lawnside and Market Street Regeneration Area
- Policy LEOM2: Land south of the Primary School
- Policy ROSS1: Strategic Development for Ross-on-Wye
- Policy ROSS2: Land to the East of Ross-on-Wye

5.80 To maximise the effectiveness of its role in mitigating recreational impacts on European sites, the design and management of open space and green infrastructure will need to be focused towards attracting walkers and dog walkers to minimise adverse impacts on qualifying features of the River Wye SAC and Wye Valley Woodlands SAC.

5.81 In addition, site specific planning applications, especially larger ones in proximity to the above European sites, will need to consider the requirement to undertake project level HRA, and where appropriate would be expected to incorporate necessary safeguards in line with the policy safeguards included within the plan.

Conclusion

Providing the above mitigation measures and additional recommendations are incorporated into the Local Plan, and implemented successfully, adverse effects on the integrity of the River Wye SAC and Wye Valley Woodlands SAC as a result of increased recreation pressure will be avoided.

Water Quality

River Wye SAC / River Clun SAC

5.82 Proposed development as part of the Herefordshire Local Plan has the potential to contribute to increased levels of nitrogen and phosphorus entering the catchment of the River Wye, including the Lugg sub-catchment, and River Clun SAC causing eutrophication of these European sites.

5.83 Natural England has advised that any new development proposed that uses WwTW that discharge into the River Wye SAC and River Clun SAC and/or waterbodies that subsequently discharge into this designated site will need to demonstrate no adverse effects on integrity by achieving nutrient neutrality. This should be calculated using the Natural England methodology **[See reference** 54**]** and may require appropriate mitigation to achieve this. The majority of the development proposed through the Herefordshire Local Plan falls within the Wye and Lugg sub-catchment area and therefore, any discharge is into the River Wye. Some development is proposed around Ledbury which is located outwith the River Wye catchment areas. The River Wye SAC is failing to meet phosphate targets which with higher summer water temperatures could be contributing to algal growth. There are also high nitrogen levels. An increase in nutrients is mainly due to arable agriculture and sewage treatment works **[See reference** 55**]**. Approximately 60-70% of the River Wye's phosphorus comes from agriculture and 3,000 tonnes of it is entering the river every year **[See reference** 56**]**. The decreasing water quality of the River Wye due to high levels of nutrients could have an adverse impact on the site's qualifying features which include a number of migratory fish. In addition, the River Clun is currently in unfavourable condition due to excessive nutrients which include nitrogen and phosphorus.

5.84 There is an existing Nutrient Management Plan (NMP) for the River Wye SAC, which sought to identify actions that would enable additional development in the Local Plan-Core Strategy (beyond existing wastewater discharge consents) to proceed. However, due to the phosphate targets still being

exceeded, and the implications of the Dutch Nitrogen case (that there must be certainty that mitigation and avoidance measures will actually be achieved), the NMP has been superseded by new documents published by the Council in March 2020 (Position Statement and FAQs on Development in the River Lugg Catchment Area, and a Guidance Note and Checklist relating to HRA and planning applications). These mostly focus on applications for residential or commercial development that will result in overnight stays, as the River Wye SAC NMP identified that 'point source discharges, such as industrial and wastewater treatment works (WwTW) discharges are responsible for a large portion of the phosphate loading to the rivers. The main diffuse source of phosphate is thought to be from agricultural sources via land run off.' The planting of tree belts and strategic use of appropriate fencing on vulnerable land will help improve runoff.

5.85 In addition, a Nutrient Management Plan is in place for the River Clun SAC **[See reference** 57**]**. The nutrient management plan identified that agriculture and the Severn Trent Water effluent (mains sewerage and on site waste water treatment works) are the main sources of increasing phosphate levels. Agriculture is the main source of nitrogen and sediment levels in the River Clun. Population growth in the River Clun catchment area is likely to impact on phosphate concentrations. The River Clun catchment area covers the northern tip of Herefordshire. Within this area, no development is proposed through the Draft (Regulation 18) Herefordshire Local Plan.

5.86 Finally, DEFRA has designated 16 sensitive catchment areas under the Water Industry Act 1991 which are sensitive to nutrient enrichment and where wastewater works should be updated. Neither the River Wye SAC or the River Clun SAC were identified as an area sensitive to nitrogen and/or phosphorus enrichment.

Avoidance and Mitigation

5.87 The risks of phosphate discharges relating to stripping away topsoil and subsoil and development construction can be avoided by the use of conditions requiring development proposals to demonstrate how 'nutrient neutrality' (i.e. a

project would result in no net increase in the phosphate load being discharged to the River Wye SAC; this could be after controls at source, reduction by treatment, and/or offsetting measures), or 'betterment' (i.e. an improvement in the current situation regarding phosphate impacts, above and beyond neutrality) would be achieved.

5.88 The Local Plan identifies that improving water quality is a key priority. The plan includes wording in Policy EE1: Protecting and Enhancing the Quality of the Natural Environment, which specifies:

> All development proposals should provide and consider their effect upon the following aspects:
>
> 2. protect, conserve and enhance statutory and locally designated landscape, ecological and geological sites;
>
> 4. protect, conserve and enhance landscape features, habitats and ecological connectivity, extending Herefordshire's natural capital, green and blue infrastructure, and nature recovery networks;
>
> 5. protect and enhance key natural assets of agricultural soils, water, and wetlands, woodlands, river meadows, or any scheme that could impact habitat diversity; improve water quality and restore and enhance riparian habitats;
>
> 6. Demonstrate that they will not result in an adverse impact on the integrity of any National Site Network Site (Special Area of Conservation, Special Protection Areas or Ramsar) through additional nutrient and pollution pathways. Where Nutrient Neutrality is in place, developments must demonstrate phosphate neutrality or provide mitigation by utilising Natural England's budget calculation tool and methodology to demonstrate the budget. Outside of Nutrient Neutrality areas, developments must

demonstrate how best available technology has been applied, in line with Council guidance, to reduce nutrient (phosphate), sediment and pollution outputs as far as feasible and how those measures are sufficient to ensure that National Site Network Sites will be protected from harm;

13. avoid and minimise air, water and noise pollution, manage effects should be on habitats and species;

5.89 In addition, Policy RURA5: Rural strategic mitigation schemes supports sites for nutrient mitigation schemes that enable nutrient neutrality and help restore river network health in Herefordshire. This policy will ensure that Herefordshire Council is taking a lead role in supporting the restoration of its rivers and watercourses. Additionally, this policy will help counteract any potential increases in phosphate levels as a result of proposed development by providing mitigation measures. Herefordshire Council has developed the UK's first phosphate calculator, delivering integrated wetlands in the Lugg catchment and striving to have 'river betterment' by improving nutrient levels in rivers.

5.90 Sites that will result in a net increase in nutrient levels will be required to achieve nutrient neutrality and to ensure no adverse effect on the integrity (adverse effects on integrity) of the European Sites. This must be demonstrated through the provision of a project-level HRA and where there is an increase nutrient levels, appropriate mitigation measures implemented to ensure the scheme achieves nutrient neutrality. As recommended by Natural England, this should include consideration of nature-based solutions and / or upgrading existing WwTWs. Herefordshire Council also has published guidance on development in the River Lugg catchment area and Phosphate credits Lugg catchment as part of a nutrient budget calculator. Guidance has also been published on development in the River Clun catchment and development must demonstrate nutrient neutrality which can be calculated through a nutrient budget calculator.

5.91 In September 2022, the cabinet within Herefordshire Council approved the Cabinet Commission – Restoring the Wye **[See reference** 58**]** which aims to

undertake a strategic and systems led review of river quality to progress the restoration of the River Wye SAC to favourable conditions.

5.92 In addition, to prevent any adverse impact in relation to water quality, Herefordshire Council will need to undertake a nutrient neutrality assessment to demonstrate that development within Herefordshire will deliver nutrient neutrality.

Conclusion

Providing the above mitigation measures and additional recommendations are incorporated into the Herefordshire Local Plan, and implemented successfully, adverse effects on the integrity of the River Wye SAC and River Clun SAC as a result of changes in water quality will be avoided.

Summary of Appropriate Assessment

5.93 The conclusions of the Appropriate Assessment are summarised in Table 5.1 overleaf:

- The European sites that are shown as screened out with no colour indicate sites that were considered to have no likely significant effect at the screening stage.
- The European sites highlighted in grey were considered at the Appropriate Assessment stage but were found to have no adverse effect on integrity (AEoI) provided the mitigation measures detailed in Chapter 5 are implemented.
- For the remaining European site in orange, the potential impacts of the Local Plan in relation to the site are uncertain until more detail is obtained through relevant studies.

Table 5.1: Summary of Appropriate Assessment conclusions

European site	Physical damage / loss of habitat	Non-physical disturbance	Non-toxic contamination	Air pollution	Recreational pressure	Water quantity	Water quality
River Wye SAC	No AEoI	No AEoI	No AEoI	Uncertain	No AEoI	Screened out	No AEoI
River Clun SAC	Screened out	Screened out	Screened out	Uncertain	Screened out	Screened out	No AEoI
Downton Gorge SAC	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out
Wye Valley Woodlands SAC	Screened out	Screened out	Screened out	Uncertain	No AEoI	Screened out	Screened out
Wye Valley and Forest of Dean Bat Sites SAC	Screened out	Screened out	Screened out	Uncertain	Screened out	Screened out	Screened out
Coed y Cerrig SAC	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out
Sugar Loaf Woodlands SAC	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out
Rhos Goch SAC	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out
River Usk SAC	Screened out	Screened out	Screened out	Uncertain	Screened out	Screened out	Screened out

European site	Physical damage / loss of habitat	Non-physical disturbance	Non-toxic contamination	Air pollution	Recreational pressure	Water quantity	Water quality
Llangorse Lake SAC	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out
Usk Bat Sites SAC	Screened out	Screened out	Screened out	Uncertain	Screened out	Screened out	Screened out
Cwm Clydach Woodlands SAC	Screened out	Screened out	Screened out	Uncertain	Screened out	Screened out	Screened out
Lyppard Grange Ponds SAC	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out
Severn Estuary SPA, SAC and Ramsar site	No AEoI	No AEoI	Screened out	Screened out	Screened out	Screened out	Screened out
Walmore Common SPA and Ramsar site	No AEoI	No AEoI	Screened out	Uncertain	Screened out	Screened out	Screened out

Chapter 6

Conclusion and Next steps

6.1 At the Screening stage, likely significant effects on European sites, either alone or in combination with other policies and proposals, were identified for the following Local Plan policies:

- Policy AG1: Accommodating housing growth
- Policy AG2: Strategic rural housing distribution
- Policy HERE4: Supporting movement in and around Hereford
- Policy PE2: Principles for economic growth
- Policy AG4: Rural settlement exemptions for affordable housing, entry level homes, affordable, self and custom build housing and small scale affordable Traveller sites
- Policy AG6: Gypsies, Travellers and Travelling Show people
- Policy PE1: Accommodating economic growth
- Policy PE4: Sustainable tourism
- Policy PE5: Supporting a strong Rural Economy
- Policy HERE1: Strategic Development for Hereford
- Policy HERE4: Supporting movement in and around Hereford
- Policy KING1: Strategic Development for Kington
- Policy KING2: Land East of Kingswood Road
- Policy LEDB1: Strategic Development for Ledbury
- Policy LEDB2: Land to the South of Ledbury
- Policy LEDB3: Land south of Little Marcle Road;
- Policy LEDB4: Lawnside and Market Street Regeneration Area
- Policy RURA4: Rural strategic transport

- Policy HERE2: Supporting vitality of Hereford City Centre
- Policy HERE3: Supporting Jobs in Hereford
- Policy HERE5: Sustainable Urban Expansion at Homer North
- Policy HERE6: Sustainable Urban Expansion at Three Elms
- Policy HERE7: Sustainable Urban Expansion at Lower Bullingham
- Policy BROM1: Strategic Development for Bromyard
- Policy BROM2: Land at Hardwick Bank
- Policy BROM3: Land west of Linton Trading Estate
- Policy LEOM1: Strategic Development for Leominster
- Policy LEOM2: Land south of the primary school
- Policy ROSS1: Strategic Development for Ross-on-Wye
- Policy ROSS2: Land to the East of Ross-on-Wye
- Policy RURA1: Housing growth within rural hubs
- Policy RURA3 Rural strategic site allocations

6.2 The findings of the HRA screening assessment determined that there were potential likely significant effects in relation to:

- Physical damage and loss, functionally linked land only – in relation to River Wye SAC; Severn Estuary SPA, SAC and Ramsar site and, Walmore Common SPA and Ramsar site.
- Non-physical disturbance including functionally linked land – in relation to River Wye SAC; Severn Estuary SPA, SAC and Ramsar site; and Walmore Common SPA and Ramsar site.
- Non-toxic contamination - River Wye SAC.
- Air pollution - River Wye SAC, River Clun SAC, Wye Valley Woodlands SAC, Wye Valley and Forest of Dean Bat Sites SAC, Usk Bat Sites SAC, River Usk SAC, Cwm Clydach Woodlands SAC and Walmore Common SPA and Ramsar site.

- Recreational pressure – in relation to River Wye SAC and Wye Valley Woodlands SAC.
- Water Quality – in relation to River Wye SAC and River Clun SAC.

6.3 The Appropriate Assessment stage considered whether there will in fact be, in light of mitigation and avoidance measures, adverse effects on integrity of the European sites. The findings of the Appropriate Assessment are detailed below.

6.4 It can be concluded that no adverse effect on integrity will occur for the following European sites, subject to the provision of safeguarding and mitigation measures as detailed in Chapter 5.

- Physical damage and loss functionally linked land only - the Appropriate Assessment concluded no adverse effect on integrity as a result of offsite physical damage and loss in relation to River Wye SAC; Severn Estuary SPA, SAC and Ramsar site; and, Walmore Common SPA and Ramsar site. This included assessing each site allocation proposed in the plan for its suitability in supporting the qualifying bird species within the Severn Estuary SPA and Ramsar site and Walmore Common SPA and Ramsar site. Three site allocations (Policy ROSS2: Land to the East of Ross-on-Wye; Policy LEDB3: Land south of Little Marcle Road and Policy HERE7: Sustainable urban expansion at Lower Bullingham) were identified with moderate potential to support qualifying bird species. The following safeguard measures should be implemented at a project level:
  - Wintering or and breeding bird surveys are required for sites with moderate suitability (Policy ROSS2: Land to the east of Ross-on-Wye; Policy LEDB3: Land south of Little Marcle Road and Policy HERE7: Sustainable urban expansion at Lower Bullingham).
  - A commitment to mitigation is required within the plan, dependent on the findings of bird surveys.
  - The site specific HRAs for the allocations made in Policy HERE6; Policy HERE7; and, and, Policy ROSS2 should require detailed protected species surveys for otter. This requirement (for project-level/site specific HRA and targeted ecological surveys) should be required for future proposals within Policy HERE2; Policy HERE1;

Policy HERE3; Policy RURA3; Policy RURA4; Policy PE1; Policy PE4; Policy HERE4; Policy PE1; Policy AG1; Policy PE2; Policy PE5; Policy AG2; Policy AG4; and, Policy AG6.

