www.landuse.co.uk

Habitats Regulations Assessment for the Herefordshire Minerals and Waste Local Plan

Screening Report

Prepared by LUC
November 2018

Project Title: HRA Screening Report for the Herefordshire Minerals and Waste Local Plan

Client: Herefordshire Council

Version	Date	Version Details	Prepared by	Checked by	Approved by
v1.0	07/09/18	Draft HRA Screening Report	David Green	David Green Taran Livingston	Taran Livingston
V2.0	16/11/18	Final HRA Screening Report	Melissa Mc Ginley	Taran Livingston	Taran Livingston

www.landuse.co.uk

Habitats Regulations Assessment for the Herefordshire Minerals and Waste Local Plan

Screening Report

Prepared by LUC
November 2018

Planning & EIA
Design
Landscape Planning
Landscape Management
Ecology
GIS & Visualisation

LUC EDINBURGH
28 Stafford Street
Edinburgh
EH3 7BD
T +44 (0)131 202 1616
edinburgh@landuse.co.uk

Offices also in:
Bristol
Glasgow
Lancaster
London
Manchester

FS 566056 EMS 566057

Land Use Consultants Ltd
Registered in England
Registered number: 2549296
Registered Office:
43 Chalton Street
London NW1 1JD
LUC uses 100% recycled paper

Contents

Tables

Figures

1 Introduction

1.1 LUC has been commissioned by Herefordshire Council to carry out a Habitats Regulations Assessment (HRA) of the emerging Herefordshire Minerals and Waste Local Plan (HMWLP). This HRA Screening Report relates to the Draft HMWLP (2018) and it should be read in conjunction with that document. It presents the methodology and findings of the HRA screening stage.

Background

1.2 Herefordshire Council is currently preparing a new Minerals and Waste Local Plan (Draft Plan stage). Once adopted, the HMWLP will replace the saved minerals and waste policies contained in the Herefordshire Unitary Development Plan. The HMWLP covers the period up to 31 December 2031 and applies across the administrative area of Herefordshire.

1.3 The HMWLP has been produced taking into account the National Planning Policy for Waste, Planning Practice Guidance on Minerals and Waste, up-to-date evidence base studies (the minerals and waste need assessments were updated in February 2018) and ensuring close co-operation with neighbouring local authorities on cross-boundary issues.

1.4 It provides a clear vision, objectives and spatial strategy for minerals and waste up to 2031, consistent with that set out in the Herefordshire Local Plan Core Strategy 2011-2031 (adopted October 2015) ensuring that it provides sufficient opportunities to meet the identified needs of the area for waste management and a steady and adequate supply of all economically significant minerals in the Plan area. The HMWLP also presents the core principles for minerals and waste development, location-specific policies in relation to where minerals and waste development should be developed, and development management style policies addressing specific issues that each development proposal should address.

The requirement to undertake HRA of development plans

1.1 The requirement to undertake HRA of development plans was confirmed by the amendments to the Habitats Regulations published for England and Wales in July 2007 and updated in 2010[1] and again in 2012[2] and 2017. These updates were consolidated into the Conservation of Habitats and Species Regulations 2017[3]. Therefore, when preparing the HMWLP, Herefordshire Council is required by law to carry out a Habitats Regulations Assessment, although consultants can undertake the HRA on its behalf. The requirement for authorities to comply with the Habitats Regulations when preparing a Local Plan is also noted in the Government's online planning practice guidance.

1.2 The HRA refers to the assessment of the potential effects of a development plan on one or more European Sites, including Special Protection Areas (SPAs) and Special Areas of Conservation (SACs):

- SACs are designated under the European Habitats Directive and target particular habitat types (Annex 1) 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.

[1] The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007. HMSO Statutory Instrument 2007 No. 1843. From 1 April 2010, these were consolidated and replaced by the Conservation of Habitats and Species Regulations 2010 (SI No. 2010/490). Note that no substantive changes to existing policies or procedures have been made in the new version.

[2] The Conservation of Habitats and Species (Amendment) Regulations 2012. Statutory Instrument 2012 No. 1927.

[3] The Conservation of Habitats and Species Regulations 2017. Statutory Instrument 2017 No. 1012

- SPAs are classified in accordance with Article 4(1) of the European Union Birds Directive for rare and vulnerable birds (as listed in Annex I of the Directive), and under Article 4(2) for regularly occurring migratory species not listed in Annex I.

1.3 Currently, the Government also expects potential SPAs (pSPAs)[4], candidate SACs (cSACs)[5] and Ramsar sites to be included within the assessment[6]. Ramsar sites support internationally important wetland habitats and are listed under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention, 1971). Sites of Community Importance (SCIs), which are sites that have been adopted by the European Commission but not yet formally designated by the government, must also be considered.

1.4 For ease of reference during HRA, these designations are collectively referred to as 'European sites'[7], despite Ramsar designations being at the wider international level.

1.5 The overall purpose of the HRA is to conclude whether or not a proposal or policy, or the whole development plan, would adversely affect the integrity of the European site in question either alone or in combination with other plans and projects. This is judged in terms of the implications of the plan for the 'qualifying features' for which the European site was designated, i.e.:

- SACs – Annex I habitat types and Annex II species[8];
- SPAs – Annex I birds and regularly occurring migratory species not listed in Annex I[9];
- Ramsar sites – the reasons for listing the site under the Convention[10].

1.6 Significantly, HRA is based on the precautionary principle meaning that where uncertainty or doubt remains, an adverse impact should be assumed.

Stages of Habitats Regulations Assessment

1.7 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.

1.8 The HRA should be undertaken by the 'competent authority', in this case Herefordshire Council, and LUC has been commissioned to do this on the Council's behalf. The HRA also requires close working with Natural England as the statutory nature conservation body[11] in order to obtain the necessary information, agree the process, outcomes and mitigation proposals. 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 Habitats Regulations

1.9 In assessing the effects of a Local Plan in accordance with Regulation 105 of the Conservation of Habitats and Species Regulations 2017[12], there are potentially two tests to be applied by the competent authority: a 'Significance Test', followed if necessary by an Appropriate Assessment which would inform the 'Integrity Test'. The relevant sequence of questions is as follows:

[4] Potential SPAs are sites that have been approved by the Government and are currently in the process of being classified as SPAs.
[5] Candidate SACs are sites that have been submitted to the European Commission, but are not yet formally adopted.
[6] Department of Communities and Local Government (March 2012) National Planning Policy Framework (para 118).
[7] The term 'Natura 2000' sites can also be used interchangeably with 'European sites' in the context of HRA, although the latter term is used throughout this report.
[8] As listed in the site's citation on the JNCC website (all features of European importance, both primary and non-primary, need to be considered).
[9] As identified in sections 3.1, 3.2 and 4.2 of the SPA's standard data form on the JNCC website; at sites where there remain differences between species listed in the 2001 SPA Review and the extant site citation in the standard data form, the relevant country agency (Natural England or Natural Resources Wales) should be contacted for further guidance.
[10] As set out in section 14 of the relevant 'Information Sheet on Ramsar Wetlands' available on the JNCC website.
[11] Regulation 5 of the Habitats Regulations 2017.
[12] The Conservation of Habitats and Species Regulations 2017. Statutory Instrument 2017 No. 1012

- **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, as is the case for the Draft HMWLP, 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 in Table 1.1.]
- **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 in Table 1.1.]
- **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 would not adversely affect the integrity of a European site.
- **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).

Typical stages

1.10 **Table 1.1** summarises the stages and associated tasks and outcomes typically involved in carrying out a full HRA, based on various guidance documents[13] [14] [15].

Table 1.1 Stages of HRA

Stage	Task	Outcome
Stage 1: HRA Screening	Description of the development plan. Identification of potentially affected European sites and factors contributing to their integrity. Review of other plans and projects. Assessment of likely significant effects of the development plan alone or in combination with other plans and projects.	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)	Information gathering (development plan and European Sites). Impact prediction. Evaluation of development plan impacts in view of conservation objectives. Where impacts are considered to affect qualifying features, identify how these effects will be avoided or reduced.	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:	Identify 'imperative reasons of	This stage should be avoided if at all possible. The test of IROPI and

[13] European Commission (2001) Assessment of plans and projects significantly affecting European Sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC.
[14] DCLG (2006) Planning for the Protection of European Sites: Appropriate Assessment
[15] RSPB (2007) The Appropriate Assessment of Spatial Plans in England. A guide to why, when and how to do it.

Stage	Task	Outcome
Assessment where no alternatives exist and adverse impacts remain taking into account mitigation	overriding public interest' (IROPI). Demonstrate no alternatives exist. Identify potential compensatory measures.	the requirements for compensation are extremely onerous.

1.11 It is normally anticipated that an emphasis on Stages 1 and 2 of this process will, through a series of iterations, help ensure that potential adverse effects are identified and eliminated through the inclusion of mitigation measures designed to avoid, reduce or abate 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 both the Government and European Commission.

HRA work carried out previously

1.12 No HRA work has been carried out to date on the Draft HMWLP; however the adopted Herefordshire Local Plan - Core Strategy was subject to HRA throughout its development. This has been drawn on to inform the HRA of the Draft HMWLP, as the European sites and their sensitivity to specific impacts are relevant to both assessments, but the HMWLP includes detailed policies and site allocations that are not covered within the Core Strategy or its HRA.