- Mitigation is also provided in the Plan through Policy EE1 with additional wording proposed to ensure no adverse effect.
    - Any plan or development which is considered to have a likely significant effect upon a European and/or Ramsar site will be subject to an Appropriate Assessment under the Habitats Regulations Assessment in order to ascertain whether an adverse effect on the site integrity can be excluded. This should consider any avoidance, mitigation or compensatory measures.
- Non-physical disturbance including functionally linked land – the Appropriate Assessment concluded no adverse effect on integrity as a result of non-physical disturbance in relation to River Wye SAC; Severn Estuary SPA, SAC and Ramsar site; and, Walmore Common SPA and Ramsar site. Suitable mitigation is provided in the Plan through Policy EE1.
    - Project-level/site specific HRA and targeted ecological surveys should also be required for future proposals within Policy HERE1; Policy HERE2; Policy RURA4; Policy HERE4; Policy HERE3; Policy PE1; Policy PE4; Policy PE2; PE5; Policy AG1; Policy AG2; Policy AG4; Policy AG6; Policy HSC2; and, Policy PE5.
    - Additional wording should be added to Policy ROSS2, Policy HERE1, Policy HERE2, Policy HERE7; Policy PE1; Policy PE4; and Policy HERE6 to ensure that no artificial lighting will be introduced that could have an adverse impact on qualifying fish species within the River Wye SAC.
- Non-toxic contamination – the Appropriate Assessment concluded no adverse effect on the integrity as a result of non-toxic contamination in relation to the River Wye SAC. Suitable mitigation is provided in the Plan through Policy EE1.

- The site specific HRA for Policy ROSS2 should require appropriate best practise construction measures to reduce any impacts on qualifying species.
- Project-level/site specific HRA and targeted ecological surveys should be required for future proposals within Policy HERE2; Policy RURA4; and, Policy HERE4.

- Recreational pressure – the Appropriate Assessment concluded no adverse effect on integrity as a result of increased recreational pressure in relation to River Wye SAC and Wye Valley Woodlands SAC. Suitable mitigation is provided in the Plan through Policy EE1, Policy HERE9 and Policy HSC3. In addition, a number of policies that propose development require the provision of green infrastructure. The following safeguards and mitigation measures are required by the plan and successfully implemented. This includes:
  - the design and management of open space and green infrastructure will need to be focused towards attracting walkers and dog walkers to minimise adverse impacts on qualifying features of the River Wye SAC and Wye Valley Woodlands SAC.
  - Site specific planning applications will need to consider the requirement to undertake project level HRA, and where appropriate, incorporate necessary safeguards.
- Water quantity – the Appropriate Assessment concluded no adverse effect on integrity as a result of impact on water quality in relation to River Wye SAC and River Clun SAC. Suitable mitigation is provided in the Plan through Policy EE1 and Policy RURA5. The Council also has published guidance on development in the River Lugg and River Clun catchment area.

6.5 In the absence of AADT traffic modelling data and in line with a precautionary approach, a conclusion of no adverse effect on integrity cannot be reached in relation to the effect of air pollution on River Wye SAC, River Clun SAC, Wye Valley Woodlands SAC, Wye Valley and Forest of Dean Bat Sites SAC, Usk Bat Sites SAC, River Usk SAC, Cwm Clydach Woodlands SAC and Walmore Common SPA and Ramsar site.

Next Steps

6.6 HRA is an iterative process and as such is expected to be updated in light of newly available evidence and comments from key consultees. As part of consultation of the Draft (Regulation 18) Herefordshire Local Plan, it is recommended that this report is subject to consultation with Natural England and Natural Resources Wales, as well as the Environment Agency, to confirm that the conclusions of the assessment are considered appropriate at this stage of plan-making.

LUC
March 2024

Appendix A

Scoping Consultation comments

A.1 Consultation on the HRA Scoping Report was undertaken between March and April 2023. Consultation comments were received from Natural England.

Natural England

Comment

- It is our understanding that this HRA Report has been produced in advance of a HRA Screening report and Appropriate Assessment. We welcome the early consideration given to these matters.
- Functionally linked land – birds
  - Paragraph 4.17 states that NE has previously advised that its recognised distance for the consideration of offsite functionally linked land is generally 2km, but for certain bird species a greater distance of 15km may be appropriate. It is not clear where this advice has come from, so we request that it is referenced. If this 2km distance is taken from the Impact Risk Zone guidance on birds, then we advise that the IRZ's were developed as consultation buffers and are not designed to be used as a tool for HRA screening. Further evidence is required.
  - In relation to this HRA, NE advises that a distance greater than 2km is not a sufficient justification alone to rule out impacts on Walmore Common SPA/Ramsar and scope it out of further HRA.
  - Paragraph 4.19 confirms that the Severn Estuary SAC/SPA/Ramsar site has been scoped in for further assessment. We advise to include Walmore Common SPA/Ramsar for the same reasons and due to the relationship between the sites. This is not to say that there are impacts, but it will need to be considered.

- An important piece of the evidence base is the Severn Estuary functionally linked land report, available here: Identification of wintering and passage roosts on functionally linked land of the Severn Estuary - Gloucestershire and Worcestershire (Phase 5) - NECR401 (nepubprod.appspot.com).

- Recreational pressure

  - Natural England does not agree with the approach put forward on Zones of Influence. We do not consider it appropriate to use Monitor of Engagement with the Natural Environment (MENE) survey data to generate a blanket distance zone of influence for recreational pressure. MENE can be a helpful source of information but was not intended to be used in this way.

  - A Zone of Influence is usually set up as a part of the development of a strategic mitigation scheme. This approach is triggered by a concern that the site is suffering from adverse impacts from recreation, for example its site improvement plan or condition assessment. Visitor surveys are undertaken and the Zone of Influence drawn up from this site specific evidence. Development within the Zone of Influence is required to undertake specified actions and/or make a financial contribution in order to mitigate its impacts. ZoI's are evidence led and are determined on a case by case basis. Some examples in the West Midlands area are Rodborough Common SAC ZoI 3km, Cotswolds Beechwoods SAC 15km, and 25km for the Malvern Hills SSSI.

  - NE advises that Habitat sites are looked at on a case by case basis considering for example their accessibility for recreation, their interest features, site improvement plans and condition assessment, in order to determine whether they need to be scoped in for recreational pressure.

  - Regarding the Severn Estuary SAC/SPA/Ramsar site, the 7.7km Zone of Influence quoted was established by Stroud District Council in relation to impacts from development there. However there is also the potential for development elsewhere to impact on the site. We advise that Herefordshire Council or its consultants should approach Stroud District Council, the Forest of Dean District Council and other

Gloucestershire LPA's if relevant in order to get the latest position and use this to inform further HRA consideration.

- Air pollution
  - Natural England does not agree with the blanket assumption that only roads forming part of the primary road network (motorways and 'A' roads) might be likely to experience any significant increase in traffic as a result of development (paragraph 4.42). For example the B4339 Rotherwas Relief Road is one of the busiest in the county. We advise that potential impacts from increase in traffic on any road should be considered. There is likely to be a need for detailed evidence base work and traffic modelling. Natural England has published advice to competent authorities on the assessment of road traffic emissions under the Habitat Regulations.
- Water quality
  - Natural England wishes to clarify that the whole of the River Wye SAC can be scoped in for consideration in the HRA, and not just the River Lugg part of the SAC. The River Lugg part of the SAC is the only part that is currently exceeding its phosphate targets and therefore a nutrient neutrality area. However there are likely significant effects from development anywhere in the catchment. Given the complexity of the water quality issues effecting the River Wye SAC, it is likely that this HRA will need to be informed by a technical evidence base.

Response

- Functionally linked land – birds
  - The Impact Risk Zone is used to initially screen out European Sites. However, the HRA screening considers further the qualifying features of the European Site and it's key vulnerabilities. There is also consideration given for functionally linked land that the qualifying feature may rely on through the HRA screening.
  - The HRA Screening has been updated for physical damage and habitat loss and non-physical disturbance. Given Walmore Common

SPA and Ramsar site contains Bewick's Swan, which are it's qualifying feature, the European Site has been screened in for further assessment and has been considered at Appropriate Assessment. This is due to the potential for Bewick's Swan to rely on functionally linked land within Herefordshire.

  - As part of this HRA Screening, the Severn Estuary functionally linked land Report has been reviewed and taken into consideration.

- Recreational pressure
  - Through the HRA Screening, the MENE Survey approach is used as part of the initial screening process. Following an initial screening of European Sites in relation to increase in recreational pressure, the screening considers the condition of the site, it's qualifying features, key vulnerabilities and accessibility to the site. Site Improvement Plans are taken into consideration during the HRA screening to help inform the decision making. Where available, visitor surveys also inform decision making during the HRA Screening.
- Air pollution
  - Through the HRA Screening, a review of additional roads, which included 'B' roads, within 200m of the European sites that were scoped into the assessment was undertaken.
- Water quality
  - The whole of the River Wye SAC has been screened in through the HRA Screening and considered at Appropriate Assessment Stage to determine whether adverse effects can be ruled out.

Appendix B

Figures

SA and HRA of the
Herefordshire Local Plan
Herefordshire Council

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Figure B.1 European Sites within 15km of Herefordshire

- Herefordshire
- Neighbouring local authority
- Buffer 15km
- SAC
- Ramsar
- SPA

1: Walmore Common
2: Severn Estuary
3: Bredon Hill
4: Cotswold Beechwoods
5: Downton Gorge
6: Lyppard Grange Ponds
7: River Clun
8: River Wye
9: Wye Valley & Forest of Dean Bat Sites
10: Wye Valley Woodlands
11: Usk Bat Sites
12: Sugar Loaf Woodlands
13: River Usk
14: Rhos Goch
15: Llangorse Lake
16: Drostre Bank
17: Cwm Clydach Woodlands
18: Coed y Cerrig

0 4 8 km

Map scale 1:350,000 @ A3

SA and HRA of the
Herefordshire Local Plan
Herefordshire Council

LUC

Figure B.2 Key Strategic Roads within and around Herefordshire

- Herefordshire
- Neighbouring local authority
- Buffer 15km
- A Road
- Motorway

0 4 8 km

Map scale 1:350,000 @ A3

12288_Figure B.2:_r0_: Key strategic roads within and around Herefordshire_A3L 11/03/2024
EB:dhane_r

SA and HRA of the
Herefordshire Local Plan
Herefordshire Council

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Figure B.3: Site allocations

Herefordshire

Neighbouring local authority

Site Allocation

Employment

Housing

Mixed Use

Shropshire

Wyre Forest District

Malvern Hills District

Forest of Dean District

Powys

Sir Fynwy - Monmouthshire

LEOM2

LEOM3

KING2

BROM2

BROM2

BROM3

RURA3

RURA3

RURA3

RURA3

RURA3

HERE5

HERE3

HERE6

HERE3

HERE7

LEDB3

LEDB2

ROSS3

ROSS3

ROSS3

0 3 6 km

Map scale 1:250,000 @ A3

12288_Figure B.3:_r0_: Site allocations_A3L 11/03/2024
EB:dhane_r

Appendix C

Attributes of European Sites

C.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 England's Site Improvement Plans (SIPs) **[See reference** 59**]**, Standard Data Forms or Ramsar Information Sheets available from the JNCC website **[See reference** 60**]** and Supplementary Advice Notes **[See reference** 61**]**, which advise on the sites features and how to implement the conservation objectives. Site conservation objectives are drawn from Natural England's website and are only available for SACs and SPAs **[See reference** 62**]**.

European sites within (or partly within) Herefordshire

River Wye SAC

The River Wye SAC covers 250km of relatively natural and unmodified main river with a near-natural fluvio-geomorphological regime. The upland reaches, from the source in Powys, has a bryophyte dominated vegetation which progresses into extensive water crowfoot Ranunculus beds in the lowland reaches in England.

The lower 23km is transitional habitat to the confluence with the Severn Estuary. The river supports several internationally important migratory fish, including Atlantic Salmon, Lamprey and Shad species. Otters are widespread.

Area (ha):

- 2234.89

Location:

- Fragmented site both beyond the county boundary to the west within Monmouthshire and Powys, south within Gloucestershire, and within the county to the south and west.

Qualifying features

Annex I habitats that are a primary reason for selection of this site:

- Water courses of plain to montane levels with the *Ranunculion fluitantis* and Callitricho-Batrachion vegetation

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:

- Transition mires and quaking bogs; very wet mires often identified by an unstable ‘quaking’ surface

Annex II species that are a primary reason for selection of this site:

- *Austropotamobius pallipes*; White-clawed (or Atlantic stream) crayfish
- Petromyzon marinus; Sea lamprey
- Lampetra planeri; Brook lamprey
- *Lampetra fluviatilis*; River lamprey
- *Alosa fallax*; Twaite shad
- Salmo salar; Atlantic salmon
- *Cottus gobio*; Bullhead

- Lutra lutra; Otter

Annex II species present as a qualifying feature, but not a primary reason for selection of this site:

- *Alosa alosa*; Allis shad

Key vulnerabilities and environmental conditions to support site integrity

The River Wye is currently facing increased water pollution, so the implementation of a Diffuse Water Pollution Plan and Nutrient Management Plan is necessary. In addition, the poor siting of infrastructure causes excessive runoff and hydrological changes. Invasive species are present throughout the catchment and require a biosecurity strategy. There is a need for forestry and woodland management to balance management and risks with fisheries management, navigation, and flood risk management. The management of banks and vegetation by river users is not always compatible with the SAC features. Increased scrub and woodland and undergrazing are affecting the structure and composition of the transitional mire and quaking bog at Colwyn Brook Marshes. Appropriate management of Network Rail's assets is necessary to ensure that the SAC features are taken into account when producing a site management statement.

Natural England's Site Improvement Plan for the SAC identifies the main threats facing the site to be the decreasing quality of water; small scale development impacting the hydromorphology and character; the invasive species of Himalayan Balsam (*Impatiens glandulifera*), Japanese Knotweed (*Reynoutria japonica*), Giant Hogweed (*Heracleum mantegazzianum*) and hybrids; lack of communication between management levels; incompatibility between fishery management and SAC features; outdated water abstraction agreement; pressure from public access; the risk of atmospheric nitrogen deposition which exceeds site relevant critical loads; inappropriate scrub control; undergrazing; and poor site management when undertaking works on Network Rail's assets.

Natural England 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 and habitats of qualifying species.
- The structure and function (including typical species) of qualifying natural habitats.
- The structure and function of the habitats of qualifying species.
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely.
- The populations of qualifying species.
- The distribution of qualifying species within the site.

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

Water courses of plain to montane levels with the *Ranunculion fluitantis* and Callitricho-Batrachion vegetation – this habitat is characterized by presence of Water-crowfoots (*Ranunculus spp.*) and its hybrids. There were three sub-types of the habitat which diversity depends on the geology and river type. In each sub-type, *Ranunculus* species are associated with a different assemblage of other aquatic plants which could include Water-cress (*Rorippa nasturtium-aquaticum*), Water-starworts (*Callitriche spp.*) Water-parsnips (*Sium latifolium* and *Berula erecta*), Water-milfoils (*Myriophyllum spp.*) and Water forget-me-not (*Myosotis scorpioides*).

Transition mires and quaking bogs – it is characterized by very wet mires often with unstable ‘quaking’ surface and changes of the surface pH conditions which range from acidic to slightly base-rich. In correlation, one can find diverse flora

adapted to the conditions such as acidophile and calciphile or basophile. As such they represent transitional zone between bogs and fen or could be found as part of succession if isolated.