Structure of this HRA Report

1.17 This chapter has introduced the requirement to undertake HRA of the HMWLP. The remainder of the report is structured as follows:

- **Chapter 2: The Draft Herefordshire Minerals and Waste Local Plan** summarises the content of the Draft HMWLP and the policies and site allocations that are the subject of this report.
- **Chapter 3: HRA Screening Methodology** sets out the approach used and the specific tasks undertaken during the screening stage of the HRA.
- **Chapter 4: HRA Screening Assessment** describes the reasoning and conclusions of the screening stage of the HRA.
- **Chapter 5: Conclusions and Next Steps** summarises the HRA Screening conclusions for the Draft HMWLP and describes the next steps to be undertaken.

2 The Draft Herefordshire Minerals and Waste Local Plan

Summary of the Draft Herefordshire Minerals and Waste Local Plan

2.1 The Draft HMWLP sets out the Council's preferred strategy for meeting the county's minerals and waste needs until 2031. The draft version is not final but represents the Council's preferred approach based on the evidence currently available and the results of the previous consultations in 2016 and 2017.

2.2 The HMWLP has been prepared to enable Herefordshire Council to engage with local communities, businesses and other statutory and interested parties in line with Regulation 18 of the Town and Country Planning (Local Planning) (England) Regulations 2012. The Draft HMWLP consultation will inform preparation of the Pre-Submission HMWLP that will consequently be submitted for examination in public by an independent planning inspector.

2.3 The Council has prepared a Local Plan, to comprise of a number of documents including the Core Strategy, to guide development and change in the county up to 2031. The first document in the production of the Local Plan, and adopted in October 2015, is the Herefordshire Local Plan Core Strategy 2011-2031. This development plan document shapes future development and sets the overall strategic planning framework for the county. When adopted, the Minerals and Waste Local Plan will be another element of the Herefordshire Local Plan as shown in **Figure 2.1**.

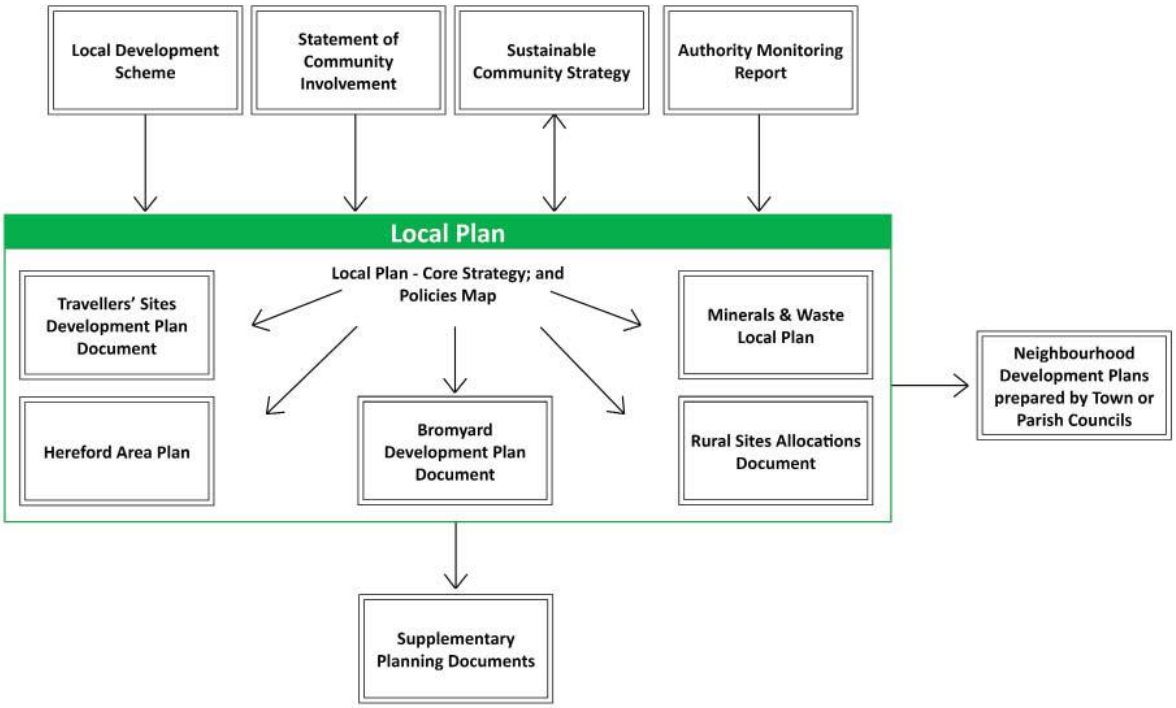

Figure 2.1 Structure of the Herefordshire Local Plan

2.4 Whilst any minerals or waste development proposal would be subject to the Core Strategy, the Core Strategy does not specifically address these sectors. The Draft HMWLP provides the strategic direction and development management policies necessary to enable sustainable minerals and waste development.

2.5 Minerals and waste policy is currently contained in the Unitary Development Plan, adopted in 2007. Much of the Unitary Development Plan has been replaced by the Core Strategy, with just the minerals and waste policies being saved

2.6 The Draft HMWLP establishes targets and planning policies relating to minerals and waste activities and associated development in Herefordshire to cover the plan period to 2031. This is slightly shorter than the 15 year timeframe usually applied to local plans of this nature, but it is intended to have an end date to align with the Herefordshire Core Strategy. Analysis undertaken in the evidence base documents has considered the period up to 2035, in order to enable the HMWLP to remain relevant after the end date.

2.7 The Draft HMWLP has been produced taking account of the National Planning Policy Framework, Planning Practice Guidance on Minerals and Waste, 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 (particularly the Core Strategy) and other organisations.

2.8 The main purpose of the Draft HMWLP is to provide guidance to developers, local communities and other interested parties on where and when minerals and waste development may be expected over the plan period, as well as how it will be managed to reduce adverse impacts and maximise benefits. Minerals development includes activities such as mining, quarrying and gas extraction. Waste development includes activities such as waste recycling and the treatment and disposal of waste.

2.9 The Draft HMWLP forms part of the statutory development plan and the Council will use it, along with the Core Strategy, as the starting point for decisions on planning applications for development relating to these activities. Where the Draft HMWLP contains relevant policies, decisions will be made in accordance with those policies unless there are other material considerations, related to planning, which indicate otherwise.

2.10 The policies and site allocations currently included in the Draft HMWLP, and which have been assessed as part of this HRA Screening, are listed in **Table 2.1**.

Table 2.1 Draft HMWLP Policies and Site Allocations

Draft HMWLP Policy / Site Allocation
Strategic policies
MT2: Transport within sites
SS8: Resource Management
OS4: Access to open space and recreation from minerals and waste development
SD5: Site Reclamation
Mineral-related policies
M1: Mineral Strategy
M2: Safeguarding of mineral resources from sterilisation
M3: The winning and working of sand and gravel
M4: The winning and working of crushed rock (limestone)
M5: The winning and working of building stone (sandstone)
M6: Borrow Pits
M7: Unconventional hydrocarbons
Waste-related policies
W1: Waste Strategy
W2: Solid waste management requirements
W3: Agricultural waste management
W4: Waste water management

Draft HMWLP Policy / Site Allocation
W5: Preferred locations for solid waste treatment facilities
W6: Preferred locations for construction, demolition and excavation waste facilities
W7: Waste management operational expectations
Site Allocations
M03a Upper Lyde Quarry (Sand and gravel)
M03b Land adjacent Upper Lyde Quarry (east) (Sand and gravel)
M03d Land north east of Upper Lyde Quarry (Sand and gravel)
M04 Shobdon Quarry (Sand and gravel)
M05a Wellington Quarry (Sand and gravel)
M05b Land adjacent Wellington Quarry (west) (Sand and gravel)
M05c Land adjacent Wellington Quarry (north west) (Sand and gravel)
M05d Land adjacent Wellington Quarry (Dinmore Manor Estate) (Sand and gravel)
M05e Land adjacent Wellington Quarry (east of A49) (Sand and gravel)
M05g Land east of Wellington Quarry (Sand and gravel)
M07a Leinthall Quarry (Crushed rock)
M07b Land west of Leinthall Quarry (Crushed rock)
M10a Perton Quarry (Crushed rock)
M10b Land north west of Perton Quarry (Crushed rock)
M12 Callow Delve (Building stone)
M13 Black Hill Delve (Building stone)
M16 Llandraw Delve (Building stone)
M17 Pennsylvani Delves (Building stone)
M18 Sunnybank Delve (Building stone)
M20 Westonhill Wood Delve (Building stone)
Area of Search A
Area of Search B
Area of Search C
Area of Search D
W05 Leominster HWS and HWRC (Municipal non-hazardous WTS and HWRC)
W07 Ledbury (HWRC)
W10 Kington (HWRC)
W13 Former Lugg Bridge Quarry (Physical Treatment)
W19 City Spares MRS (Car Breaker)
W43 Upper Lyde Quarry (M03)
W44 Shobdon Quarry (M04) (Mineral site - inert waste disposal)
W45 Wellington Quarry (M05) (Mineral site - inert waste disposal)
W58 Rotherwas Industrial Estate (Strategic Employment Site)
W59 Westfields Trading Estate (Strategic Employment Site)
W60 Three Elms Trading Estate (Strategic Employment Site)
W61 Holmer Road, Hereford (Strategic Employment Site)

Draft HMWLP Policy / Site Allocation
W62 Leominster Enterprise Park (Strategic Employment Site)
W63 Southern Avenue, Leominster (Strategic Employment Site)
W64 Land between Little Marcle Road and Ross Road, Ledbury (Strategic Employment Site)
W65 Model Farm, Ross-on-Wye (Strategic Employment Site)
W66 Moreton Business Park, Moreton-on- Lugg (Strategic Employment Site)

3 HRA Screening Methodology

3.1 HRA screening of the Draft HMWLP has been undertaken in line with current available guidance and seeks to meet the requirements of the Habitats Regulations. The tasks that have been undertaken during the screening stage of the HRA are described in detail below.

European sites which may be affected by the Draft Herefordshire Minerals and Waste Local Plan

3.2 An initial investigation was undertaken to identify European sites within or adjacent to Herefordshire which may be affected by the Draft HMWLP. This involved the use of GIS data to map the locations and boundaries of European sites using publicly available data from Natural England. All European sites lying partially or wholly within 15km of the Country boundary were included in order to address the fact that Local Plan policies may affect European sites which are located outside the administrative boundary of the plan. This distance was deemed sufficient to ensure that all designated sites that could potentially be affected by development are identified and included in the assessment.

3.3 The location of European sites is shown in **Figure 3.1**, and detailed site information relating to their qualifying features, sensitivities and conservation objectives is provided in **Appendix 1**. The following European sites are located wholly or partly within Herefordshire:

- River Wye SAC;
- River Clun SAC;
- Downton Gorge SAC; and,
- Wye Valley Woodlands SAC.

3.4 The following European sites are located outside Herefordshire but within a 15km search buffer:

- Wye Valley and Forest of Dean Bat Sites SAC;
- Coed y Cerrig SAC;
- Sugar Loaf Mountains SAC;
- Rhos Goch SAC;
- River Usk SAC;
- Llangorse Lake SAC;
- Usk Bat Sites SAC;
- Cwm Clydach Woodlands SAC;
- Lyppard Grange Ponds SAC;
- Severn Estuary SPA;
- Severn Estuary Ramsar;
- Severn Estuary SAC; and,
- Walmore Common SPA.

3.5 The attributes of these sites which contribute to and define their integrity are described in **Appendix 1**. In doing so, reference was made to Standard Data Forms for SACs and SPAs[16] as

[16] These were obtained from the Joint Nature conservation Committee and Natural England websites (www.jncc.gov.uk and

well as Natural England's Site Improvement Plans[17]. This analysis enabled European site interest features to be identified, along with the features of each site which determine site integrity and the specific sensitivities and threats facing the site. This information was then used to inform an assessment of how the potential impacts of the Draft HMWLP may affect the integrity of the site in question.

Potential impacts of the Draft Herefordshire Minerals and Waste Local Plan on European Sites

3.6 **Table 3.1** sets out the range of potential impacts that minerals and waste development and related activities may have on European sites.

Table 3.1 Potential impacts of minerals and waste development on European sites

Broad categories and examples of potential impacts on European sites	Examples of activities responsible for impacts
Physical loss / damage • Removal (including offsite effects, e.g. foraging habitat) • Mine collapse • Smothering • Habitat degradation • Direct mortality • Sedimentation / silting • Prevention of natural processes • Habitat degradation • Erosion • Trampling • Fragmentation • Severance / barrier effect • Edge effects	Soil removal/mineral extraction Infilling (e.g. of mines, water bodies) Alterations or works to disused quarries Tipping Landfill Mineral extraction
Non-physical disturbance • Noise • Vibration • Visual presence • Human presence • Light pollution	Mineral extraction Vehicular traffic Artificial lighting

www.naturalengland.org.uk)

[17] Natural England is in the process of compiling Site Improvement Plans for all Natura 2000 sites in England as part of the Improvement programme for England's Natura 2000 sites (IPENS).

Broad categories and examples of potential impacts on European sites	Examples of activities responsible for impacts
Water quantity and quality • Drying • Flooding / stormwater • Water level and stability • Water flow (e.g. reduction in velocity of surface water • Barrier effect (on migratory species) • Run-off • Toxic contamination • Non-toxic contamination	Water abstraction Dredging Dewatering Extraction below the water table Increased discharge (e.g. drainage, runoff) from landfill, plant, vehicular traffic and leachate Oil / chemical spills Tipping Flood risk
Air Pollution • Nutrient enrichment • Habitat degradation • Toxic contamination	Emissions from vehicles Emission from waste treatment facilities Emissions from landfill
Non-toxic contamination • Nutrient enrichment (e.g. of soils and water) • Algal blooms • Changes in salinity • Changes in thermal regime • Changes in turbidity • Air pollution (dust)	Water abstraction Mineral extraction Increased discharge Dust emissions Attraction of vermin, gulls and corvids

Assessment of 'likely significant effects' of the Draft Herefordshire Minerals and Waste Local Plan

3.7 As required under the Conservation of Habitats and Species Regulations 2017 an assessment of the 'likely significant effects' of the Draft HMWLP has been undertaken. A screening matrix has been prepared in order to assess which policies and site allocations would be likely to have a significant effect on European sites, either alone or in-combination with other plans and projects. The findings of the screening assessment are summarised in **Chapter 4** and the full matrix can be found in **Appendix 2**, with other plans or projects that could give rise to in-combination effects summarised in **Appendix 3**.

3.8 A risk-based approach involving the application of the precautionary principle has been adopted in the assessment, such that a conclusion of 'no significant effect' has only been reached where it is considered very unlikely, based on current knowledge and the information available, that a policy or site allocation would have a significant effect on the integrity of a European site.

Interpretation of 'likely significant effect'

3.9 HRA screening seeks to determine whether a significant effect will be likely, uncertain, or unlikely (either no effect or an effect that will not be significant). Likely and uncertain effects are then taken forward to the Appropriate Assessment stage.

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

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

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

3.12 An opinion delivered to the Court of Justice of the European Union[19] commented that: *"The requirement that an effect in question be 'significant' exists in order to lay down a 'de minimus' 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."*

3.13 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 minimus'*; referring to such cases as those *"which have no appreciable effect on the site"*. In practice such effects could be screened out as having no likely significant effect; they would be 'insignificant'.

Mitigation provided by the Draft Herefordshire Minerals and Waste Local Plan

3.1 Some of the potential effects of the Draft HMWLP could be mitigated through the provisions of commitments and safeguards included within the Plan itself, such as those relating to protecting water resources.

3.2 However, a recent CJEU ruling (People over Wind, Peter Sweetman v Coillte Teoranta (Case C-323/17) judgement) ruled that Article 6(3) of the Habitats Directive should be interpreted as meaning that mitigation measures, specifically measures which avoid or reduce adverse effects, should be assessed as part of an Appropriate Assessment, and should not be taken into account at the screening stage. In completing this assessment, this has been taken to include any forms of mitigation upon which conclusions rely, either solely or partly. 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*."

3.3 Prior to this judgment, UK case law had established that avoidance or reduction measures that form part of a proposal could be taken into account at the screening stage, on the basis of objective information. This HRA takes account of the recent ruling and as a result, conclusions have not relied on mitigation measures at the screening stage. Where such measures are proposed to avoid the harmful effects of the plan, they will need to be considered at the Appropriate Assessment stage to ensure compliance with recent case law.

Screening assumptions and information used in reaching conclusions about likely significant effects

3.4 The screening stage of the HRA has taken the approach of screening each policy or potential site allocation individually, which is consistent with current guidance. For many of the types of

[18] ECJ Case C-127/02 "Waddenzee" Jan 2004.
[19] Advocate General's Opinion to CJEU in Case C-258/11 Sweetman and others v An Bord Pleanala 22nd Nov 2012.

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 assumptions have been applied in relation to assessing the likely significant effects on European sites that may result from the Draft HMWLP, as described below.

3.5 These assumptions take account of the nature of development likely to result from a Minerals and Waste Local Plan (as opposed to a Local Plan that proposes residential development, for example). The key types of impact which may occur as a result of the Draft HMWLP and which will be considered in this HRA include:

- Physical loss / damage (onsite and offsite);
- Non-physical disturbance (e.g. noise, vibration and light);
- Air pollution;
- Water quality and quantity; and,
- Non-toxic contamination (e.g. dust).

Physical loss /damage of habitat

3.6 Physical loss and damage of habitat can occur through direct impacts within a European site boundary, or through indirect impacts associated with the loss and damage of offsite habitat upon which the qualifying feature of a European site depends.

3.7 Direct loss and damage is considered likely to occur only when development is proposed within or immediately adjacent to a European site. The Draft HMWLP includes minerals and waste allocations located immediately adjacent to the River Wye SAC and therefore 'onsite' physical loss and damage is screened in in relation to the River Wye SAC. Other European sites are located sufficient distance from site allocations to ensure that direct damage and loss of habitat 'onsite' can be screened out.

3.8 Loss of habitat from outside of the boundaries of a European site could still affect the integrity of that site if it occurs in an area used for offsite breeding, foraging or roosting by the qualifying species of the site. Therefore, consideration has been given to whether the European sites in and around Herefordshire have transient species amongst their qualifying features, which could be affected by habitat loss resulting from development outside of the European site boundary. Sites which do support transient species which could theoretically depend upon offsite habitat affected by the Draft HMWLP include the following:

- River Wye SAC (otter);
- Lyppard Grange Ponds SAC (great crested newt);
- Wye Valley and Forest of Dean Bat Sites SAC (greater horseshoe bat, lesser horseshoe bat);
- Usk Bat Sites SAC (lesser horseshoe bat);
- Walmore Common SPA (Bewick's swan); and,
- Severn Estuary SPA and Ramsar (wetland birds).

3.9 With regards to the River Wye SAC, otter home ranges can occupy extensive areas and linear distances, and therefore the population of otter for which the River Wye SAC is designated is likely to utilise, and depend upon, the availability and connectivity of suitable riparian and wetland habitat in the wider region. As a result, there is potential for offsite habitats which may be affected by the Draft HMWLP to be important for otter and **the potential for loss of offsite habitat to affect the River Wye SAC will require consideration at the Screening stage**.