Allis shad (*Alosa alosa*)

- Habitats: grows in coastal waters and estuaries. Migrate up to 800km upstream into continental Europe to spawn where they are not keen on traversing obstacles such as dams and weirs.
- Diets: smaller fish, plankton, water invertebrates and sometimes even fish eggs

Twaite shad (*Alosa fallax*)

- Habitats: habitat requirements are not fully understood
- Diets: smaller fish, plankton, water invertebrates and sometimes even fish eggs

White-clawed (or Atlantic stream) crayfish (*Austropotamobius pallipes*)

- Habitats: diverse variety of clean aquatic habitats with preference on hard-water stream and rivers.
- Diets: water invertebrates, carrion, water plants and dead organic matter

Bullhead (*Cottus gobio*)

- Habitats: fast-flowing, clear shallow rivers, streams, and stony lakes. Water needs to be well oxygenated as it does not tolerate badly polluted waters.
- Diets: eats anything that can find from planktons and water invertebrates to fish eggs

River lamprey (*Lampetra fluviatilis*)

- Habitats: coastal waters, estuaries, and accessible rivers. The species is anadromous, i.e., spawns in freshwater and spends part of the life in the sea. Water pollution and obstacles (weirs and dams) impede the migration.

- Diets: as young: algae, detritus, and bacteria; as adults: other fish's bodily fluids and carrion

Brook lamprey (*Lampetra planeri*)

- Habitats: non-migratory species found in freshwater slow-running streams and lakes.
- Diets: bacteria, algae, and other type of detritus from water and mud

Sea lamprey (*Petromyzon marinus*)

- Habitats: warm estuaries and easily accessible rivers. The species is anadromous, i.e., spawns in freshwater and spends part of the life in the sea. Needs warm water with gravel and silt or sand for spawning and burrowing juvenile ammocoetes. Water pollution and obstacles (weirs and dams) impede the migration.
- Diets: young: micro-organisms; adults: suck blood of other fishes

Atlantic salmon (*Salmo salar*)

- Habitats: fast-flowing, shallow clear waters of rivers and streams. The species is anadromous, i.e., spawns in freshwater and spends part of the life in the sea. Water pollution and obstacles (weirs and dams) could impede the migration.
- Diets: young: water invertebrates; adults: smaller fishes

Lutra lutra; Otter

- Habitats: shallow coastal areas for feeding, inland freshwater for bathing and terrestrial areas for resting and breeding. They could be found in sheltered wooded inlets, vegetated river banks, islands and reedbeds with a range or running and standing freshwater, to low-laying coasts.
- Diets: fish, crustaceans, molluscs, amphibians, waterbirds, and small mammals.

Downton Gorge SAC

Downton Gorge was formed by the River Teme cutting through a ridge of limestones, siltstones and sandstones. With its rocky cliffs and steep dingles, the Gorge supports an area of ancient semi-natural woodland of varying types including Tilio-Acerion Forest. The Large Leaved Lime is an example of a nationally rare tree which is prevalent on the site.

Area (ha):

- 68.88

Location:

- Fragmented site lying to the north within the county.

Qualifying features

Annex I habitats that are a primary reason for selection of this site:

- Tilio-Acerion forests of slopes, screes and ravines; Mixed woodland on base-rich soils associated with rocky slopes

Key vulnerabilities and environmental conditions to support site integrity

Deer are having an adverse impact on woodland vegetation and are affecting the vertical woodland structure. Without improvements in their management, the deer population will impose long-term changes on the composition of the site's woodland. There is evidence that the large number of pheasants that are reared each year are causing some damage to the ground flora. Most woodland

management on the sites is carried out as part of NNR management and therefore generally is done sympathetically within the SAC itself; however, there are a few small issues. Monitoring for the presence and extent of *Phytophthora* disease and Ash-die back disease, *Chalara*, is required. Several invasive species are present and need to be contained and reduced.

Natural England's Site Improvement Plan for the SAC identifies the main threats facing the site to be the adverse impact of deer; the over rearing of pheasants by game management; a few small scale issues with forestry and woodland management; the spread of disease; several invasive species; and the risk of atmospheric nitrogen deposition which exceeds site relevant critical loads.

Natural England 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 and habitats of qualifying species.
- The structure and function (including typical species) of qualifying natural habitats.
- The structure and function of the habitats of qualifying species.
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely.
- The populations of qualifying species.
- The distribution of qualifying species within the site.

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

Tilio-Acerion forests of slopes, screes and ravines – habitat characterised by nutrient rich soils that accumulates at basses of shady ravines, cliffs, coarse scree and steep rocky slopes. It could e found as scattered patches or as narrow strips along stream sides.

River Clun SAC

Area (ha):

- 14.93

Location:

- Fragmented site both beyond the county boundary to the north within Shropshire and north within the county.

Qualifying features

Annex II species present as a qualifying feature, but not a primary reason for selection of this site:

- Margaritifera margaritifera; Freshwater pearl mussel

Key vulnerabilities and environmental conditions to support site integrity

Siltation and water pollution are major issues affecting the health of Freshwater Mussel, especially juveniles. In addition, the stressed and aging population of Freshwater Mussel is very vulnerable to low breeding success and one-off events, such as, floods, droughts, and pollution. Disease in the trees of the area is causing issues with siltation and nutrient enrichment. Dead trees are leading to less stable banksides and contributing directly to bankside erosion/ increased siltation. Weirs and dams are affecting the movement of migratory salmonids on which the mussels depend. Current and future changes in land management in the catchment, particularly intensification of farming practices, are a concern.

Natural England's Site Improvement Plan for the SAC identifies the main threats facing the site to be the increasing pressure of siltation; loss of suitable habitats and food sources through water pollution; low breeding success of Freshwater Mussel; the spread of disease; physical modification; the invasive species of Himalayan balsam; and the change in land management.

Natural England 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 the habitats qualifying species.
- The structure and function of the habitats of qualifying species.
- The structure and function of the habitats of qualifying species.
- The supporting processes on which the habitats of qualifying species rely.
- The populations of qualifying species.
- The distribution of qualifying species within the site.

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

Freshwater pearl mussel (*Margaritifera margaritifera*)

- Habitats: fast-flowing rivers and stream with sandy substrates between pebbles and boulders. The water needs to be cool, well oxygenated soft and free from turbidity and pollution.
- Diets: filters water to ingest fine particles of organic matter

European sites outside Herefordshire but within 15km

Rhos Goch SAC

Area (ha):

- 67.59

Location:

- Fragmented site beyond the county boundary to the west within East Wales.

Qualifying features

Annex I habitats that are a primary reason for selection of this site:

- Active raised bogs
- Transition mires and quaking bogs

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:

- Molina meadows on calcareous, peaty, or clayey-silt-laden soils (*Molinion caeruleae*)
- Bog woodland
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* ((Alno-Padion, *Alnion incanae*, *Salicion albae*)

Key vulnerabilities and environmental conditions to support site integrity

Habitat quality did not reach its targets. There are ongoing programmes of scrub control within the transition mire zone and rush control within the swamp zone on the common, so recovery has been assumed. Currently, the threat of air pollution is high since the atmospheric nitrogen deposition exceeded site relevant critical loads. Measures have not been put into place to improve the air quality. Problematic native species is a serious threat.

Natural England conservation objectives

Each conservation objective is a composite statement defining a site-specific aspiration for each designated feature. This composite statement contains clauses that correspond to all the elements of FCS, namely:

- For habitat features:
  - Extent should be stable in the long term, or where appropriate increasing.
  - Quality (including in terms of ecological structure and function) should be being maintained, or where appropriate improving.
  - Populations of the habitat's typical species must be being maintained or where appropriate increasing.

  - Factors affecting the extent and quality of the habitat and its typical species (and thus affecting the habitat's future prospects) should be under appropriate control.

- For species features:
  - The size of the population should be stable or increasing, allowing for natural variability, and sustainable in the long term.
  - The distribution of the population should be being maintained.
  - There should be sufficient habitat, of sufficient quality, to support the population in the long term.
  - Factors affecting the population, or its habitat should be under appropriate control.

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

Active raised bogs – are defined by active microtopography (mixture of flat and sloping topography) rich with peat-forming species, and water draining zone (i.e., lagg). There are different types of raised bogs which are characterised by the dominant floral species.

Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, *Alnion incanae*, *Salicion albae*) – found on flood plains which are influenced by inundation. Such habitats could be found on base-rich eutrophic soils on islands in river channels to low-lying wetlands alongside the channels.

Bog woodland – characterised by bog habitat populated with scattered trees. It is influenced by water quantity, it's pH and quality of soil anaerobic conditions which are important for adequate tree development.

Molina meadows on calcareous, peaty, or clayey-silt-laden soils (*Molinion caeruleae*) – are found on moist, base-rich, peats and peaty clay soils which are influenced by fluctuating water tables.

Transition mires and quaking bogs – it is characterized by very wet mires often with unstable 'quaking' surface and changes of the surface pH conditions which range from acidic to slightly base-rich. In correlation, one can find diverse flora adapted to the conditions such as acidophile and calciphile or basophile. As such they represent transitional zone between bogs and fen, or could be found as part of succession if isolated.

Llangorse Lake SAC

Area (ha):

- 215.44

Location:

- Outside of the county boundary to the southwest within East Wales.

Qualifying features

Annex I habitats that are a primary reason for selection of this site:

- Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation

Key vulnerabilities and environmental conditions to support site integrity

A natural eutrophic lake of glacial origin with higher nutrient levels than those of oligotrophic, dystrophic, or mesotrophic lakes, which results in higher natural productivity, and are typically species rich. Water quality and sedimentation are of high importance in the area for the maintenance of its very special plants and animals. Natural erosion makes the lake vulnerable to any extra sediment that may enter the lake from sources other than the natural inputs. There is some pressure from recreation since the lake is a popular location for water-based activities, but guidelines have been drawn up by Llangorse Lake Advisory Group to ensure water users are aware of the wildlife of the lake and how to act in a responsible manner. The other habitats around the lake, such as the fen, woodlands, and grassland, require proper management. Non-native species, including Canada geese and Canadian pondweed exist in and around the lake. Further research is required regarding their impact.

Natural England conservation objectives

The vision for this feature is for it to be in a favourable conservation status, where all the following conditions are satisfied:

- There is no loss of lake area, as defined in 2006 aerial photographs for summer levels.
- The aquatic plant community is typical of this lake type in terms of composition and structure, including species such as water-starworts, stoneworts, duckweeds, broad-leaved and fineleaved pondweeds, water lilies, amphibious bistort, water-crowfoots, rigid hornwort, spiked water-milfoil, mare’s-tail and horned pondweed.
- Plants indicating very high nutrient levels and excessive silt loads are not dominant and invasive non-native water plants do not threaten to out-compete the native flora.

- The nutrient, pH and dissolved oxygen levels are typical for a lake of this type and there is no excessive growth of cyanobacteria or green algae.
- There is a natural hydrological regime.
- The natural shoreline is maintained.
- The natural and characteristic substrate is maintained.
- The natural sediment load maintained.
- All factors affecting the achievement of these conditions are under control.

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

Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation – they are dependent on the nutrients amount within the lakes, geography, topography, and climatic conditions. They are formed on soft rocks where wave-washed rocky shores form important part of the habitat.

Usk Bat Sites SAC

Area (ha):

- 1686.025

Location:

- Outside of the County boundary to the southwest within East Wales, West Wales, and the Valleys.

Qualifying features

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:

- European dry heaths
- Degraded raised bogs still capable of natural regeneration
- Blanket bogs
- Calcareous rocky slopes with chasmophytic vegetation
- Caves not open to the public
- Tilio-Acerion forests of slopes, screes, and ravines

Annex II species present that are a primary reason for selection of this site:

- Rhinolophus hipposideros: Lesser horseshoe bat

Key vulnerabilities and environmental conditions to support site integrity

The Usk Valley area contains one of the largest maternity roosts for lesser horseshoe bats as well as several important hibernacula in caves in the area. The area contains up to 5% of the UK population, though counts in hibernation sites suggest this may be an underestimate. The nursery roost sites need to be maintained in a suitable condition. It is very important for the bat access points to remain open and be of a suitable size. Habitat management must also be maintained since lesser horseshoe bats tend to feed in wooded areas and use linear features to navigate their way between roosts and foraging habitat. Sensitive management of woodlands and hedgerows and trees will be necessary to preserve these features.

Natural England conservation objectives

The vision for this feature is for it to be in a favourable conservation status, where all the following conditions are satisfied:

- The site will support a sustainable population of lesser horseshoe bats in the River Usk area.
- The population will be viable in the long term, acknowledging the population fluctuations of the species.
- Buildings, structures, and habitats on the site will be in optimal condition to support the populations.
- Sufficient foraging habitat is available, in which factors such as disturbance, interruption to flight lines, and mortality from predation or vehicle collision, changes in habitat management that would reduce the available food source are not at levels which could cause any decline in population size or range.
- Management of the surrounding habitats is of the appropriate type and sufficiently secure to ensure there is likely to be no reduction in population size or range, or any decline in the extent or quality of breeding, foraging or hibernating habitat.
- There will be no loss or decline in quality of linear features (such as hedgerows and tree lines) which the bats use as flight lines – there will be no loss of foraging habitat use by the bats or decline in its quality, such as due to over-intensive woodland management.
- All factors affecting the achievement of the above conditions are under control.

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

Blanket bogs – dependent on high rainfall and small evapotranspiration, topography, climatic factors, altitude, and geography. Based on those factors, different blanket bogs were formed into five known associations.

Calcareous rocky slopes with chasmophytic vegetation – characterised by rock base and their plant communities colonise cracks and fissures of rock faces. Variations in floral communities are dependent on geographic location, altitude, and rock type.

Degraded raised bogs still capable of natural regeneration – occur as consequence of widespread disruption, usually by human. Their appearance can influence hydrology, vegetation, and physical structures of the bog, which could lead to desiccation, oxidation, and changes in floral communities, i.e., natural succession towards different habitat type.

European dry heaths – appears on well-drained, acidic to circumneutral soils with mainly low nutrient contents. The floral and faunal communities are dependent on climatic conditions, altitude, aspect, soil conditions, maritime influence, and grazing and burning intensity.

Tilio-Acerion forests of slopes, screes, and ravines - habitat characterised by nutrient rich soils that accumulates at basses of shady ravines, cliffs, coarse scree, and steep rocky slopes. It could be found as scattered patches or as narrow strips along stream sides.

Caves not open to the public – they are characterised by not being open to tourism and which host endemic cave species or population of Annex II species. Those species are influenced by cave's microclimate which forms specific floral and faunal communities.

Lesser horseshoe bat (*Rhinolophus hipposideros*)

- Habitat: sheltered valleys close to deciduous woodlands or dense scrub located close to roosts. Linear features such as hedgerows help connect fragmented habitats which helps bats connect roosts with foraging locations. They are also influenced by temperature which defines their foraging, breeding and hibernating locations. They prefer to hibernate in caves which should not be more than 5-10km apart.
- Diet: terrestrial invertebrates such as spiders, moths, midges, and flies.

Cwm Clydach Woodlands SAC

Area (ha):

- 28.08

Location:

- Outside of the County boundary to the southwest within West Wales and The Valleys.

Qualifying features

Annex I habitats present that are a primary reason for selection of this site:

- Asperulo-Fagetum beech forests

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:

- Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion)

Key vulnerabilities and environmental conditions to support site integrity

Most of the woodland at the site is mature and appears to require little active management. However, over recent years, many of the beech trees are old and have fallen. In some areas there is good regeneration of beech, and in time, these should grow and fill the gaps. Some areas with the woodland should be retained as permanent open glades to benefit butterflies and other invertebrates and scrub encroachment should be controlled in these areas. Past grazing has influenced the structure of the woodland, such as the dominance of beech in the canopy. It is therefore likely that occasional light grazing would be beneficial for the woodland habitat, although any increase in grazing pressure could prevent all tree and shrub regeneration and suppress the woodland ground flora. Due to roads passing through the site, parts are accessible to vehicles and the illegal dumping of domestic and commercial waste and abandoned vehicles can be a problem. Barriers put in place several years ago have been successful in preventing vehicles (some of which have been later burnt) being driven along the railway track. It is essential that these barriers be maintained to prevent any future occurrences. Japanese knotweed is also a problem in parts of the site, usually having been introduced by illegal dumping of waste material, and this species will be controlled as necessary.

Natural England conservation objectives

The vision for this feature is for it to be in a favourable conservation status, where all the following conditions are satisfied:

- At least 50% of the canopy-forming trees are beech.
- The canopy cover is at least 80% (excluding areas of crag) and composed of locally native trees.
- The woodland has trees of all age classes with a scattering of standing and fallen dead wood.

- Regeneration of trees is sufficient to maintain the woodland cover in the long term.
- The shrub layer and ground flora can be quite sparse, but where present consist of locally native plants such as yew, hawthorn, wych elm, ash, hazel, field maple and elder, bramble, dog's mercury, enchanter's-nightshade, lords-and-ladies, woodruff, male fern, sanicle, wood melick, ivy, false brome, violets, herb robert, wood avens, and tufted hair-grass.
- Scarcer plants, such as soft-leaved sedge and bird's-nest orchid are locally frequent and, more rarely, yellow bird's-nest orchid can be found.
- All factors affecting the achievement of the above conditions are under control.

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

Asperulo-Fagetum beech forests – includes two types of association which are dependent on the slope inclination and soil type.

Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion) – this type includes two associations which are dependent on soil type and humid climatic conditions.

Coed y Cerrig SAC

Area (ha):

- 8.99

Location:

- Outside of the County boundary to the southwest within West Wales and The Valleys.

Qualifying features

Annex I habitats present that are a primary reason for selection of this site:

- Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)

Key vulnerabilities and environmental conditions to support site integrity

Coed y Cerrig is a good example of an alluvial forest in southern Wales. Small-scale coppicing over a long cycle is desirable to maintain the dominance of alder and create a varied canopy structure in the wet woodland. More frequent coppicing is required to maintain the open glades that are dominated by sedge swamp. Past sporadic grazing in the wet woodland may have restricted the ash content and light grazing can have some positive benefits on overall species composition. However, the marsh fern and other grazing sensitive plants would be at risk from uncontrolled and anything more than light grazing. The alder woodland and associated swamp, marshy grassland, and spring-fed mire, as well as the marsh fern, are found in areas of impeded drainage in the valley bottom. There should be no drainage works that could interfere with the springs and the generally waterlogged ground. The wet woodland has developed relatively fertile valley soils because nutrients accumulate here as a result of down-slope water movement and leaf-fall. However, further enrichment from agricultural run-off would promote dominance by weed species, such as nettles. No new agricultural drains should be routed into the site and existing drains may need to be diverted if they are causing an enrichment problem. To minimise trampling damage within the wet woodland, boardwalks and footpaths must be maintained.

Natural England conservation objectives

The vision for this feature is for it to be in a favourable conservation status, where all the following conditions are satisfied:

- Around a third of the site is covered by wet alder and willow woodland.
- This wet woodland grades into areas of permanent open swamp dominated by lesser pond-sedge or other typical wetland plants, where the hydrological conditions are suitable. Adjacent areas of marshy grassland and spring-fed mire are intimately linked to the wet woodland and swamp.
- The remainder of the site supports mainly dry semi-natural woodland.
- The wet woodland has a variable canopy structure, based on a small-scale patchwork, with alder of different ages and some standing as well as fallen dead wood. Ash does not make up more than 25% of the canopy.
- Young trees/saplings and/or vegetative re-growth of the above species are present.
- The understorey includes locally native shrubs typical of this habitat and the ground flora consists of a variety of typical wetland plants, such as lesser pond-sedge, common marsh-bedstraw, meadowsweet, yellow pimpernel, opposite-leaved golden-saxifrage, marsh-marigold, hemlock water-dropwort, water mint, lady fern and rushes.
- Plants associated with nutrient enrichment, such as stinging nettle and cleavers, are not dominant over large areas and invasive alien plants like Japanese knotweed and Indian balsam are absent.
- This wet woodland grades into areas of permanent open swamp dominated by lesser pond-sedge or other typical wetland plants, where the hydrological conditions are suitable. Adjacent areas of marshy grassland and spring-fed mire are intimately linked to the wet woodland and swamp.
- There is no significant input of nutrient-rich water from ditches and surrounding land.
- All factors affecting the achievement of these conditions are under control.

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

Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) - found on flood plains which are influenced by inundation. Such habitats could be found on base-rich eutrophic soils on islands in river channels to low-lying wetlands alongside the channels.

Sugar Loaf Woodlands SAC

Area (ha):

- 173.09

Location:

- Outside of the County boundary to the southwest within West Wales and The Valleys.

Qualifying features

Annex I habitats present that are a primary reason for selection of this site:

- Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles

Key vulnerabilities and environmental conditions to support site integrity

Canopy regeneration is a key attribute for signifying the functioning, habitat quality and sustainability of most woodland types, including sessile oak woods.

Grazing has suppressed the regeneration of native woody species and in combination with past coppicing has resulted in a uniform age structure. Discussing possible means of managing grazing with owners/commoners is necessary to encourage natural regeneration in the woodland area, including possible agreements to fence all new and some existing canopy gaps.

Managing woodland will entail controlling the spread of non-native species (principally beech) through a programme of selective removal of saplings to ensure no further trees get into the canopy. Much of the woodland lacks structure due to past woodland management to remove timber. It is likely to be decades before a more natural woodland structure can develop. Deadwood is present on the site, but much has been removed in the past. In future, the owners should be encouraged to leave as much dead wood as possible.

Retention of veteran trees is necessary. Bracken may require management where it is thought to be hindering successful regeneration, largely in the open areas and gaps. However, this needs to be balanced against the protection bracken offers for young saplings against browsing and its place as a key natural component of acidic woodlands.

Natural England conservation objectives

The vision for this feature is for it to be in favourable conservation status within the site, as a functioning and regenerating* oak wood, where all the following conditions are satisfied:

- The wooded area is no less than 122 ha.
- The remainder of the site is semi-natural acid grassland, heathland, bracken, and scrub, often forming a transition zone at the woodland edge.
- Saplings of birch betula spp, oak Quercus petraea, alder Alnus glutinosa or holly Ilex aquifolium dominate the tree regeneration.
- Young beech Fagus sylvatica and sycamore Acer pseudoplatanus trees are rare.

- The woodland ground flora is composed of a range of typical native plants including bilberry Vaccinium myrtillus, wavy-hair grass Deschampsia flexuosa and the mosses Plagiothecium undulatum, Rhytidiadelphus loreus, Dicranum majus.
- The liverwort Bazzania trilobata to continue to be present in its core area of Unit 1.
- All factors affecting the achievement of these conditions will under control.

* A "functioning and regenerating oak woodland" would include all the positive attributes described in the performance indicators.

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

Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles – this type is dependent on base-poor soils and moderately high rainfall. Its floral communities are characterised by diversity in rainfall, slope, aspect, soil depth, and past and present woodland management.

River Usk SAC

Area (ha):

- 967.97

Location:

- Outside of the County boundary to the southwest within East Wales, West Wales, and The Valleys.

Qualifying features

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:

- Water courses of plain to montane levels with the *Ranunculion fluitantis* and Callitricho-Batrachion vegetation

Annex II species present that are a primary reason for selection of this site:

- Petromyzon marinus: Sea lamprey
- *Lampetra planeri*: Brook lamprey
- *Lampetra fluviatillis*: River lamprey
- *Alosa fallax*: Twaite shad
- *Salmo salar*: Atlantic salmon
- *Cottus gobio*: Bullhead
- *Lutra Lutra*: Otter

Annex II species present as a qualifying feature, but not a primary reason for selection of this site:

- *Alosa alosa*: Allis shad

Key vulnerabilities and environmental conditions to support site integrity

The factors that led to an unfavourable assessment are the presence of probable partial barriers further downstream (notably Crickhowell Bridge), and flow depletion resulting from abstractions including Brecon canal and Prioress Mill public water supply abstraction. The latter in particular has been shown to have effects both on a seasonal timescale by reducing spate flows during the migration period and on a diurnal timescale by substantially depleting flows

during the night time to the extent that sea lamprey nests and nursery areas are likely to be exposed above the water level. The effect of the Brecon canal abstraction has been shown to comprise a substantial depletion of flows, at least locally, during low flow periods with a resulting reduction in river depth downstream of the off-take weir.

Natural England conservation objectives

Conservation Objective for the water course:

- The capacity of the habitats in the SAC to support each feature at near-natural population levels.
- The ecological status of the water environment should be sufficient to maintain a stable or increasing population of each feature.
- Flow regime, water quality and physical habitat should be maintained in, or restored as far as possible to, a near-natural state.
- All known breeding, spawning and nursery sites of species features should be maintained as suitable habitat as far as possible, except where natural processes cause them to change.
- Flows, water quality, substrate quality and quantity at fish spawning sites and nursery areas will not be depleted by abstraction, discharges, engineering or gravel extraction activities or other impacts to the extent that these sites are damaged or destroyed.
- The river planform and profile should be predominantly unmodified.
- River habitat SSSI features should be in favourable condition.
- Artificial factors impacting on the capability of each species feature to occupy the full extent of its natural range should be modified where necessary to allow passage.
- Natural factors should not be modified.

- Flows during the normal migration periods of each migratory fish species feature will not be depleted by abstraction to the extent that passage upstream to spawning sites is hindered.
- Flow objectives for assessment points in the Usk Catchment Abstraction Management Strategy will be agreed between EA and CCW.
- Levels of nutrients, in particular phosphate, will be agreed between EA and CCW for each Water Framework Directive water body in the Usk SAC.

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

Water courses of plain to montane levels with the *Ranunculion fluitantis* and Callitricho-Batrachion vegetation - this habitat is characterized by presence of Water-crowfoots (*Ranunculus spp.*) and its hybrids. There were three sub-types of the habitat which diversity depends on the geology and river type. In each sub-type, *Ranunculus* species are associated with a different assemblage of other aquatic plants which could include Water-cress (*Rorippa nasturtium-aquaticum*), Water-starworts (*Callitriche spp.*) Water-parsnips (*Sium latifolium* and *Berula erecta*), Water-milfoils (*Myriophyllum spp.*) and Water forget-me-not (*Myosotis scorpioides*).

Allis shad (*Alosa alosa*)

- Habitats: grows in coastal waters and estuaries. Migrate up to 800km upstream into continental Europe to spawn where they are not keen on traversing obstacles such as dams and weirs.
- Diets: smaller fish, plankton, water invertebrates and sometimes even fish eggs

Twaite shad (*Alosa fallax*)

- Habitats: habitat requirements are not fully understood
- Diets: smaller fish, plankton, water invertebrates and sometimes even fish eggs

Bullhead (*Cottus gobio*)

- Habitats: fast-flowing, clear shallow rivers, streams, and stony lakes. Water needs to be well oxygenated as it does not tolerate badly polluted waters.
- Diets: eats anything that can find from planktons and water invertebrates to fish eggs

River lamprey (*Lampetra fluviatilis*)

- Habitats: coastal waters, estuaries, and accessible rivers. The species is anadromous, i.e., spawns in freshwater and spends part of the life in the sea. Water pollution and obstacles (weirs and dams) impede the migration.
- Diets: as young: algae, detritus, and bacteria; as adults: other fish's bodily fluids and carrion

Brook lamprey (*Lampetra planeri*)

- Habitats: non-migratory species found in freshwater slow-running streams and lakes.
- Diets: bacteria, algae, and other type of detritus from water and mud

Sea lamprey (*Petromyzon marinus*)

- Habitats: warm estuaries and easily accessible rivers. The species is anadromous, i.e., spawns in freshwater and spends part of the life in the sea. Needs warm water with gravel and silt or sand for spawning and burrowing juvenile ammocoetes. Water pollution and obstacles (weirs and dams) impede the migration.
- Diets: young: micro-organisms; adults: suck blood of other fishes

Atlantic salmon (*Salmo salar*)

- Habitats: fast-flowing, shallow clear waters of rivers and streams. The species is anadromous, i.e., spawns in freshwater and spends part of the life in the sea. Water pollution and obstacles (weirs and dams) could impede the migration.
- Diets: young: water invertebrates; adults: smaller fishes

Lutra lutra; Otter

- Habitats: shallow coastal areas for feeding, inland freshwater for bathing and terrestrial areas for resting and breeding. They could be found in sheltered wooded inlets, vegetated river banks, islands and reedbeds with a range or running and standing freshwater, to low-laying coasts.
- Diets: fish, crustaceans, molluscs, amphibians, waterbirds, and small mammals.

Wye Valley Woodlands SAC

Area (ha):

- 916.24

Location:

- Fragmented site outside of the County boundary to the south within Gloucestershire, Herefordshire, and Monmouthshire.

Qualifying features

Annex I habitats present that are a primary reason for selection of this site:

- Asperulo-Fagetum beech forests.
- Tilio-Acerion forests of slopes, screes, and ravines; Mixed woodland on base-rich soils associated with rocky slopes.
- Taxus baccata woods of the British Isles, Yew-dominated woodland.

Annex II species present as a qualifying feature, but not a primary reason for selection of this site:

- Rhinolophus hipposideros; Lesser horseshoe bat.

Key vulnerabilities and environmental conditions to support site Integrity

The woodlands of the lower Wye Valley form one of the most important areas for woodland conservation in Britain. Due to the excessive levels of browsing by deer on a range of woodland plants, the natural regeneration of many species is being affected adversely. In the past, woodland management managed the woodlands as coppice to support the local mining and quarrying industries.

However, a new management approach is being introduced to better reflect the requirements needed to sustain the SAC features. A variety of invasive species are present including Himilayan balsam, Perwinkle, Japanese knotweed and Cherry laurel. In some places regeneration from planted conifers is occurring.

To improve the functionality of the ecosystem and considering climate change, other areas of semi-natural woodland will be added to the SSSI series allowing linkages to be made between both sides of the Wye gorge and on the Dean plateau.

Natural England's Site Improvement Plan for the SAC identifies the main threats facing the site to be the increasing pressure of deer; poor woodland management; spread of invasive species; habitat fragmentation which risks hindering the ecosystem; and the risk of atmospheric nitrogen deposition which exceeds site relevant critical loads.

Natural England 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 and habitats of qualifying species.
- The structure and function (including typical species) of qualifying natural habitats.
- The structure and function of the habitats of qualifying species.
- The supporting processes on which qualifying natural habitats and habitats of qualifying species rely.
- The populations of qualifying species.
- The distribution of qualifying species within the site.

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

Asperulo-Fagetum beech forests – includes two types of association which are dependent on the slope inclination and soil type. Tilio-Acerion forests of slopes, screes and ravines – habitat characterised by nutrient rich soils that accumulates at basses of shady ravines, cliffs, coarse scree and steep rocky slopes. It could e found as scattered patches or as narrow strips along stream sides.