3.10 Lyppard Grange Ponds SAC is designated for great crested newt (GCN). Whilst GCN are 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. This site is located outside Herefordshire and is several kilometres from the closest site allocation.

Therefore impacts to Lyppard Grange Ponds SAC as result of physical loss and damage can be screened out.

3.11 Bat species for which the Wye Valley and Forest of Dean Bat Sites SAC, and Usk Bat Sites SAC are designated are dependent on the maintenance of an extensive network of high quality habitat including woodlands, tree lines, hedgerows and grasslands which extend beyond the boundaries of the SACs. Indeed these bat species will rely on habitat extending for several kilometres from key roost sites. The Wye Valley and Forest of Dean Bat Sites SAC is located 2.6km from the closest minerals allocation (M12), and therefore **the potential for loss of offsite habitat to affect the Wye Valley and Forest of Dean Bat Sites SAC will require consideration at the Screening Stage**. In contrast, the Usk Bat Sites SAC is located over 20km from the closest site allocation, and therefore the potential for impacts to the Usk Bat Sites SAC as a result of physical loss and damage can be screened out.

3.12 Walmore Common SPA is designated for supporting overwintering Bewick's swan, a species which regularly depends upon offsite habitat such as pastures, arable crop and stubble fields for foraging. Nevertheless, the SPA is located over 20km from any site allocations and at such distances this species would not be expected to rely on site allocations specified within the HMWLP. Therefore the potential for impacts to the Walmore Common SPA as a result of physical loss and damage can be screened out.

3.13 The Severn Estuary SPA is designated for supporting a range of wetland bird species. Whilst many of these species will regularly utilise and depend upon offsite foraging habitat, the extent to which such species are reliant upon such habitat typically declines with increasing distance. Given that this SPA and Ramsar is located over 15km from the closest minerals or waste site allocation, the potential for likely significant effects has been screened out.

3.14 In summary, **the potential for the Draft HMWLP to result in likely significant effects on a European site as a result of physical loss and damage is restricted to the River Wye SAC and Wye Valley and Forest of Dean Bat Sites SAC**. For other European sites, the potential for this type of impact to occur has been screened out on account of distance between 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.

Non-physical disturbance (noise, vibration and light pollution)

3.15 Noise and vibration effects, e.g. during mineral extraction, waste treatment, and/or transportation of materials to and from site, is most likely to disturb sensitive species and are thus a key consideration with respect to sites located in close proximity and where qualifying features include birds or mammals, although such effects may also impact upon some fish species. Artificial lighting at night (e.g. from additional street lamps, flood lighting and security lights) is most likely to affect bat populations or nocturnal birds, and therefore have an adverse effect on the integrity of European sites where bats and nocturnal birds are a qualifying feature.

3.16 The effects of noise, vibration and light are most likely to be significant if minerals and waste development takes place within 500m of a European site with qualifying features sensitive to these disturbances, or mapped off-site breeding, foraging or roosting areas. This is the distance that, in our experience, provides a robust assessment of effects in plan-level HRA and meets with the agreement of Natural England.

3.17 European sites within 500m of proposed site allocations specified in the Draft HMWLP are limited to the River Wye SAC. The River Wye SAC is located immediately adjacent to minerals and waste site allocations and its qualifying features include otter and fish species which are likely to be susceptible to noise, vibration and light pollution. As a result, **the potential for the Draft HMWLP to result in likely significant effects on the River Wye SAC due to non-physical disturbance requires assessment at the HRA Screening Stage**. Other European sites have been screened out on the basis of their distance from site allocations.

Air pollution

3.18 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 availability that can then affect plant health, productivity and species composition.

3.19 In terms of vehicle traffic arising from transportation of minerals, nitrogen oxides (NOx, i.e. NO and NO_2) 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.

3.20 Based on the Highways Agency Design Manual for Road and Bridges (DMRB) Volume 11, Section 3, Part 1[20] (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.

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

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

3.22 Defra defines Heavy Duty Vehicles (HDVs) as road vehicles greater than 3.5 tonnes gross weight and Heavy Goods Vehicles (HGVs) as road vehicles greater than 7.5 tonnes gross weight[21]. Minerals extraction sites and waste facilities could generate HDV traffic that includes both HGVs and smaller types of HDVs. Therefore the second criterion from the DMRB (listed above) will be relevant to this HRA of the Draft HMWLP.

3.23 It should be noted that recent case law, known as the Wealden judgement[22], has revised the method by which Natural England expects to see in-combination air pollution effects assessed. The implication of the judgement 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 DMRB screening criteria should then be applied to the traffic flows of the plans in combination. The judgement focussed on the 1,000 AADT daily traffic flow data rather than 200 AADT HDV flows, but it assumed that the same principle would apply.

3.24 An assessment has been undertaken to identify which European sites lie within 200m of either motorways or A roads[23]. The following European sites are within 200m of either 'A' roads or motorways:

- River Clun SAC (A4113);
- River Wye SAC (A438, A49, A40, A4103, A417,); and,
- Wye Valley Woodlands SAC (A40, A466).

3.25 Therefore, **the potential for likely significant effects associated with increased air pollution from vehicle traffic will only require consideration in relation to the above European sites** and has been ruled out in relation to other European sites.

[20] *Design Manual for Road and Bridges.* Highways Agency. http://dft.gov.uk/ha/standards/dmrb/index.htm

[21] https://uk-air.defra.gov.uk/assets/documents/reports/aqeg/nd-glossaryapp.pdf

[22] 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

[23] Note that the strategic road network includes all motorways and major trunk A-roads in England that are managed by the Highways Agency. All other A roads are managed locally by the Highways Authority.

Water quantity and quality

3.26 Minerals extraction and water requirements for waste treatment facilities can affect water flows and quality through processes used such as dredging, dewatering and excavation below the water table, or through leaching and run-off of chemicals and nutrients. Impacts on water quantity and quality are most likely to affect European sites that are hydrologically connected to the mineral sites, either via surface or groundwater pathways. Consideration has been given to the likelihood of hydrological connectivity between the mineral sites and the European sites within 10km of the county boundary. Where there is connectivity, the potential for significant effects to arise through changes in water flows or quality has been considered for each site.

3.27 Above-ground connectivity has been identified where the River Wye SAC is adjacent to allocated minerals and waste sites located upstream of Hereford (Allocations M05 and W45) in the west of the County close to allocation M20, and in the south of the county close to allocation M12, and there is potential for effects at these locations to include run-off of surface water, pollutants and chemical spills, and changes in the below-ground water connectivity.

3.28 The Severn Estuary SPA, SAC and Ramsar site is located downstream of the River Wye SAC, and therefore shares theoretical connectivity with minerals and waste allocations located in the Draft HMWLP. Nevertheless, the Severn Estuary is located over 35km downstream from the Herefordshire county boundary, and considerably further from allocated minerals and waste sites. At such distances, any impact arising at the source would be highly unlikely to reach the site. The Severn Estuary has therefore been screened out from further consideration in relation to water quality.

3.29 The River Clun SAC is sensitive to hydrological changes and is located 90m to the northwest of the A4113. As a result, there is potential for contaminated run-off from road traffic associated with the Draft HMWLP. It has therefore been screened in for further assessment in the HRA Screening.

3.30 None of the other European sites have hydrological connectivity with locations specified in the Draft HMWLP and have therefore been screened out.

3.31 It should be noted that any water abstraction and discharges arising from mineral extraction will be regulated through the Environmental Permit regime administered by the Environment Agency, which also takes into account environmental impacts including likely significant effects on European sites.

3.32 In light of the above, **changes in water quantity and quality have been screened in for the River Wye SAC and River Clun SAC, but have been screened out for other European sites on account of a lack of hydrological connectivity or the significant distances between them and site allocations specified in the Draft HMWLP**.

Non-toxic contamination

3.33 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.

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

3.35 European sites within 500m of proposed site allocations specified in the Draft HMWLP are limited to the River Wye SAC. The River Wye SAC is located immediately adjacent to minerals and waste site allocations and its qualifying features includes river habitat and vegetation and fish species, which are likely to be susceptible to the effects of non-toxic contamination. As a result, **the potential for the Draft HMWLP to result in likely significant effects on the River Wye SAC due to non-physical disturbance requires assessment at the HRA Screening Stage**. Other European sites have been screened out on the basis of their distance from site allocations.

Summary of screening assumptions

3.36 **Table 3.2** summarises the screening assumptions that are being applied to the HRA of the Draft HMWLP. Where certain types of effect are screened out in **Table 3.2**, they did not need to be considered further, and so are not referred to in the screening matrix in **Appendix 2**.