Taxus baccata woods of the British Isles, Yew-dominated woodland – this habitat is dependent on shallow and dry soils usually located on chalk or limestone slopes, though occasionally it could be found on mesotrophic soil.

Lesser horseshoe bat (*Rhinolophus hipposideros*)

- Habitat: sheltered valleys close to deciduous woodlands or dense scrub located close to roosts. Linear features such as hedgerows help connect fragmented habitats which helps bats connect roosts with foraging locations. They are also influenced by temperature which defines their foraging, breeding and hibernating locations. They prefer to hibernate in caves which should not be more than 5-10km apart.

- Diet: terrestrial invertebrates such as spiders, moths, midges, and flies.

Wye Valley and Forest of Dean Bat Sites SAC

Area (ha):

- 142.70

Location:

- Outside of the County boundary to the southeast within Gloucestershire and Monmouthshire.

Qualifying features

Annex II species present that are a primary reason for selection of this site:

- Rhinolophus hipposideros; Lesser horseshoe bat
- Rhinolophus ferrumequinum; Greater horseshoe bat

Key vulnerabilities and environmental conditions to support site integrity

This complex of sites on the border between England and Wales contains, at the time of listing, by far the greatest concentration of Lesser horseshoe bat in the UK, totalling about 26% of the national population. It features an exceptional breeding population. In addition, it supports a significant population of Greater horseshoe bat in the northern part of its range. The site contains the main maternity roost and hibernacula for this species in this area. Roosting bats have precise microclimate requirements and are sensitive to small changes in conditions such as temperature and humidity. The microclimate of roosts in

buildings, bridges and caves can be adversely affected by structural deterioration, repair and renovation or other factors. As many of the maternity roost sites are in inhabited privately owned buildings, they are vulnerable to disturbance. It is important that there is appropriate advice, support and monitoring provided at roost sites. The bats are also vulnerable to disturbance whilst breeding; they have only single young every year, and so disturbing a maternity colony can have a significant adverse impact on the area's bat population. Most of the entrances to underground hibernacula and maternity roosts have grills to deter access. If these become damaged, unauthorised access by cavers and others can occur.

Natural England's Site Improvement Plan for the SAC identifies the main threats facing the site to be the structural deterioration of roosts sites that are in inhabited privately owned buildings vulnerable to disturbance, and pressure from public access.

Natural England 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 the habitats of qualifying species.
- The structure and function of the habitats of qualifying species.
- The supporting processes on which the habitats of qualifying species rely.
- The populations of qualifying species.
- The distribution of qualifying species within the site.

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

Lesser horseshoe bat (*Rhinolophus hipposideros*)

- Habitat: sheltered valleys close to deciduous woodlands or dense scrub located close to roosts. Linear features such as hedgerows help connect fragmented habitats which helps bats connect roosts with foraging locations. They are also influenced by temperature which defines their foraging, breeding and hibernating locations. They prefer to hibernate in caves which should not be more than 5-10km apart.
- Diet: terrestrial invertebrates such as spiders, moths, midges, and flies.

Greater horseshoe bat (*Rhinolophus ferrumequinum*)

- Habitat: during the season they roost in large old buildings, while during summer the prefer caves, abandoned mines and other undisturbed underground locations. These locations are usually less than 20-30km apart. For foraging they prefer pasture, mixed deciduous woodland, and hedgerows. They also require diverse airflow and temperature range.
- Diet: terrestrial invertebrates such as beetles, moths, midges, and flies.

Severn Estuary SAC

Area (ha):

- 73714.11

Location:

- Outside of the County boundary to the southeast within Bristol City, Gloucestershire, Bath & North East Somerset, Somerset, South Gloucestershire and the Welsh counties of Vale of Glamorgan, Cardiff, Newport and Monmouthshire.

Qualifying features

Annex I habitats present that are a primary reason for selection of this site:

- Estuaries.
- Mudflats and sandflats not covered by seawater at low tide, Intertidal mudflats, and sandflats.
- Glauco-Puccinellietalia maritimae: Atlantic salt meadows.

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:

- Sandbanks which are slightly covered by sea water all the time; Subtidal sandbanks.
- Reefs.

Annex II species present that are a primary reason for selection of this site:

- Petromyzon marinus: Sea Lamprey.
- Lampetra fluviatilis: River Lamprey.
- Alosa fallax: Twaite Shad.

Key vulnerabilities and environmental conditions to support site integrity

The estuary's classic funnel shape, unique in the UK, is a factor causing the Severn to have one of the highest tidal ranges in the world. A consequence of the large tidal range is an extensive intertidal zone, one of the largest in the UK. The tidal regime results in plant and animal communities typical of the extreme physical conditions of liquid mud and tide-swept sand and rock. The species-poor intertidal invertebrate community includes high densities of ragworms, lugworms and other invertebrates forming an important food source for passage and wintering waders and fish. The Severn River Basin Management Plan identifies that 17 % of the estuarine water bodies in the river basin district currently achieve good ecological status while the others are at moderate status.

Natural England's Site Improvement Plan for the SAC identifies the main threats facing the site to be the increasing pressure of recreational activities; modification to water courses; increased number of developments within and adjacent to the Estuary; coastal squeeze causing loss of habitat; changes in land management; changes in species distributions caused by climate change and other man-made and natural modifications to on and offsite environments; loss of suitable habitats and food sources through water pollution; adverse impacts of aggregate extraction, maintenance and disposal of minerals and waste; the emergence of invasive species; increasing amounts of marine litter; and marine pollution incidents.

Natural England 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 and habitats of qualifying species.
- The structure and function (including typical species) of qualifying natural habitats.
- The structure and function of the habitats of qualifying species.
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely.
- The populations of qualifying species.
- The distribution of qualifying species within the site.

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

Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) – this habitat is dependent on the protection from strong waves, though where it could still be influenced by tidal inundation with decreasing frequency and duration. Vegetation changes with climate, frequency and duration of tidal inundation, and land management.

Estuaries – this habitat is subject to tide, gradient of salinity, sediment input, shelter from wave actions, low current flows, geomorphological and hydrographic factors. Based on those factors four different types of estuaries are categorised.

Mudflats and sandflats not covered by seawater at low tide – this habitat type could be influenced by waves, tide, and soil structure. Vegetation grooving in these areas are dependent on salinity and stability of water, and sediment texture and structure.

Sandbanks which are slightly covered by sea water all the time – this habitat is characterised by topography, physical, chemical, and hydrographic factors, sandy sediments, shallow sea water and differences in depth, turbidity, and salinity of surrounding water.

Reefs – this habitat is influenced by tide and wave action, as it could be subtidal or intertidal. Diverse communities of attached algae, aquatic invertebrates and fish are populating the area which presence depends on topography, turbidity, salinity, temperature, and depth.

Twaite shad (*Alosa fallax*)

- Habitats: habitat requirements are not fully understood.
- Diets: smaller fish, plankton, water invertebrates and sometimes even fish eggs.

River lamprey (*Lampetra fluviatilis*)

- Habitats: coastal waters, estuaries, and accessible rivers. The species is anadromous, i.e., spawns in freshwater and spends part of the life in the sea. Water pollution and obstacles (weirs and dams) impede the migration.
- Diets: as young: algae, detritus, and bacteria; as adults: other fish's bodily fluids and carrion.

Sea lamprey (*Petromyzon marinus*)

- Habitats: warm estuaries and easily accessible rivers. The species is anadromous, i.e., spawns in freshwater and spends part of the life in the sea. Needs warm water with gravel and silt or sand for spawning and burrowing juvenile ammocoetes. Water pollution and obstacles (weirs and dams) impede the migration.
- Diets: young: micro-organisms; adults: suck blood of other fishes.

Lyppard Grange Ponds SAC

Qualifying features

Annex II species present that are a primary reason for selection of this site:

- *Triturus cristatus*: Great crested newt.

Key vulnerabilities and environmental conditions to support site integrity

Lyppard Grange Ponds are two field ponds located in the grounds of the former Lyppard Grange Farm. The terrestrial habitat within these grounds, previously formal garden, and orchard, has become neglected rough grassland with brambles and scrub, and retains many mature native and exotic trees. The area

serves as public open space within recently constructed housing and other built development. These two ponds, along with the associated terrestrial habitats, support a large breeding colony of great crested newts, and are a remnant of a formerly more widespread newt habitat when large numbers of ponds were maintained for agricultural purposes.

Natural England's Site Improvement Plan for the SAC identifies the main threats facing the site to be the changes in great crested newt population.

Natural England 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 the habitats of qualifying species.
- The structure and function of the habitats of qualifying species.
- The supporting processes on which the habitats of qualifying species rely.
- The populations of qualifying species.
- The distribution of qualifying species within the site.

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

Great crested newt (*Triturus cristatus*)

- Habitat: for breeding and laying eggs they use water bodies such as ponds and ditches with ample aquatic vegetation during the spring time; during other times in the year they send in woodlands, farmland, grassland and scrub. Other less possible locations could be coastal structures, rural, urban, and post-industrial.
- Diet: various invertebrates.

Severn Estuary SPA

Area (ha):

- 24487.91

Location:

- Outside of the County boundary to the southeast within counties of Gloucestershire and Somerset in England, and Monmouthshire in Wales.

Qualifying features:

- *Anas strepera*: Gadwall
- Anser albifrons albifrons: Greater white-fronted goose
- Calidris alpina alpina: Dunlin
- Cygnus columbianus bewickii: Berwick's Swan
- Tadorna tadorna: Shelduck
- Tringa totanus: Redshank
- Waterbird assemblage

Key vulnerabilities and environmental conditions to support site integrity

The immense tidal range, second largest in world, affects both the physical environment and biological communities. The fish of the whole estuarine and river system is one of the most diverse in Britain, with over 110 species recorded. This site is important for the run of migratory fish between sea and

river via estuary. It is also of particular importance for migratory birds during spring and autumn.

Natural England conservation objectives

Severn Estuary SPA site objectives need to 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 and habitats of qualifying species.
- The structure and function (including typical species) of qualifying natural habitats.
- The structure and function of the habitats of qualifying species.
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely.
- The populations of qualifying species.
- The distribution of qualifying species within the site.

Species of interest are:

- Internationally important population of regularly occurring Annex 1. species Bewick's swan (*Cygnus columbianus bewickii*)
- Internationally important population of regularly occurring migratory species wintering European white-fronted goose *(Anser albifrons albifrons*)
- Internationally important population of regularly occurring migratory species wintering Dunlin (*Calidris alpina*)
- Internationally important population of regularly occurring migratory species wintering Redshank (*Tringa tetanus*)
- Internationally important population of regularly occurring migratory species wintering Shelduck (*Tadorna tadorna*)

- Internationally important population of regularly occurring migratory species wintering Gadwall (*Anas strepera*)
- Internationally important assemblage of waterfowl

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

Gadwall (*Anas strepera*)

- Habitat: in winter they could be found in gravel pits, lakes, reservoirs and coastal wetlands and estuaries, while during the breeding time they could be found in the shallow edges of lakes and gravel pits where there is vegetation.
- Diets: Stems, leaves, and seeds.

Greater white-fronted goose (*Anser albifrons*)

- Habitat: they are present UK only during winter time (October – March) and could be found around freshwater, farmlands and wetlands.
- Diets: Grass, clover, winter wheat, potatoes, roots, shoots, tubers, and leaves, as well as grains and oats.

Dunlin (*Calidris alpina*)

- Habitat: they could be found on heathland, moorland, freshwater, wetlands, and coastal areas.
- Diets: Insects, snails, and worms.

Berwick's Swan (*Cygnus columbianus bewickii*)

- Habitat: they could be found only during winter time (October – March) in areas of freshwater, farmland, coastal and wetlands.
- Diets: in UK they feed in fields on leftover potatoes and grain. On their breeding grounds in Siberia, they eat aquatic plants and grass.

Shelduck (*Tadorna tadorna*)

- Habitat: wetlands, freshwater, coastal areas, and inland waters such as reservoirs and gravel workings.
- Diets: Invertebrates, small shellfish, and aquatic snails.

Redshank (*Tringa totanus*)

- Habitat: while breeding they could be found in saltmarshes, flood meadows, wetlands, heathland, moorland and around lakes, tough during winter you'll see them on farmland, estuaries and coastal lagoons.
- Diets: insects, earthworms, molluscs and crustaceans by probing their bills into soil and mud.

Severn Estuary Ramsar Site

Area (ha):

- 24,701

Location:

- Outside of the County boundary to the southeast within counties of Gloucestershire and Somerset in England, and Monmouthshire in Wales.

Qualifying features:

- Estuaries
- Assemblage of migratory fish species (Sea lamprey, River lamprey, Twaite shad, Allis shad, Salmon, Sea trout, Eel)
- *Anas strepera*: Gadwall
- *Anser albifrons albifrons:* European white-fronted goose
- *Calidris alpina:* Dunlin

- *Cygnus columbianus bewickii:* Bewick's swan
- *Limosa limosa islandica*: Black-tailed godwit
- *Numenius phaeopus*: Eurasian whimbrel
- *Tadorna tadorna*: Shelduck
- *Tringa totanus*: Redshank
- Internationally important assemblages of waterfowl

Key vulnerabilities and environmental conditions to support site integrity

The immense tidal range, second largest in world, affects both the physical environment and biological communities. The fish of the whole estuarine and river system is one of the most diverse in Britain, with over 110 species recorded. This site is important for the run of migratory fish between sea and river via estuary. It is also of particular importance for migratory birds during spring and autumn.

Natural England's Site Improvement Plan for the Ramsar site identifies the main threats facing the site to be the increasing pressure of recreational activities; modification to water courses; increased number of developments within and adjacent to the Estuary; coastal squeeze causing loss of habitat; changes in land management; changes in species distributions caused by climate change and other man-made and natural modifications to on and offsite environments; loss of suitable habitats and food sources through water pollution; adverse impacts of aggregate extraction, maintenance and disposal of minerals and waste; the emergence of invasive species; increasing amounts of marine litter; and marine pollution incidents.

Natural England conservation objectives

Severn Estuary Ramsar site has similar objectives to Severn Estuary SPA. These include:

- Explanatory information for Estuaries.
- Explanatory information for Assemblage of migratory fish species.
- Internationally important population of regularly occurring Anex 1. species Bewick's swan (*Cygnus columbianus bewickii*).
- Internationally important population of regularly occurring migratory species wintering European white-fronted goose *(Anser albifrons albifrons*).
- Internationally important population of regularly occurring migratory species wintering Dunlin (*Calidris alpina*).
- Internationally important population of regularly occurring migratory species wintering Redshank (*Tringa tetanus*).
- Internationally important population of regularly occurring migratory species wintering Shelduck (*Tadorna tadorna*).
- Internationally important population of regularly occurring migratory species wintering Gadwall (*Anas strepera*).
- Internationally important assemblage of waterfowl.

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

Estuaries – this habitat is subject to tide, gradient of salinity, sediment input, shelter from wave actions, low current flows, geomorphological and hydrographic factors. Based on those factors four different types of estuaries are categorised.

Allis shad (*Alosa alosa*)

- Habitats: grows in coastal waters and estuaries. Migrate up to 800km upstream into continental Europe to spawn where they are not keen on traversing obstacles such as dams and weirs.
- Diets: smaller fish, plankton, water invertebrates and sometimes even fish eggs.

Twaite shad (*Alosa fallax*)

- Habitats: habitat requirements are not fully understood.
- Diets: smaller fish, plankton, water invertebrates and sometimes even fish eggs.

River lamprey (*Lampetra fluviatilis*)

- Habitats: coastal waters, estuaries, and accessible rivers. The species is anadromous, i.e., spawns in freshwater and spends part of the life in the sea. Water pollution and obstacles (weirs and dams) impede the migration.
- Diets: as young: algae, detritus, and bacteria; as adults: other fish's bodily fluids and carrion.

Sea lamprey (*Petromyzon marinus*)

- Habitats: warm estuaries and easily accessible rivers. The species is anadromous, i.e., spawns in freshwater and spends part of the life in the sea. Needs warm water with gravel and silt or sand for spawning and burrowing juvenile ammocoetes. Water pollution and obstacles (weirs and dams) impede the migration.
- Diets: young: micro-organisms; adults: suck blood of other fishes.

Atlantic salmon (*Salmo salar*)

- Habitats: fast-flowing, shallow clear waters of rivers and streams. The species is anadromous, i.e., spawns in freshwater and spends part of the life in the sea. Water pollution and obstacles (weirs and dams) could impede the migration.
- Diets: young: water invertebrates; adults: smaller fishes.

Sea trout (*Salmo trutta*)

- Habitat: freshwater rivers and coastal areas.
- Diet: young: on freshwater invertebrates; adults: smaller fish.

Eel (*Anguilla Anguilla*)

- Habitat: freshwater, coastal, wetlands, marine.
- Diet: eats anything in marine and freshwater, augmented by terrestrial invertebrates.

Gadwall (*Anas strepera*)

- Habitat: in winter they could be found in gravel pits, lakes, reservoirs and coastal wetlands and estuaries, while during the breeding time they could be found in the shallow edges of lakes and gravel pits where there is vegetation.
- Diets: Stems, leaves, and seeds.

White-fronted goose (*Anser albifrons*)

- Habitat: they are present UK only during winter time (October – March) and could be found around freshwater, farmlands and wetlands.
- Diets: Grass, clover, winter wheat, potatoes, roots, shoots, tubers, and leaves, as well as grains and oats.

Dunlin (*Calidris alpina*)

- Habitat: they could be found on heathland, moorland, freshwater, wetlands and coastal areas.
- Diets: Insects, snails and worms.

Berwick's Swan (*Cygnus columbianus bewickii*)

- Habitat: they could be found only during winter time (October – March) in areas of freshwater, farmland, coastal and wetlands.
- Diets: in UK they feed in fields on leftover potatoes and grain. On their breeding grounds in Siberia, they eat aquatic plants and grass.

Black-tailed godwit (*Limosa limosa islandica*)

- Habitat: estuaries, coastal lagoons, wetlands, wet meadows, marshes, and grassland.
- Diet: Insects, worms, and snails, but also some plants, beetles, grasshoppers, and other small insects during the breeding season.

Eurasian whimbrel (*Numenius phaeopus*)

- Habitat: grassland, heathland, moorland, freshwater, farmland, coastal and wetlands.
- Diet: On breeding grounds insects, snails, and slugs; on passage, crabs, shrimps, molluscs, worms.

Shelduck (*Tadorna tadorna*)

- Habitat: wetlands, freshwater, coastal areas, and inland waters such as reservoirs and gravel workings.
- Diets: Invertebrates, small shellfish, and aquatic snails.

Redshank (*Tringa totanus*)

- Habitat: while breeding they could be found in saltmarshes, flood meadows, wetlands, heathland, moorland and around lakes, tough during winter you'll see them on farmland, estuaries, and coastal lagoons.
- Diets: insects, earthworms, molluscs, and crustaceans by probing their bills into soil and mud.

Walmore Common SPA

Area (ha):

- 53.41

Location:

- Outside of the County boundary to the southeast within Gloucestershire County.

Qualifying features:

- Cygnus columbianus bewickii: Bewick's Swan

Key vulnerabilities and environmental conditions to support site integrity

A low-lying area in the Severn Vale subject to annual winter flooding which creates suitable conditions for regular wintering by an important number of Bewick's Swan (*Cygnus columbianus bewickii*). The swans will only visit the site if it is under flood conditions. The operating protocol for the tilting weir installed in 2011 needs to have regards for creating flood conditions in the winter months when required. The site, which is in two sections, overlies the only significant area of peat in the County. It is one of three similar wetland sites of local botanical and ornithological importance.

Natural England conservation objectives

Walmore Common SPA site requires to ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- The extent and distribution of the habitats of the qualifying features.
- The structure and function of the habitats of the qualifying features.
- The supporting processes on which the habitats of the qualifying features rely.
- The population of each of the qualifying features.

- The distribution of the qualifying features within the site.

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

Berwick's Swan (*Cygnus columbianus bewickii*)

- Habitat: they could be found only during winter time (October – March) in areas of freshwater, farmland, coastal and wetlands.
- Diets: in UK they feed in fields on leftover potatoes and grain. On their breeding grounds in Siberia they eat aquatic plants and grass.

Walmore Common Ramsar Site

Area (ha):

- 53. 41

Location:

- Outside of the County boundary to the southeast within Gloucestershire.

Qualifying features:

- Cygnus columbianus bewickii: Bewick's Swan.

Key vulnerabilities and environmental conditions to support site integrity

Natural England's Site Improvement Plan for the Ramsar site identifies the main threats facing the site to be the hydrological changes; declining numbers are due to broad scale re-distributions of Bewick's swans; changes in land management; unprotected and unavailable feeding and roosting areas; increased public access; and the increased development of energy production in the area.

Natural England conservation objectives

Considering that both Walmore Common SPA and Ramsar site are covering same area and have same qualifying features, one can conclude that the same conservation objectives were taken into actions. Those include actions to ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- The extent and distribution of the habitats of the qualifying features.
- The structure and function of the habitats of the qualifying features.
- The supporting processes on which the habitats of the qualifying features rely.
- The population of each of the qualifying features.
- The distribution of the qualifying features within the site.

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

Berwick's Swan (*Cygnus columbianus bewickii*)

- Habitat: they could be found only during winter time (October – March) in areas of freshwater, farmland, coastal and wetlands.
- Diets: in UK they feed in fields on leftover potatoes and grain. On their breeding grounds in Siberia, they eat aquatic plants and grass.

Appendix D

Screening Assessment

D.1 The following section below shows which types of impacts on European sites could potentially result from each of the policies and site allocations in the Herefordshire Local Plan.

Strategic Policies

Policy CC1: A carbon neutral Herefordshire

- This policy will not result in development as it sets out how Herefordshire will become carbon neutral and to mitigate and adapt to the effects of climate change.

Is the policy likely to have significant effects?

- No.

Policy EE1: Protecting and enhancing the quality of the natural environment

- This policy sets out criteria that development proposals should consider and provide in relation to protecting and enhancing the natural environment. Development proposals should demonstrate that they don't result in an adverse impact on the integrity of any National Site Network Site. Therefore, this policy does not result in development.

Is the policy likely to have significant effects?

- No.

Policy EE2: Protecting and enhancing the quality of the historic environment and its setting

- This policy sets out criteria that development proposals are required to do in relation to protecting and enhancing the historic environment and its setting. Therefore, this policy does not result in development.

Is the policy likely to have significant effects?

- No.

Policy EE3: Enhancing the quality of the built environment

- This policy sets out criteria that development proposals are required to do in relation to protecting and enhancing the built environment and its setting. Therefore, this policy does not result in development.

Is the policy likely to have significant effects?

- No.

Policy AG1: Accommodating housing growth

- This policy ensures that deliverable sites will be identified to support the delivering of a minimum of 16,100 new homes over the plan period. The policy proposes residential development across six settlements and rural areas within Herefordshire..

Is the policy likely to have significant effects?

- Yes. This policy outlines the distribution and quantity of housing development as part of the plan and therefore could contribute to effects, including physical damage and habitat loss functionally linked only, non-physical disturbance, air pollution; recreational pressure; and, water quality.

Policy AG2: Strategic rural housing distribution

- This policy ensures that 5,320 dwellings will be provided over the plan period within rural areas. This policy proposes residential development within the rural parts of Herefordshire.

Is the policy likely to have significant effects?

- Yes. This policy outlines the distribution and quantity of housing development as part of the plan and therefore could contribute to effects, including physical damage and habitat loss functionally linked only, non-physical disturbance, air pollution; recreational pressure; and water quality.

Policy AG3: Rural housing growth in Hubs and Service Settlements

- This policy ensures that new development within Herefordshire will be located in accordance with the county's settlement hierarchy. Additionally, Neighbourhood Development Plans will allocate land for new housing or demonstrate the delivery of the required housing growth. However, there may not be Neighbourhood Development Plans within all settlements and areas.

Is the policy likely to have significant effects?

- No.

Policy AG4: Rural settlement exceptions for affordable housing, entry level homes, affordable, self and custom build housing and small scale affordable Traveller sites

- This policy supports the provision of sites for affordable housing, affordable custom build housing and affordable Traveller sites will be supported when it is outside of the Rural Settlement Hierarchy.

Is the policy likely to have significant effects?

- Yes. This supports the development of affordable, self and custom build housing and small scale affordable traveller sites as part of the plan and therefore could contribute to effects, including physical damage and habitat loss functionally linked only, non-physical disturbance, air pollution; recreational pressure; and, water quality. .

Policy AG5: Open countryside

- This policy details what areas are classified as open countryside and does not result in development.

Is the policy likely to have significant effects?

- No.

Policy AG6: Gypsies, Travellers and Travelling Show People

- This policy supports proposals for new pitches for Gypsies and Traveller and new plots for Travelling Show People to meet the need. This policy

does not allocate any sites but has the potential to result in development of pitches for Gypsy, Traveller and Travelling Showpeople.

Is the policy likely to have significant effects?

- Yes. This policy supports the development of new pitches as part of the plan and therefore could contribute to effects, including physical damage and habitat loss functionally linked only, non-physical disturbance, air pollution; recreational pressure; and, water quality. .

Policy BC1: Housing mix and range

- This policy does not result in development and only states the requirement for a mix of and range of housing to be delivered.

Is the policy likely to have significant effects?

- No.

Policy BC2: Affordable housing – thresholds and targets

- This policy would not result in development as it sets a requirement for affordable housing. Therefore, setting out criteria related to development.

Is the policy likely to have significant effects?

- No.

Policy BC3: Diversity of housing delivery

- This policy would not result in development as it sets requirements for housing developments in ensuring a variety of housing sites are to be delivered.

Is the policy likely to have significant effects?

- No.

Policy HSC1: Promoting health and wellbeing

- This policy does not result in development but instead sets out criteria that new development should meet in relation to community, health, educational and open space and sports facilities. The policy also requires light pollution to be taken into account.

Is the policy likely to have significant effects?

- No.

Policy HSC2: Infrastructure Delivery

- This policy supports the delivery of infrastructure to meet current needs and support development.

Is the policy likely to have significant effects?

- Yes. This policy supports the delivery of infrastructure across Herefordshire and therefore will contribute to effects, including physical damage and habitat loss functionally linked only, non-physical disturbance, and, air pollution.

Policy HSC3: Green & Blue Infrastructure

- This policy will not result in development, instead providing criteria for new developments in relation to green and blue infrastructure.

Is the policy likely to have significant effects?

- No.

Policy HSC4: Herefordshire and Gloucestershire Canal

- This policy safeguards the Herefordshire and Gloucestershire Canal corridor and provides criteria for when development near the canal would be permitted; however the policy will not itself result in new development.

Is the policy likely to have significant effects?

- No.

Policy PE1: Accommodating economic growth

- This policy aims to deliver 182 hectares of employment land over the plan period with the employment land distributed across six settlements. The majority of employment land is proposed in Hereford and Ross- on- Wye.

Is the policy likely to have significant effects?

- Yes. This policy outlines the quantity of employment development as part of the plan and therefore could contribute to effects, including physical damage and habitat loss functionally linked only, non-physical disturbance, air pollution and water quality.

Policy PE2: Principles for economic growth

- This policy sets out the criteria for economic growth within Herefordshire. This policy also safeguards the Herefordshire Enterprise Zone for future employment land and additional employment land to the south of the Enterprise Zone.

Is the policy likely to have significant effects?

- Yes. This policy supports employment development as part of the plan and therefore could contribute to effects, including physical damage and habitat loss functionally linked only, non-physical, air pollution and water quality.

Policy PE3: Enhancing town centre vitality

- This policy states the range of uses that are acceptable within town centres and ensuring towns remain vibrant. The policy does support residential or office conversion above ground floor retail units but does not propose new development.

Is the policy likely to have significant effects?

- No.

Policy PE4: Sustainable Tourism

- This policy sets criteria for where proposals for sustainable tourism experiences and new or extensions to caravan and camping sites and new hotels and guest houses would be acceptable. However, this policy will not result in development.

Is the policy likely to have significant effects?

- Yes. This policy supports tourism development as part of the plan and therefore could contribute to effects, including physical damage and habitat loss functionally linked only, non-physical disturbance, air pollution and water quality.

Policy PE5: Supporting a strong Rural Economy

- This policy supports the vitality and viability of the rural economy and design criteria for proposals.

Is the policy likely to have significant effects?

- Yes. This policy supports employment development as part of the plan and therefore could contribute to effects, including physical damage and habitat loss functionally linked only, non-physical disturbance, air pollution and water quality.

Place Shaping Policies

Policy HERE1: Strategic development for Hereford

- This policy supports the delivery of around 5,000 dwellings during the plan period. The policy identified four locations for strategic residential development. The policy identifies strategic residential development at the following locations:
  - Land at Holmer North- approximately 900 new homes
  - Land at Three Elms- approximately 90 new homes
  - Land at Lower Bullingham- approximately 1000 new homes
  - Hereford city centre- approximately 800 new homes

Is the policy likely to have significant effects?

- Yes. This policy outlines the distribution and quantity of housing development as part of the plan and therefore will contribute to effects, including physical damage and habitat loss functionally linked only, non-physical disturbance functionally linked only, air pollution and recreational pressure.

Policy HERE2: Supporting the vitality of Hereford City Centre

- This policy supports the delivery of about 800 new dwellings during the plan period within Hereford City Centre.

Is the policy likely to have significant effects?

- Yes. This policy outlines the distribution and quantity of housing development as part of the plan and therefore will contribute to effects, including physical damage and habitat loss functionally linked only, non-physical disturbance including functionally linked, non-toxic contamination, air pollution and recreational pressure.

Policy HERE3: Supporting jobs in Hereford

- This policy supports the extension of the Hereford Enterprise Zone at Rotherwas and a new 15 hectare site adjacent to the Three Elms urban expansion during the plan period.

Is the policy likely to have significant effects?

- Yes. This policy would result in infrastructure development which has the potential to result in effects including physical damage and loss of habitat functionally linked only; non-physical disturbance functionally linked only, air pollution; water quality; and, recreational pressure.

Policy HERE4: Supporting movement in and around Hereford

- This policy supports enhancements to active travel within Hereford which includes an additional river crossing, multi-storey parking provision, multi-modal transport interchange and improvements to public realm and green infrastructure.

Is the policy likely to have significant effects?

- Yes. This policy would result in infrastructure development which has the potential to result in effects including physical damage and loss of habitat functionally linked only; non-physical disturbance functionally linked only; non-toxic contamination; air pollution; and, recreational pressure.