Table 3.2 Summary of screening assumptions

European Site	Physical damage/ loss of habitat	Non-physical disturbance	Air pollution	Water quantity and quality	Non-toxic contamination
River Wye SAC	**Screened in**	**Screened in**	**Screened in**	**Screened in**	**Screened in**
River Clun SAC	Screened out	Screened out	**Screened in**	**Screened in**	Screened out
Downton Gorge SAC	Screened out	Screened out	Screened out	Screened out	Screened out
Wye Valley Woodlands SAC	Screened out	Screened out	**Screened in**	Screened out	Screened out
Wye Valley and Forest of Dean Bat Sites SAC	**Screened in** (offsite only)	Screened out	Screened out	Screened out	Screened out
Coed y Cerrig SAC	Screened out	Screened out	Screened out	Screened out	Screened out
Sugar Loaf Mountains SAC	Screened out	Screened out	Screened out	Screened out	Screened out
Rhos Goch SAC	Screened out	Screened out	Screened out	Screened out	Screened out
River Usk SAC	Screened out	Screened out	Screened out	Screened out	Screened out
Llangorse Lake SAC	Screened out	Screened out	Screened out	Screened out	Screened out
Usk Bat Sites SAC	Screened out	Screened out	Screened out	Screened out	Screened out
Cwm Clydach Woodlands SAC	Screened out	Screened out	Screened out	Screened out	Screened out
Lyppard Grange Ponds SAC	Screened out	Screened out	Screened out	Screened out	Screened out
Severn Estuary SPA	Screened out	Screened out	Screened out	Screened out	Screened out
Severn Estuary Ramsar	Screened out	Screened out	Screened out	Screened out	Screened out
Severn Estuary SAC	Screened out	Screened out	Screened out	Screened out	Screened out
Walmore Common SPA	Screened out	Screened out	Screened out	Screened out	Screened out

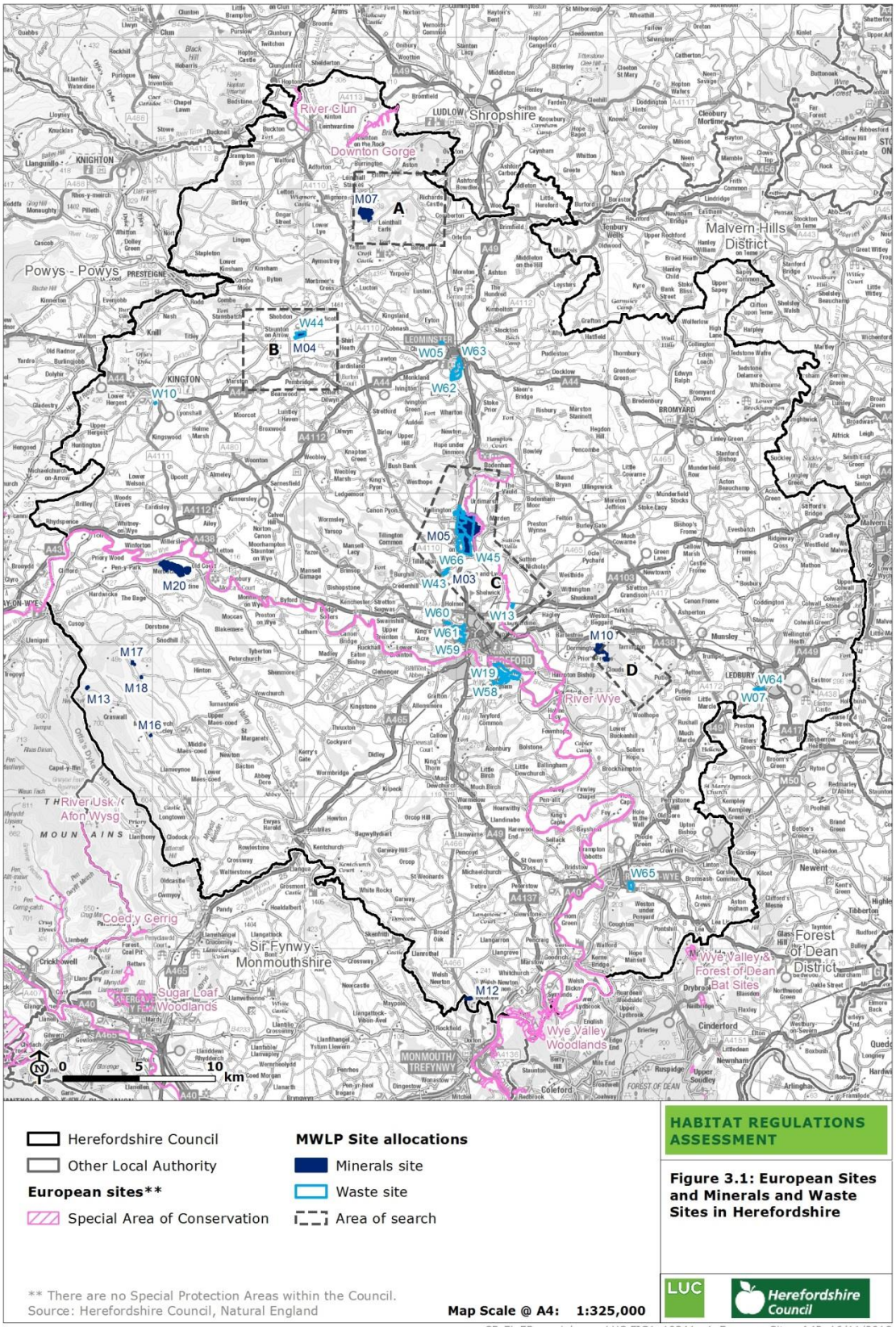

Figure 3.1 European Sites and Minerals and Waste Sites in Herefordshire

4 HRA Screening Assessment

4.1 In light of the screening assumptions detailed in **Chapter 3**, the following European sites required inclusion as part of the HRA Screening Stage, to determine whether the Draft HMWLP will result in 'likely significant effects' either alone, or in-combination with other plans and projects:

- River Wye SAC (Physical damage/ loss of habitat, non-physical disturbance, air pollution, water quantity and quality, non-toxic contamination);
- River Clun SAC (air pollution);
- Wye Valley Woodlands SAC (air pollution); and,
- Wye Valley and Forest of Dean Bat Sites SAC (physical damage/loss of offsite habitat).

4.2 Following application of the screening assumptions described in Chapter 3, the approach to HRA Screening initially involved an assessment of each policy and site allocation, followed by a detailed assessment of each potential impact identified. The full screening matrix, which sets out the decision making process used for this assessment can be found in **Appendix 2** and the findings are described below.

Significant effects unlikely

4.3 The following policies and proposed site allocations are unlikely to have significant effects on any of the European sites. For the policies listed below, this is because they either would not result in development (because they set out criteria relating to development proposed), or they seek to protect the natural environment). For the proposed site allocations listed below, significant effects are unlikely given the distance from the site allocation to 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.

4.4 The policies that are unlikely to have significant effects on any European site are:

- MT2: Transport within sites;
- SS8: Resource Management ;
- OS4: Access to open space and recreation from minerals and waste development;
- SD5: Site Reclamation;
- M1: Mineral Strategy;
- M2: Safeguarding of mineral resources from sterilisation;
- M4: The winning and working of crushed rock (limestone);
- M6: Borrow Pits;
- W1: Waste Strategy;
- W2: Solid waste management requirements;
- W3: Agricultural waste management;
- W4: Waste water management;
- W5: Preferred locations for solid waste treatment facilities;
- W7: Waste management operational expectations;

4.5 The site allocations that are unlikely to have significant effects on any European site are:

- M03a Upper Lyde Quarry;

- M03b Land adjacent Upper Lyde Quarry (east);
- M03d Land north east of Upper Lyde Quarry;
- M04 Shobdon Quarry;
- M05 Land adjacent Wellington Quarry (west) (sites b, c, e);
- M07a Leinthall Quarry;
- M07b Land west of Leinthall Quarry;
- M10a Perton Quarry;
- M10b Land north west of Perton Quarry;
- M13 Black Hill Delve;
- M16 Llandraw Delve;
- M17 Pennsylvani Delve;
- M18 Sunnybank Delve ;
- Area of Search A;
- Area of Search B;
- Area of Search D;
- W05 Leominster;
- W07 Ledbury;
- W10 Kington ;
- W13 Former Lugg Bridge Quarry;
- W19 City Spares MRS;
- W43 Upper Lyde Quarry (M03);
- W44 Shobdon Quarry (M04);
- W45 Wellington Quarry (M05);
- W58 Rotherwas Industrial Estate;
- W59 Westfields Trading Estate;
- W60 Three Elms Trading Estate;
- W61 Holmer Road, Hereford;
- W62 Leominster Enterprise Park;
- W63 Southern Avenue, Leominster;
- W64 Land between Little Marcle Road and Ross Road, Ledbury;
- W65 Model Farm, Ross-on-Wye; and,
- W66 Moreton Business Park, Moreton-on- Lugg.

Significant effects likely or uncertain

4.6 Whilst no policies or proposed site allocations are certain to result in a significant effect, for some there is uncertainty and therefore, in line with the precautionary approach being applied in the HRA, until significant effects can be ruled out, for example following detailed consideration of each potential impact type, as detailed below, they are treated as giving rise to 'likely significant effects'.

4.7 The screening assessment identified a lack of certainty as to whether the following policies would result in likely significant effects on European sites:

- M3: The winning and working of sand and gravel;
- M5: The winning and working of building stone (sandstone);
- M7: Unconventional hydrocarbons; and,
- W6: Preferred locations for construction, demolition and excavation waste facilities.

4.8 The screening assessment identified a lack of certainty as to whether the following proposed site allocations would result in likely significant effects on European sites:

- M05 Land adjacent Wellington Quarry (west) (sites a, d, g);
- M12 Callow Delve;
- M20 Westonhill Wood Delve;
- Area of Search C; and,
- W45 Wellington Quarry (M05) (sites a and d only).

HRA Screening Assessment

River Wye SAC

Physical loss of or damage to habitat

4.9 A review of each of the minerals and waste site allocations using GIS mapping and aerial imagery indicates that the majority are located a sufficient distance from the River Wye SAC to ensure that physical loss or damage to the SAC 'onsite' will be avoided. In addition, they lack habitat types which may provide opportunities for transitory species associated with the River Wye SAC (e.g. otter). As a result, the majority of site allocations and Areas of Search A, B and D (see **Figure 3.1**) have been ruled out.