Policy HERE5: Sustainable urban expansion at Homer North

- This policy supports development of land to the north of the existing Holmer West scheme to deliver around 900 homes.

Is the policy likely to have significant effects?

- Yes. This policy would result in residential development at land to the north of the existing Holmer West scheme which has the potential to result in effects including air pollution; recreational pressure and water quality.

Policy HERE6: Sustainable urban expansion at Three Elms

- This policy supports the delivery of a mixed use urban extension including approximately 950 homes and 8ha of employment land at the Three Elms between Roman Road and Canon Pyon Road.

Is the policy likely to have significant effects?

- Yes. This policy would result in residential development at the Three Elms between Roman Road and Canon Pyon Road which has the potential to result in effects including physical damage and loss of habitat functionally linked only; non-physical disturbance functionally linked only; air pollution; recreational pressure and water quality.

Policy HERE7: Sustainable urban expansion at Lower Bullingham

- This policy support the delivery of approximately 1,000 new homes at land south east of the city at Lower Bullingham.

Is the policy likely to have significant effects?

- Yes. This policy would result in residential development at land south east of the city at Lower Bullingham which has the potential to result in effects including physical damage and loss of habitat functionally linked only; non-physical disturbance functionally linked only; air pollution; recreational pressure and water quality.

Policy HERE8: Supporting education and community facilities in Hereford

- This policy requires the delivery of specific community services and facilities through development proposals. This will include the below:
  - The provision and safeguarding of 1ha of land for the expansion of Whitecross High School;
  - The continuing growth of other further education provision;
  - The provision of special school facilities;
  - The provision of any required health care provision;

- The provision of local service centres within existing neighbourhoods;
- Safeguarding land for future expansion of Hereford Cemetery.

Is the policy likely to have significant effects?

- Yes. This policy would result in community infrastructure development which has the potential to result in effects including physical damage and loss of habitat functionally linked only; non-physical disturbance functionally linked only; air pollution and water quality.

Policy HERE9: Supporting greening of the city in Hereford

- This policy will not result in development but sets requirements for development proposals to enhance opportunities to increase and improve the natural environment.

Is the policy likely to have significant effects?

- No.

Policy BROM1: Strategic development for Bromyard

- This policy supports the delivery of a minimum of 750 dwellings and 4ha of employment land at Bromyard during the plan period.

Is the policy likely to have significant effects?

- Yes. This policy would result in residential and employment development at Bromyard which has the potential to result in effects including air pollution and water quality.

Policy BROM2: Land at Hardwick Bank

- This policy supports the delivery of 500 homes at Hardwick Bank through two development phases. Land at Hardwick Bank will deliver a sustainable urban extension to the town.

Is the policy likely to have significant effects?

- Yes. This policy would result in residential development at land at Hardwick Bank which has the potential to result in effects including air pollution; and water quality.

Policy BROM3: Land west of Linton Trading Estate

- This policy supports the delivery of 4ha of employment land at Land West of Linton Trading Estate. Due to the gradient of the site and proximity to the Bromyard Downs, any development is required to be located on the northern part of the site.

Is the policy likely to have significant effects?

- Yes. This policy would result in employment development at land to the east of Kingswood Road which has the potential to result in effects including air pollution and water quality.

Policy KING1: Strategic development for Kington

- This policy supports the delivery of a minimum of 150 new dwellings at Kington within the plan period.

Is the policy likely to have significant effects?

- Yes. This policy would result in residential development at land to the east of Kingswood Road which has the potential to result in effects including air pollution and water quality.

Policy KING2: Land east of Kingswood Road

- This policy supports the development of up to 50 homes at Land to the East of Kingswood Road.

Is the policy likely to have significant effects?

- Yes. This policy would result in residential development at land to the east of Kingswood Road which has the potential to result in effects including air pollution and water quantity.

Policy LEDB1: Strategic development for Ledbury

- This policy supports the delivery of a minimum of 1,700 dwellings and employment land at Ledbury within the plan period across 22 ha.

Is the policy likely to have significant effects?

- Yes. This policy would result in residential and employment development at Ledbury which has the potential to result in effects including air pollution.

Policy LEDB2: Land to the south of Ledbury

- This policy supports the delivery of residential development to Land to the south east of Ledbury. This includes the delivery of a minimum of 450 new homes over 25 ha. The site will also include a new community facility and a small-scale neighbourhood retail facility.

Is the policy likely to have significant effects?

- Yes. This policy would result in residential development at land to the south of Ledbury which has the potential to result in effects including air pollution.

Policy LEDB3: Land south of Little Marcle Road

- This policy allocates 17 hectares of employment land south of Little Marcle Road Trading Estate.

Is the policy likely to have significant effects?

- Yes. This policy would result in employment development to the land south of Little Marcle Road which has the potential to result in effects including air pollution.

Policy LEDB4: Lawnside and Market Street Regeneration Area

- This policy supports the regeneration of the Lawnside and Market Street area of Ledbury which could include the improvement and redevelopment of housing. The area is 4ha in total and will include a mix of residential and employment generating uses.

Is the policy likely to have significant effects?

- Yes. This policy would result in residential development within the Lawnside and Market Street area which has the potential to result in effects including air pollution.

Policy LEOM1: Strategic development for Leominster

- This policy supports the delivery of a minimum of 800 new dwellings during the plan period within Leominster. Of these, 200 new homes will be provided on a strategic housing site to the south of the town in accordance with policy LEOM2. The remaining new homes will be delivered through non-strategic allocations in the Leominster Neighbourhood Development Plan, existing commitments and future windfall developments.

Is the policy likely to have significant effects?

- Yes. This policy would support residential development in Leominster which has the potential to result in effects including air pollution and water quality.

Policy LEOM2: Land south of the Primary School

- This policy supports residential development at Land south of the Primary School which will include the delivery of 200 new homes.

Is the policy likely to have significant effects?

- Yes. This policy would result in residential development at land south of the Primary School which has the potential to result in effects including air pollution and water quality.

Policy LEOM3: Land south of Leominster Enterprise Park

- This policy will result in the development of 10ha of employment land at land south of Leominster Enterprise Park.

Is the policy likely to have significant effects?

- Yes. This policy will result in employment development at land south of Leominster Enterprise Park which has the potential to result in effects including air pollution and water quality.

Policy ROSS1: Strategic development for Ross-on-Wye

- This policy supports the delivery of a minimum of 1,800 new homes and 35ha of employment land during the plan period at Ross-on-Wye. Of these, 1,000 new homes will be provided in a strategic mixed use site to the east of the town in accordance with Policy ROSS2.. The remaining new homes will be delivered through existing commitments, future windfall developments and through the Ross-on-Wye Neighbourhood Development Plan. The majority of employment land (33ha) will be concentrated at Land to the East of Ross-on-Wye. Further employment land will be met through existing commitments and smaller sites identified in the Neighbourhood Development Plan.

Is the policy likely to have significant effects?

- Yes. This policy would result in residential development within Ross-on-Wye which has the potential to result in effects including non-physical disturbance including air pollution; water quality and recreational pressure.

Policy ROSS2: Land to the East of Ross-on-Wye

- This policy supports a mixed-use sustainable urban extension which includes the delivery of a minimum of 1,000 homes and 33ha of employment land at Land to the East of Ross-on-Wye.

Is the policy likely to have significant effects?

- Yes. This policy would result in residential development at LandLand to the East of Ross-on-Wye which has the potential to result in effects including physical damage and loss of habitat functionally linked only; non-physical disturbance functionally linked only; non-toxic contamination; air pollution; water quality and, recreational pressure.

Policy RURA1: Housing growth within rural Hubs

- This policy states that housing growth will be directed to Hubs and Second tier Hubs. Hubs and Second tier Hubs will be required to deliver growth through strategic allocations and Neighbourhood Development Plans.

Is the policy likely to have significant effects?

- Yes. This policy would result in residential development within rural strategic locations which has the potential to result in effects including water quality.

Policy RURA2: Rural housing growth in Service Settlements

- This policy supports housing growth within service settlements and second tier service settlements. However, the policy is not proposing any new development and is only continuing existing allocations within Neighbourhood Development Plans.

Is the policy likely to have significant effects?

- No.

Policy RURA3: Rural strategic site allocations

- This policy allocates sites within the following areas to encourage strategic rural housing growth: Bodenham, Colwall, Canon Pyon, Bartstree and Weston under Penyard. However, details of the sites have not been provided.

Is the policy likely to have significant effects?

- Yes. This policy would result in residential development within rural strategic locations which has the potential to result in effects including physical damage and loss of habitat functionally linked only; air pollution; and, water quality.

Policy RURA4: Rural strategic transport

- This policy proposes a new railway station or parkway along the Hereford and Abergavenny rail line. The exact location of the proposed railway station is unknown. The River Wye SAC flows through Hereford with the construction of a railway line potentially required to cross the River Wye.

Is the policy likely to have significant effects?

- Yes. This policy will support infrastructure development which could result in effects including physical damage and loss of habitat functionally linked only; non-physical disturbance including functionally linked; non-toxic contamination; and, air pollution.

Policy RURA5 Rural strategic mitigation schemes

- This policy supports nutrient mitigation sites to enable nutrient neutrality.

Is the policy likely to have significant effects?

- No.

Appendix E

Suitability of allocations for qualifying bird species

Suitability of allocations for qualifying bird species of Severn Estuary SPA and Ramsar site and Walmore Common SPA and Ramsar site

Policy HERE1: Strategic development for Hereford

- Policy HERE1 is an overarching policy for strategic development within Hereford. Policy HERE1 supports development at land at Holmer North; land at Three Elms; land at Lower Bullingham; and, Hereford city centre. The suitability of each site is considered under their respective policies (Policy HERE2, Policy HERE5, Policy HERE6 and Policy HERE7).

Policy HERE2: Supporting the vitality of Hereford City Centre

- Review of Site Parameters
  - Distance from European Site: Approximately 37.9km north west of Severn Estuary SPA and Ramsar and approximately 33.5km north west of Walmore Common SPA and Ramsar at the closest point.
  - Size: Not specified
  - Habitats Present: The site is the urbanised area of Hereford. The River Wye flows to the south of Hereford. The Northern and southern tip of the site are within Flood Zone 3.
  - Use of Site: Urban area

- Assessment of Suitability for SPA/Ramsar Qualifying birds
  - Negligible

Policy HERE3: Supporting jobs in Hereford

- Review of Site Parameters (Hereford Enterprise Zone at Rotherwas)
  - Distance from European Site: Approximately 34.7km north west of Severn Estuary SPA and Ramsar and approximately 30.1km north west of Walmore Common SPA and Ramsar, at the closest point.
  - Size: 10.1 ha
  - Habitats Present: A thin strip of greenspace with some trees and hedging. Some of the woodland is dense in areas. The Greenspace looks to be in agricultural use. The site sites directly south of an industrial area with the B4399 intersecting the centre of the site. The site is not located within any flood risk zone.
  - Use of Site: Agriculture
- Assessment of Suitability for SPA/Ramsar Qualifying birds
  - Negligible
- Review of Site Parameters (Land East of Hereford Cattle Market)
  - Distance from European Site: Approximately 40.3km north west of Severn Estuary SPA and Ramsar and approximately 36.1km north west of Walmore Common SPA and Ramsar, at the closest point.
  - Size: ~ 15ha
  - Habitats Present: Areas of open farmland with hedgerow running along the outer edges of the site. A road insects the centre of the site. Yazor Brook runs along the southern edge of the site. The site is located adjacent to the A4110. There are also small pockets of light industry adjacent to the site. The southern portion of the site is partially located within Flood Zone 2 and 3.
  - Use of Site: Agriculture

- Assessment of Suitability for SPA/Ramsar Qualifying birds
  - Low – due to the distance of the site from the Severn Estuary SPA and Ramsar site and Walmore Common SPA and Ramsar site and the high-levels of disturbance from surrounding development.

Policy HERE4: Supporting movement in and around Hereford

- Review of Site Parameters
  - Distance from European Site: Approximately 37.9km north of Severn Estuary SPA and Ramsar and approximately 33.5km north of Walmore Common SPA and Ramsar, at the closest point.
  - Size: 7.22 ha
  - Habitats Present: The site is the urbanised area of Hereford. The River Wye flows to the south of Hereford. The Northern and southern tip of the site are within Flood Zone 3.
  - Use of Site: Urban area
- Assessment of Suitability for SPA/Ramsar Qualifying birds
  - Negligible

Policy HERE5: Sustainable urban expansion at Holmer North

- Review of Site Parameters
  - Distance from European Site: Approximately 40.8km north west of Severn Estuary SPA and Ramsar and approximately 36.1km north west of Walmore Common SPA and Ramsar, at the closest point.
  - Size: ~ 53.1ha
  - Habitats Present: A larger area of farmland fields separated by hedgerows. New residential development lies to the south of the site,

some of which is under construction. The site is not located within a flood risk zone.

  - Use of Site: Agriculture

- Assessment of Suitability for SPA/Ramsar Qualifying birds
  - Low – due to the distance of the site from Severn Estuary SPA and Ramsar site and Walmore Common SPA and Ramsar site.

Policy HERE6: Sustainable urban expansion at Three Elms

- Review of Site Parameters
  - Distance from European Site: Approximately 40.3km north west of Severn Estuary SPA and Ramsar and approximately 36.1km north west of Walmore Common SPA and Ramsar, at the closest point.
  - Size: ~ 95.2ha
  - Habitats Present: Areas of open farmland with hedgerow running along the outer edges of the site. A road insects the centre of the site. Yazor Brook runs along the southern edge of the site. The site is located adjacent to the A4110. There are also small pockets of light industry adjacent to the site. The southern portion of the site is partially located within Flood Zone 2 and 3.
  - Use of Site: Agriculture
- Assessment of Suitability for SPA/Ramsar Qualifying birds
  - Low – due to the distance of the site from the Severn Estuary SPA and Ramsar site and Walmore Common SPA and Ramsar site and the high-levels of disturbance from surrounding development.

Policy HERE7: Sustainable urban expansion at Lower Bullingham

- Review of Site Parameters

- Distance from European Site: Approximately 35.1km north west of Severn Estuary SPA and Ramsar and approximately 31.2km north west of Walmore Common SPA and Ramsar, at the closest point.
- Size: ~ 75.6ha
- Habitats Present: Large areas of farmland with hedgerows. There are some outbuildings present on the site with a road running through the western part of the site. Norton Brook and Red Brook run through the site. Parts of the site falls within Flood Zone 3.
- Use of Site: Agriculture

- Assessment of Suitability for SPA/Ramsar Qualifying birds
  - Moderate

Policy BROM1: Strategic development for Bromyard

- Policy BROM1 is an overarching policy for strategic development within Bromyard. Policy BROM1 supports development at land at Hardwick Bank and land west of Linton Trading Estate. The suitability of this site is considered under their respective policies (Policy BROM2 and Policy BROM3).

Policy BROM2: Land at Hardwick Bank

- Review of Site Parameters
  - Distance from European Site: Approximately 46.3km north of Severn Estuary SPA and Ramsar and approximately 40.1km north of Walmore Common SPA and Ramsar, at the closest point.
  - Size: ~ 15.1 ha
  - Habitats Present: A small area of farmland each surrounded by hedgerows. A residential area lies to the south of the site. The site not located within any flood risk zone.
  - Use of Site: Agriculture

- Assessment of Suitability for SPA/Ramsar Qualifying birds
  - Low – due to the distance from the Severn Estuary SPA and Ramsar site and Walmore Common SPA and Ramsar site.

Policy BROM3: Land west of Linton Trading Estate

- Review of Site Parameters
  - Distance from European Site: Approximately 45.5km north of Severn Estuary SPA and Ramsar and approximately 39.2km north of Walmore Common SPA and Ramsar, at the closest point.
  - Size: ~ 9.2 ha
  - Habitats Present: Farmland surrounded by hedgerows bound by the A44 to the north of the site. The site is not located within any flood risk zone.
  - Use of Site: Agriculture
- Assessment of Suitability for SPA/Ramsar Qualifying birds
  - Low

Policy KING1: Strategic development for Kington

- Policy KING1 is an overarching policy for strategic development within Kington. Policy KING1 supports development at land east of Kingswood Road. The suitability of each site is considered under their respective policies (Policy KING2).

Policy KING2: Land east of Kingswood Road

- Review of Site Parameters
  - Distance from European Site: Approximately 63.9km north west of Severn Estuary SPA and Ramsar and approximately 60.1km north west of Walmore Common SPA and Ramsar, at the closest point.

- Size: ~ 4.9 ha
- Habitats Present: Two areas of farmland each surrounded by hedgerows. There is a residential area to the east of the site. The site is not located within any flood risk zone.
- Use of Site: Agriculture

- Assessment of Suitability for SPA/Ramsar Qualifying birds
  - Low

Policy LEDB1: Strategic development for Ledbury

- Review of Site Parameters
  - Distance from European Site: Approximately 28.1km north of Severn Estuary SPA and Ramsar and approximately 21.7km north of Severn Estuary SPA and Ramsar, at the closest point.
  - Size: 20 ha
  - Habitats Present: Two large areas of farmland with hedgerows surrounding each of the fields. Between the two areas of farmland is an area of woodland which contains informal footpaths that could be used by dog walkers. An industrial area lies to the north of the site with recreational fields to the eats of the site. The site is not located within a flood risk zone.
  - Use of Site: Agricultural and possible recreational (walkers)
- Assessment of Suitability for SPA/Ramsar Qualifying birds
  - Low – due to the distance of the site from Severn Estuary SPA and Ramsar site and Walmore Common SPA and Ramsar site and the high level of disturbance surrounding the site.

Policy LEDB2: Land to the south of Ledbury

- Review of Site Parameters

- Distance from European Site: Approximately 27.2km north of Severn Estuary SPA and Ramsar and approximately 20.8km north of Walmore Common SPA and Ramsar, at the closest point.
- Size: 25 ha
- Habitats Present: Six separate areas of farmland separated by hedgerows. To the north and the east the site is bound by the A417 and the A449. There is a pocket of woodland in the centre and bordering the site which increases the risk of predation. To the west of the site is a residential development that is under construction. Flood zone 3 runs along the eastern edge of the site.
- Use of Site: Agriculture

- Assessment of Suitability for SPA/Ramsar Qualifying birds
  - Low – due to the lack of wetland habitat.

Policy LEDB3: Land south of Little Marcle Road

- Review of Site Parameters
  - Distance from European Site: Approximately 28.2km north of Severn Estuary SPA and Ramsar and approximately 21.9km north of Walmore Common SPA and Ramsar, at the closest point.
  - Size: 17 ha
  - Habitats Present: The site is located to the west of Ledbury and contains a mixture of agricultural land and areas of woodland and shrubbery. The River Leadon runs to the east of the site and there are areas of Flood Zone 3 associated with this watercourse. However, the site falls outwith this flood zone.
  - Use of Site: Agriculture/woodland.
- Assessment of Suitability for SPA/Ramsar Qualifying birds
  - Moderate.

Policy LEDB4: Lawnside and Market Street Regeneration Area

- Review of Site Parameters
  - Distance from European Site: Approximately 28.9km north of Severn Estuary SPA and Ramsar and approximately 22.2km north of Walmore Common SPA and Ramsar, at the closest point.
  - Size: 4 ha
  - Habitats Present: The site is the urbanised area of Ledbury. The site is not located within a flood risk zone.
  - Use of Site: Urban Area
- Assessment of Suitability for SPA/Ramsar Qualifying birds
  - Negligible

Policy LEOM1: Strategic development for Leominster

- Policy LEOM1 is an overarching policy for strategic development within Leominster. Policy LEOM1 supports development at Land south of the Primary School. Policy LEOM3 supports development at the Leominster Enterprise Park. The suitability of this site is considered under their respective policies (Policy LEOM2 and Policy LEOM3).

Policy LEOM2: Land south of the primary school

- Review of Site Parameters
  - Distance from European Site: Approximately 54.2km north of Severn Estuary SPA and Ramsar and approximately 48.8km north of Walmore Common SPA and Ramsar, at the closest point.
  - Size: ~ 8.3ha
  - Habitats Present: An area of farmland with some of fields divided by hedgerows and footpaths/roads. A road runs through the centre of the

site. The site lies next to a residential area in the south of Leominster. The site is not located within a flood risk zone.

  - Use of Site: Agriculture

- Assessment of Suitability for SPA/Ramsar Qualifying birds
  - Low – due to the distance of the site from the Severn Estuary SPA and Ramsar site and Walmore Common SPA and Ramsar site.

Policy LEOM3: Land south of Leominster Enterprise Park

- Review of Site Parameters
  - Distance from European Site: Approximately 53.8km north of Severn Estuary SPA and Ramsar and approximately 48.4km north of Walmore Common SPA and Ramsar, at the closest point.
  - Size: ~ 10ha
  - Habitats Present: Two large agricultural fields surrounded by hedgerows on most sides. The site lies directly to the south of Leominster Enterprise Park. The site is not located within a flood risk zone.
  - Use of Site: Agriculture
- Assessment of Suitability for SPA/Ramsar Qualifying birds
  - Low – due to the distance of the site from the Severn Estuary SPA and Ramsar site and Walmore Common SPA and Ramsar site.

Policy ROSS1: Strategic development for Ross-on-Wye

- Policy ROSS1 is an overarching policy for strategic development within Ross-on-Wye. Policy ROSS1 supports development at land to the east of Ross-on-Wye. The suitability of the development site is considered under its respective policy (Policy ROSS2).

Policy ROSS2: Land to the East of Ross on Wye

- Review of Site Parameters
  - Distance from European Site: Approximately 18.6km north-west of Severn Estuary SPA and Ramsar and approximately 15km north-west of Walmore Common SPA and Ramsar, at the closest point.
  - Size: ~ 158.7 ha
  - Habitats Present: The site mainly consists of farmland that are divided by hedgerows. A farm with house and outbuildings is situated in the northern corner of the site. The site is bound by the A449 and the A40 to the North and West. The A40 separates the site from Ross-on-Wye. Adjacent to the site on its western edge is a residential development which is currently under construction. Flood Zone 2 and 3 runs through the centre of the site.
  - Use of Site: Agriculture
- Assessment of Suitability for SPA/Ramsar Qualifying birds
  - Moderate.

Policy RURA1: Housing growth within Rural Hubs

- Policy RURA1 supports housing growth within rural hubs but does not specifically allocate sites. Therefore, the suitability of allocations for qualifying bird species of the Severn Estuary and Ramsar site was not able to be assessed.

Policy RURA3: Strategic site allocations in the rural areas

- Review of Site Parameters (Land opposite playing fields, Weston under Penyard)
  - Distance from European Site: Approximately 16.8km north west of Severn Estuary SPA and Ramsar and approximately 12.8km north west of Walmore Common SPA and Ramsar, at the closest point.

- Size: ~ 5.9 ha
- Habitats Present: Farmland with hedgerow on two sides of the site. There are areas of farmland to the east and south of the site with recreational ground to the south west. A residential development sits to the west of the site. The A40 runs along the northern edge of the site. The site is not located within a flood risk zone.
- Use of Site: Agriculture.

- Assessment of Suitability for SPA/Ramsar Qualifying birds
  - Low.
- Review of Site Parameters (Land west of Colwall primary School)
  - Distance from European Site: Approximately 33.2km north west of Severn Estuary SPA and Ramsar and approximately 26.7km north west of Severn Estuary SPA and Ramsar, at the closest point.
  - Size: ~ 4.1 ha
  - Habitats Present: Two areas of farmland separated by hedgerows. Hedgerows runs round the perimeter of the fields with some trees in the north of the site. The site is not located within a flood risk zone.
  - Use of Site: Agriculture.
- Assessment of Suitability for SPA/Ramsar Qualifying birds
  - Low.
- Review of Site Parameters (Land adjoining Nursery Cottages, Bartestree)
  - Distance from European Site: Approximately 36.3km north west of Severn Estuary SPA and Ramsar and approximately 31.1km north west of Walmore Common SPA and Ramsar, at the closest point.
  - Size: ~ 9.4 ha
  - Habitats Present: Two areas of farmland each surrounded by hedgerows. The A438 lies to the south west of the site. The site is not located within a flood risk zone.
  - Use of Site: Agriculture.

- Assessment of Suitability for SPA/Ramsar Qualifying birds
  - Low.
- Review of Site Parameters (Land north of Size Brook, Canon Pyon)
  - Distance from European Site: Approximately 47.7km north west of Severn Estuary SPA and Ramsar and approximately 43km north west of Severn Estuary SPA and Ramsar, at the closest point.
  - Size: ~ 4.3 ha
  - Habitats Present: Two pasteurised fields each surrounded by hedgerows on all sides. The A4110 runs along the western edge of the site. Flood zone 2 and 3 runs along the northern edge of the site.
  - Use of Site: Agriculture.
- Assessment of Suitability for SPA/Ramsar Qualifying birds
  - Low.
- Review of Site Parameters (Land south of Chapel Lane, Bodenham)
  - Distance from European Site: Approximately 47.7km north west of Severn Estuary SPA and Ramsar and approximately 39.9km north west of Walmore Common SPA and Ramsar, at the closest point.
  - Size: ~ 4.3 ha
  - Habitats Present: Farmland surrounded by a hedgerow. The site falls within Flood Zone 3.
  - Use of Site: Agriculture.
- Assessment of Suitability for SPA/Ramsar Qualifying birds
  - Low.

References

1 HM Government (2007) The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007 (SI No. 2007/1843)

2 HM Government (2017) The Conservation of Habitats and Species Regulations 2017 (SI No. 2017/1012), as amended by HM Government (2019) The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI No. 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 Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities and Local Government (2019) Appropriate assessment: Guidance on the use of Habitats Regulations Assessment

5 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).

6 Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the 'Habitats Directive').

7 Directive 2009/147/EC of 30 November 2009 on the conservation of wild birds (the 'Birds Directive').

8 The network of protected areas identified by the EU: European Commission (2008) Natura 2000

9 Department or Environment, Food and Rural Affairs (2021) Changes to the Habitats Regulations 2017

10 Defra and Natural England (2021) Guidance - Habitats regulations assessments: protecting a European site

11 NPPF para 187

12 The HRA Handbook, Section A3. David Tyldesley & Associates, a subscription based online guidance document

13 Defra and Natural England (2021) Guidance - Habitats regulations assessments: protecting a European site

14 Regulation 5 of the Habitats Regulations 2017.

15 UK Government Planning Practice Guidance

16 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.

17 The HRA Handbook. David Tyldesley & Associates, a subscription based online guidance document

18 Conservation objectives are published by Natural England for SACs and SPAs

19 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.

20 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) conservation objectives supplementary advice and Site Improvement Plans prepared by Natural England:

21 Chapman, C. & Tyldesley, D. (2016) Functional linkage: How areas that are functionally linked to European sites have been considered when they may be affected by plans and projects – a review of authoritative decisions. Natural England Commissioned Reports, Number 207.

22 Obtained from the Natural England website.

23 Natural England (undated) Conservation Objectives for European Sites

24 SI No. 2017/2012.

25 ECJ Case C-127/02 “Waddenzee” Jan 2004.

26 Planning Inspectorate (undated) National Infrastructure Planning: South East

27 Chanin, P. (2003). Monitoring the Otter Lutra lutra. Conserving Natura 2000 Rivers Monitoring Series No.10. English Nature, Peterborough.

28 Collins, J. (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London

29 Following consultation with Natural England as part of HRA work undertaken for North Essex Authorities, it was advised that the application of a 2km buffer in relation to functionally linked landed was deemed appropriate. However, it was advised that for certain species, including most notably, golden plover and lapwing, a greater distance of 15km may be appropriate. Subsequent to this and part of consultation with Natural England on Dover Local Plan HRA it was advised that Natural England's Functionally Linked Land Impact Risk Zone (IRZ) for golden plover and lapwing is 5km for rural large-scale developments (>50 dwellings).

30 Air Pollution Information System website

31 https://www.standardsforhighways.co.uk/dmrb/search/10191621-07df-44a3-892e-c1d5c7a28d90

32 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

33 LUC (2023), HRA Scoping Report of the Local Plan

34 Natural England (2020). Monitoring Engagement with the Natural Environment, MENE Visit data Year 1 to 10 filtered by residence local authority (County of Herefordshire) and distance travelled (q8)

35 Footprint Ecology (2022) Severn Estuary (Stroud District) Visitor Survey

36 Natural England Hereford's National Nature Reserve

37 Natural England (2015), Site Improvement Plan - Wye Valley Woodlands/ Coetiroedd Dyffryn Gwy

38 Natural England (2015), Site Improvement Plan - Wye Valley and Forest of Dean Bat Sites / Safleoedd Ystlumod Dyffryn Gwy A Fforest Y Ddena

39 Natural Resources Wales (2017) Core Management Plan for Rhos Goch SAC

40 Natural Resources Wales (2022) New fishing byelaws come into force on Wye and Usk

41 Gov.uk (2023) Guidance Sharks, skates and fish

42 Countryside Council for Wales (2008) Core Management Plan for Coed y Cerrig SSSI including Coed y Cerrig SAC

43 https://www.breconbeacons.org/route/walking-routes-coed-y-cerrig

44 Natural England Site Improvement Plan River Wye

45 Natural Resources Wales (2022) Core Management Plan including conservation objectives for River Wye SAC

46 Dŵr Cymru Welsh Water Final Water Resources Management Plan. Dŵr Cymru Welsh Water, March 2019.

47 Welsh Water (2023) Revised Draft Water Resources Management Plan 2024

48 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. European Commission Environment DG, November 2001.

49 Natural England (2022) Identification of wintering and passage roosts on functionally linked land of the Severn Estuary - Gloucestershire and Worcestershire (Phase 5) (NECR401)

50 Gov.uk (2014) Natural Character Area Profiles

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52 Environment Agency Wye Canoe? Canoeists' guide to the River Wye

53 Wye Valley AONB Office (2021) Wye Valley AONB Management Plan

54 Natural England (2022), Nutrient Neutrality Generic Methodology

55 Environment Agency (2022) River Wye Management Catchment Integrated Data Analysis Report

56 BBC News (2023) River Wye pollution prompts High Court Review

57 Atkins (2014) River Clun SAC Nutrient Management Plan

58 Herefordshire Council (2022) Cabinet Commission – Restoring the Wye

59 Natural England (undated) Site Improvement Plans: East of England

60 JNCC (undated) UK Protected Areas

61 Natural England (undated) Conservation Objectives for European Sites

62 Natural England (undated) Conservation Objectives for European Sites

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