4.10 The exception to the above finding includes minerals site allocation M05 (a, d and g) and waste site allocation W45 (a and d) which are located immediately adjacent to the River Lugg component of the River Wye SAC. These sites occupy much of the same wider site, and whilst they currently and historically support active minerals workings they also currently support a series of flooded gravel pits surrounded by dense scrub and fields intersected by ditches. As a result, there is a high probability of this site providing suitable habitat for otter. The seclusion of such habitats may increase the suitability of such habitat to be utilised for otter breeding purposes.

4.11 Given the proximity of these sites to the SAC, and the presence of potentially functionally linked habitat which may be used by otter, sand and gravel extraction, and inert waste disposal at these sites may result in likely significant effects both as a result of direct (onsite) and indirect (offsite) physical loss and damage.

4.12 It is recognised that the presence of suitable habitat for otter is the result of existing and historic sand and mineral extraction at the site, and given that habitat restoration and creation would be expected to continue as part of future workings at these sites, these proposals have the potential to contribute to strengthening the population for which the SAC is designated. Furthermore, despite the boundary of these site allocations being concurrent with the boundary of the SAC, it is unlikely that site works would encroach directly into the SAC due to the implementation of best practice working methods.

4.13 To provide sufficient certainty that potentially harmful effects to the SAC can be prevented, avoidance and mitigation measures, such as policy wording and the requirement for best practice measures, protection buffers, and site specific HRA as new proposals and phases come forward, would be required. Given the recent CJEU 'People over Wind' ruling, the effect of avoidance and mitigation measures cannot be considered at the HRA Screening stage, and therefore, the potential for site allocations M05a, d and g and W45a and d to result in likely significant effects cannot be ruled out at this stage.

4.14 This conclusion also applies to Area of Search C which encompasses the above sites, and provides the search area for future minerals operations in proximity to the River Wye SAC, and strategic

policies M3 and W6 which specifically focus minerals and waste operations to the Wellington Quarry sites.

4.15 **In summary**, **the potential for the Draft HMWLP site allocations M05a, d and g, and W45a and d to result in likely significant effects on the River Wye SAC as a result of physical loss or damage, cannot be excluded at this stage, and will therefore require further consideration at the Appropriate Assessment stage to determine whether, in light of potential mitigation safeguards, they will result in adverse effects on the integrity of the River Wye SAC, either alone or in-combination with other plans and projects**.

Non-physical disturbance (noise, vibration and light pollution)

4.16 As described in **Chapter 3**, noise and vibration effects, e.g. during mineral extraction, waste operations and/or transportation of minerals to and from the site, are most likely to disturb sensitive species and are thus a key consideration with respect to sites located in close proximity and where qualifying features include birds or mammals, although such effects may also impact upon some fish species. Artificial lighting at night (e.g. from additional street lamps, flood lighting and security lights) is most likely to affect bat populations or nocturnal birds, and therefore have an adverse effect on the integrity of European sites where bats and nocturnal birds are a qualifying feature.

4.17 The effects of noise, vibration and lighting are most likely to be significant if minerals and waste development takes place within 500m of a European site with qualifying features sensitive to these disturbances. As a result, the potential for such effects is limited to the River Wye SAC.

4.18 A review of the site allocations considered the proximity of the River Wye SAC, and the presence of any intervening habitat (e.g. woodlands) which would act as an avoidance buffer for such effects. This review identified that the potential for non-physical disturbance is limited to the Wellington Quarry waste and minerals sites (M05 and W45) because this site is located adjacent to the River Wye SAC, and specifically is limited to sites M05a, d and g, and W45 a and d due to their proximity to the SAC.

4.19 These sites have the potential to result in lighting, noise and vibration which could disturb otter which may be utilising adjacent habitats, or offsite functionally linked habitat which occurs within the site allocations. This conclusion also applies to Area of Search C which encompasses the above sites, and provides the search area for future minerals operations in proximity to the River Wye SAC, and strategic policies M3 and W6 which specifically focus minerals and waste operations to the Wellington Quarry sites.

4.20 It is likely that such potential effects could be avoided and mitigated with relative ease through a commitment to best practice working measures and maintaining appropriate buffers between operations and the River Wye SAC. Nevertheless, the effectiveness of such mitigation measures will require consideration at the appropriate assessment stage.

4.21 In conclusion, **the following policies have the potential to result in likely significant effects on the River Wye SAC as a result of non-physical disturbance and will require assessment at the appropriate assessment stage to determine whether, in light of mitigation measures, they would result in adverse effects on integrity of the River Wye SAC either alone or in-combination**:

- M3: The winning and working of sand and gravel;
- W6: Preferred locations for construction, demolition and excavation waste facilities;
- M05 Land adjacent Wellington Quarry (west) (sites a, d, g);
- Area of Search C; and,
- W45 Wellington Quarry (M05) (sites a and d only).

Air pollution

4.22 As identified in **Chapter 3**, increases in Heavy Duty Vehicle flows of 200 AADT or more have the potential to result, either alone or in-combination, in likely significant effects as a result of increases in air pollution. Minerals extraction sites and waste facilities could generate HDV traffic that includes both HGVs and smaller types of HDVs.

4.23 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 Draft HMWLP, and therefore the potential for air pollution as a result of the contribution of vehicle movement associated with the Draft HMWLP is unlikely.

4.24 The majority of the SAC is located further than 200m from a main road, thereby further reducing the potential for likely significant effect as a result of air pollution. A review of the primary road network identified the following key locations where main roads occur within 200m of the River Wye SAC:

- A38 at Bridge Sollers and Hackmoor Hall;
- A438 at Whitney-on-Wye, Hay-on-Wye, Glasbury and Lugwardine;
- A4103 at Lugg Bridge;
- A49 at Burghope and within central Hereford; and,
- A417 at Bowley and Hampton Court Bridge.

4.25 Each of these locations is typically characterised by a road intersecting the River Wye SAC, or being adjacent to the meander of the river which increases its proximity to the road at a given location. Therefore, the locations where roads are within 200m of the SAC are often focused to discrete locations. Crucially, none of the above locations support the transition mire habitat which is identified as being sensitive to the effects of air pollution. 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 likely to be associated with vehicle movement arising from the Draft HMWLP because 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.

4.26 In terms of in-combination effects, the changes in traffic associated with the Draft HMWLP would not be expected to affect locations or components of the SAC considered vulnerable to this type of effect, and therefore there is no mechanism by which in-combination effects could occur.

4.27 In addition to vehicle traffic, air pollution may also be caused by particular types of development such as waste management facilities (where they incorporate thermal treatment) or agricultural activities. Some types of waste facilities release gaseous emissions from waste management technologies involving, anaerobic digestion or producing energy from waste. However, a review of the HMWLP policies indicates that no specific locations for such activities are specified. It is therefore not possible to fully assess the likelihood of this occurring at this stage due to a lack of information about the precise location, type and scale of development, which will not be known until the planning application stage. However, waste management facilities will also need to meet the high standards of design and operation that are required to obtain an Environmental Permit (EP), as regulated by the Environment Agency. The requirement to meet EP standards (including emissions to air, land and water, energy efficiency, noise, vibration and heat and accident prevention) would ensure that the design and operation of waste and agricultural facilities minimises air pollution and avoids harm to the River Wye SAC (and other European sites).

4.28 In light of the above, **the Draft HMWLP is not predicted to result in likely significant effects on the River Wye SAC as a result of air pollution either alone or in-combination with other plans and projects**.

Water quality

4.29 As specified in Chapter 3, there is potential for the Draft HMWLP to result in impacts to the River Wye SAC through changes in water quality. In particular this relates to the discharge and run off of contaminated water, and leaching of chemicals, pollutants and nutrients. Impacts on water quality are most likely to affect European sites that are hydrologically connected to the site allocations, either via surface or groundwater pathways.

4.30 A review of each policy, and mineral and waste site allocation was completed to identify those sites with direct hydrological connectivity with the River Wye SAC, and which, given the type of activity proposed at the site, are of increased likelihood to result in harmful effects to the SAC in the absence of mitigation and avoidance measures.

4.31 The majority of policies do not direct development or specify locations and will therefore not result in likely significant effects. The majority of mineral and waste site allocations do not share direct hydrological connectivity with the River Wye SAC and are located a sufficient distance to ensure that the likelihood of operations resulting in likely significant effects on the SAC as a result of degraded water quality is negligible. Policies and site allocations with the potential to affect the River wye SAC as a result of changes in water quality are discussed below.

4.32 Mineral site allocations M05a, d, and g, and waste site allocation W5a and d are both located at Wellington Quarry, adjacent to the River Wye SAC and share direct hydrological connectivity with the River Wye SAC, either through sharing boundaries, or via field drains. These allocations relate to the extraction of gravel and sand, and the treatment of inert minerals waste which is non-reactive both chemically and biologically. As a result, the potential for activities at these sites to result in changes in water quality which would be considered significant is low. Nevertheless, in the absence of appropriate safeguards and mitigation measures, the potential for operations at these sites to harm the qualifying features of the SAC, for example through plant washing, chemical spills and pollution events, and surface water run-off, cannot be excluded.

4.33 Strategic policies M3 and W6 identify preferred locations for construction, demolition and excavation of minerals and waste management facilities, and specify Wellington Quarry as a preferred location. As a result, the potential for these policies to result in likely significant effects on the River Wye SAC cannot be excluded for the reasons provided above.

4.34 Area C is also specified as a search area for future sand and gravel extraction. The potential for likely significant effects associated with potential activities will depend upon the location and nature of the proposals, which at this stage is not possible to conclude. For the reasons provided above, locations which share hydrological connectivity may result in significant effects on the SAC. Therefore, suitable mitigation and avoidance safeguards are likely to be required for Policies M3, W6 and site allocations M05a, d and g and W5 a and d to ensure the potential for significant effects is avoided.

4.35 The western edge of the minerals site allocation M12 Callow Delve is situated immediately adjacent to Mally Brook which discharges into River Wye SAC approximately 3.7km downstream. As a result run-off of chemicals, sediment or contaminants has the potential to result in likely significant effects on the SAC. In keeping with the site allocations described above, it is likely that this could be avoided with relative ease through a commitment to, and implementation of, appropriate mitigation safeguards including best practice working methods.

4.36 Minerals site allocation M20 Westonhill Wood Delve is located 300m upslope from the River Wye SAC and the western edge of the site is situated immediately adjacent to a brook at Merbach which flows directly into the River Wye SAC. As a result, run-off of chemicals, pollutants, sediment or contaminated water has the potential to result in likely significant effects on the SAC. Policy M5 also specifically identifies this site allocation as a preferred mineral extraction site and therefore also has the potential to result in significant effects. As specified above, it is likely that such effects could be avoided with relative ease through a commitment to and implementation of appropriate mitigation safeguards.

4.37 Policy M7 sets out the principles of development in relation to unconventional hydrocarbons (UH). It also broadly specifies the location of potential UH resources in the south of the county, and potentially in proximity to the River Wye SAC. Exploration, appraisal and production phases of this activity may each involve hydraulic fracturing for gas. These activities have the potential to affect ground water resources in particular and could therefore result in likely significant effects when the disturbance of ground water resources may lead to changes in water quality. The policy specifies that "*surface proposals will only be permitted where they would be outside the following designated areas: Areas of Outstanding Natural Beauty; protected groundwater source areas; World Heritage sites; Special Protection Areas; Special Areas of Conservation; Ramsar sites; and Sites of Special Scientific Interest*", but this fails to recognise that such activities can affect European sites from beyond the site boundary. As a result, uncertainty remains as to whether this policy could result in likely significant effects and additional policy wording and commitment to

mitigation and avoidance is likely to be required to ensure the potential for harm to the River Wye SAC is avoided. Therefore the potential for Policy M7 to result in likely significant effects as a result of changes in water quality requires consideration at the appropriate assessment stage.

4.38 It is likely that the potential likely significant effects identified above could be mitigated through the provision and commitment to safeguards and best practice working. However, following recent case law, the effect of mitigation measures cannot be considered at the screening stage and therefore **the potential for the above policies and site allocations to result in adverse effects on the integrity of the River Wye SAC either alone or in-combination as a result of changes in water quality, will require consideration at the Appropriate Assessment stage**.

Water quantity

4.39 European sites can be sensitive to changes in water quantity where they are designated for their water habitats, but also other habitats dependent on consistent water levels (e.g. bogs, mires, woodlands etc.). As specified in Chapter 3, the potential for the Draft HMWLP to result in likely significant effects is restricted to the River Wye SAC due to the locations of site allocations, distance, and a lack of hydrological connectivity with other European sites.

4.40 The water supply in Herefordshire comes mainly from Dwr Cymru Welsh Water (DCWW). DCWW's website states that following publication of their draft Water Resources Management Plan in 2009, new information was received arising from the Environment Agency Wales's Review of Consents process. The information included proposals from Environment Agency Wales, to modify DCWW's abstraction licences in order to comply with the Habitats Regulations 2010. As a result of this information a revised draft Water Resources Management Plan was published in October 2011, taking into account these proposed changes (and accompanied by its own HRA Report[24]). Following consultation the WRMP was amended to include the additional supporting evidence that DCWW had committed to provide in the Final WRMP[25].

4.41 As DCWW is a member of Herefordshire Council's Water Steering Group, the progress of the WRMP and the Review of Consents was discussed directly with the Environment Agency and Herefordshire Council. From the minutes of the Water Steering Group meetings (available on the Council's website) and a summary Water Resources Report by the Water Steering Group (dated 3 February 2012, and also available on the Council's website) it is understood that DCWW confirmed that there are sufficient water resources to meet the increases in demand from Herefordshire throughout its operating area. It is also stated in the WRMP that there are sufficient water resources to meet demand during the plan period. The HRA for the WRMP also incorporates the sustainability reductions of the Review of Consents. Accordingly, the HRA concludes no likely significant effects on any water resource sensitive European site. Furthermore the WRMP is subject to regular review to account for any changes experienced during the plan period. Herefordshire Council has agreed in the Water Resources Report to liaise with DCWW on this matter to ensure that there are no detrimental impacts on growth within Herefordshire. Should such an impact arise, Herefordshire Council will report this through the Annual Monitoring Report process and thus initiate a review of policy. **Therefore, no likely significant effects on the River Wye SAC as a result of changes in water quantity are expected in relation to the Draft HMWLP**.

Non-toxic contamination

4.42 As described in Chapter 3, non-toxic contamination during mineral extraction, waste operations and/or transportation of minerals and waste to and from the site 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 Draft HMWLP, which relates primarily to dust creation, is restricted to sites in proximity (<500m) of the River Wye SAC.

4.43 A review of the site allocations considered the proximity of sites to the river Wye SAC and the presence of any intervening habitat (e.g. woodlands) which would act as an avoidance buffer for

[24] *Habitats Regulations Assessment of the Dwr Cymru Welsh Water Revised Draft Water Resources Management Plan.* Entec, 2011.
[25] *Dŵr Cymru Welsh Water Final Water Resources Management Plan.* Dŵr Cymru Welsh Water, September 2012.

such effects. This review identified that the potential for non-physical disturbance is limited to the Wellington Quarry waste and minerals site (M05 and W45) because this site is located adjacent to the River Wye SAC. Only those sites, in proximity to the River Wye SAC have the potential to result in impacts associated with non-physical disturbance, and this is limited to sites M05a, d and g, and W45a and d.

4.44 These sites and the operations proposed there (minerals extraction and transport, and treatment of inert waste) have the potential to result in dust creation which could smother riparian vegetation, and change the physical conditions of aquatic habitat of the adjacent River Wye SAC. This could potentially damage or prevent the natural processes required by qualifying features including fish species and aquatic plants, and thereby result in likely significant effects.

4.45 This conclusion also applies to Area of Search C which encompasses the above sites, and provides the search area for future minerals operations in proximity to the River Wye SAC, and strategic policies M3 and W6 which specifically focus minerals and waste operations to the Wellington Quarry sites.

4.46 It is likely that such potential effects could be avoided and mitigated with relative ease through a commitment to best practice working measures and maintaining appropriate buffers between operations and the River Wye SAC. The effectiveness of such mitigation measures will require consideration at the appropriate assessment stage.

4.47 In conclusion, **the following policies and site allocations have the potential to result in likely significant effects on the River Wye SAC as a result on non-toxic contamination and will require assessment at the appropriate assessment stage to determine whether, in light of mitigation measures, they would result in adverse effects on integrity of the River Wye SAC either alone or in-combination**.

- M3: The winning and working of sand and gravel;
- W6: Preferred locations for construction, demolition and excavation waste facilities ;
- M05 Land adjacent Wellington Quarry (west) (sites a, d, g);
- Area of Search C; and,
- W45 Wellington Quarry (M05) (sites a and d only).

River Clun SAC

Air and Water Pollution

4.48 The River Clun SAC is located within 200m of the A4113. As a result, there is potential for vehicle traffic associated with the Draft HMWLP to result in air pollution and run-off of pollutants associated with traffic at this location. Nevertheless, the A4113 is likely to provide a key movement route for site allocation M07 only, and is unlikely to represent an important strategic route for the majority of vehicle movements associated with the Draft HMWLP. The SAC is located 90m upstream from the A4113 Bridge crossing and therefore deposited particulate matter and chemicals as a result of vehicle emissions, are likely to dissipate at an increased rate prior to reaching the SAC whilst contaminated run-off at this location would not be expected to reach the SAC due to the direction of flow. These factors are therefore unlikely to change the chemical composition of water habitat upstream from the A4113 because of the distance and direction of flow, and the SACs qualifying feature, freshwater pearl mussel, would not be expected to be susceptible to the effects of emissions or road run-off deposition at this location. Therefore, **the Draft HMWLP will not result in likely significant effects on the River Clun SAC as a result of air pollution, either alone, or in-combination**.

Wye Valley Woodlands SAC

Air pollution

4.49 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.

4.50 In terms of vehicle traffic, nitrogen oxides (NOx, i.e. NO and NO_2) 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.

4.51 As identified in **Chapter 3**, increases in Heavy Duty Vehicle flows of 200 AADT or more have the potential to result, either alone or in-combination, in likely significant effects as a result of increases in air pollution. Minerals extraction sites and waste facilities could generate HDV traffic that includes both HGVs and smaller types of HDVs.

4.52 There is no County wide model that provides traffic forecasts for all roads in the County at the end of the Local Plan period versus the current baseline flows and taking into account the housing provision planned. The Department for Transport website provides traffic count data for local authorities on a quarterly and annual basis[26], however, the majority of counts are on major roads (A roads and motorways), and only a sample of points on the minor road network is counted each year.

4.53 In the absence of detailed traffic forecasts for the whole county, it was 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 the Draft HMWLP. As such, where a site is within 200m of only minor roads, no significant effect from traffic-related air pollution was considered to be the likely outcome.

4.54 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)[27] database. Data from APIS has 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.

4.55 The Wye Valley Woodlands SAC lies within 200m of an 'A' road (A40 between Monmouth and Ross-on-Wye and the A466 between Monmouth and Hereford for the Wye Valley Woodlands SAC). According to the APIS website, the Wye Valley Woodlands SAC contains qualifying habitats that are sensitive to deposition of nitrogen and exceeding critical loads, including broadleaved and coniferous woodland which is noted in APIS as the relevant broad habitat for the qualifying bat species. However, road transport emissions only contribute around 12.6% of the overall nitrogen deposition for the Wye Valley Woodlands SAC.

4.56 This site could experience air pollution effects due to an increase in vehicle traffic resulting from increases in HDV movements to and from minerals and waste sites specified in the Draft HMWLP.

4.57 A review of the locations and distribution of minerals and waste sites allocated in Herefordshire indicates that the only allocations within any proximity to the Wye Valley Woodlands SAC are minerals site M12 and waste site W65, which are less than 20 miles from the SAC. Waste site W65 is an existing strategic employment site, and therefore any proposals would not be expected to exceed the existing type of use, whilst site M12 is also an existing quarry which will be granted a time extension to continue the existing activities. As a result, the continued working of these sites would not be expected to result in any notable increases in vehicle movements. All remaining sites are located over 20 miles from the Wye Valley Woodlands SAC component sites and this is likely to further limit the potential contribution of traffic increases associated with the Draft HMWLP.

4.58 **Therefore, significant effects as a result of air pollution on the Wye Valley Woodlands SAC are considered unlikely**.

Wye Valley and Forest of Dean Bat Sites SAC

Physical damage/loss of offsite habitat

4.59 The Wye Valley and Forest of Dean Bat Sites SAC comprises a network of sites designated for supporting several important maternity roosts for lesser and greater horseshoe bats. These bats are particularly reliant upon the maintenance of a suitable network of foraging and commuting

[26] http://www.dft.gov.uk/traffic-counts/index.php
[27] www.apis.ac.uk

habitat within the wider landscape and can therefore be affected by the loss of functionally linked habitat located outside the SAC boundary.

4.60 In general, site allocations and areas of search identified in the Draft HMWLP are located considerable distance from the SAC and do not share functional habitat connectivity with the SAC, and are unlikely to represent resources upon which the SAC bat population depend. As a result, the majority of the policies and site allocations would not be expected to result in likely significant effects associated with physical damage and loss of offsite habitat. Nevertheless, a single site allocation, Minerals site M12 Callow Delve is located 2.6km to the northwest of a component site of the SAC, and shares continuous habitat connectivity with the SAC via woodland habitat. In addition, site M12 supports woodland habitat and is located in close proximity to several buildings which may support roosting horseshoe bats. Therefore, in accordance with a precautionary approach, felling of significant areas of woodland could potentially result in the severance of habitat connectivity or loss of foraging habitat for horseshoe bats, if using this habitat.

4.61 Precautionary safeguards are recommended to ensure that there is sufficient confidence that activities at the site would avoid harm to horseshoe bats. This is likely to include a commitment to undertake a project level assessment of the potential effect of site operations on horseshoe bat species as new areas are targeted for mineral workings which would involve felling of woodland, and to ensure that peripheral woodland which may be important in maintaining commuting routes for these species is maintained as appropriate.

4.62 Following recent case law, mitigation measures cannot be considered at the screening stage and therefore **the potential for likely significant effects to result in adverse effects on the Wye Valley and Forest of Dean Bat Sites SAC as a result of off-site habitat loss associated with minerals site M12, either alone or in-combination, will require consideration at the Appropriate Assessment stage**.

Identification of other plans and projects which may have 'in-combination' effects

4.63 Regulation 102 of the Amended Habitats Regulations 2017 requires an Appropriate Assessment where "*a land use plan is likely to have a significant effect on a European site (either alone or in combination with other plans or projects) and is not directly connected with or necessary to the management of the site*". The purpose of the in-combination effects assessment is to make sure that the effects of numerous small activities, which alone would not result in a significant effect, are assessed to determine whether their combined effect would be significant.

4.64 In accordance with recent guidance on HRA[28], the potential for in-combination effects need only be considered for the effects of a Local Plan identified as unlikely to have a significant effect alone, but which could combine with the effects of other plans and projects to produce a significant effect.

4.65 The first stage in identifying 'in-combination' effects involves identifying which other plans and projects in addition to the Herefordshire Draft HMWLP may affect the European sites that are the focus of this assessment.

4.66 There are a small number of potentially relevant plans and projects which could be considered. The review focused on plans within the authorities adjacent to Herefordshire, and those with potential functional links with European sites that could be affected by the Draft HMWLP, as these are the ones most likely to give rise to in-combination effects. **Appendix 3** lists the plans that were considered, outlining the components of each that could have an impact on nearby European sites and considering the findings of the accompanying HRA work (where available).

4.67 The purpose of the review of other plans was to identify any components that could have an impact on the European sites that could also be affected by the Herefordshire Draft HMWLP, e.g. proposals for development near to the European sites which could have implications in terms of increased traffic, water use and pollution. The potential for the effects of these plans to combine

[28] DTA: The Habitats Regulations Assessment Handbook: http://www.dtapublications.co.uk/handbook/browse

with the effects of the Draft HMWLP has been considered in the screening assessment provided above.

4.68 The review of other plans, and their corresponding HRAs reached the following conclusions in relation to this assessment:

- **Forest of Dean Core Strategy (Adopted 2012)**: The HRA screening concluded that the Core Strategy will not result in any significant negative impacts on identified sites either alone or in-combination.
- **South Worcestershire Development Plan (Adopted 2016)**: The potential for likely significant effects as a result of changes in water quality or quantity was identified. However, the AA concluded that the mitigation provided by Pre-Submission policies and current regulatory processes (EA Review of Consents) would ensure that the potential impacts of proposed development on the water environment would be minimised. It was concluded that the SWDP would not have adverse in combination effects on the integrity of the identified European sites through reduced water levels or water quality. Subsequent screening assessments including the 2015 screening assessment concluded that the proposed Main Modifications do not significantly affect the findings of the previous HRA work and that the conclusion that the SWDP will not have adverse effects on the integrity of European sites either alone or in combination is still valid.
- **Shropshire Core Strategy (Adopted 2011)**: The HRA Report for the Shropshire Core Strategy found that the Core Strategy was not likely to have a significant effect on any of the European sites in the county, provided that adequate HRA work is carried out in relation to the Site Allocations and Management of Development DPD. The HRA of the Site Allocation and Management of Development Local Plan Document concluded no likely significant effects on any European Sites subject to the provision of policy commitments.
- **Monmouthshire County Council Adopted Local Development Plan 2011-2021 (Adopted 2014)**: The AA concluded that the LDP will not have adverse effects on the integrity of European sites as the recommended mitigation measures have been incorporated into the Plan. The AA conclusions were revisited in the February 2014 HRA Addendum, which took into account the changes made in the final version of the LDP. It did not change the conclusions of the 2012 HRA Report and concluded that the LDP will still not have adverse effects on the integrity of European sites.
- **Powys Local Development Plan 2011-2026 (Adopted 2018)**: The 2018 HRA Screening of the Inspector's Matters Arising Changes report concluded that further HRA screening was not necessary. The changes proposed were not considered to be significant and served to clarify or enhance the policy guidance set out by the Plan. HRA Screening of new Policy RE1 as proposed by IMAC 5, determined that the new policy would not result in a Likely Significant Effect to any European Sites (SAC, SPA, Ramsar Sites) or their associated features, either alone or in combination with other Plans or projects.
- **Brecon Beacons Local Development Plan (Adopted 2013)**: No Likely Significant Effects on European sites were predicted.

4.69 Therefore, **it can be concluded that significant effects from the Herefordshire Draft HMWLP in combination with other surrounding land use plans are not expected**.

Summary of HRA Screening Assessment

4.70 A summary of the HRA Screening conclusions are provided in **Table 4.1**. In summary, the potential for the Draft HMWLP to result in likely significant effects on the River Wye SAC could not be ruled as a result of physical damage and loss of habitat, non-physical disturbance, water quality, and non-toxic contamination. The potential for the Draft HMWLP to result in likely significant effects on the Wye Valley and Forest of Dean Bat Sites SAC was also identified as a result of physical damage and loss of offsite functionally linked habitat.

Table 4.1 Summary of screening conclusions

European Site	Physical damage/ loss of habitat	Non-physical disturbance	Air pollution	Water quantity and quality	Non-toxic contamination
River Wye SAC	**LSE uncertain – proceed to AA**	**LSE uncertain – proceed to AA**	**No LSE**	**LSE uncertain – proceed to AA (water quality only)**	**LSE uncertain – proceed to AA**
River Clun SAC	Screened out	Screened out	**No LSE**	**No LSE**	Screened out
Downton Gorge SAC	Screened out	Screened out	Screened out	Screened out	Screened out
Wye Valley Woodlands SAC	Screened out	Screened out	**No LSE**	Screened out	Screened out
Wye Valley and Forest of Dean Bat Sites SAC	**LSE uncertain – proceed to AA**	Screened out	Screened out	Screened out	Screened out
Coed y Cerrig SAC	Screened out	Screened out	Screened out	Screened out	Screened out
Sugar Loaf Mountains SAC	Screened out	Screened out	Screened out	Screened out	Screened out
Rhos Goch SAC	Screened out	Screened out	Screened out	Screened out	Screened out
River Usk SAC	Screened out	Screened out	Screened out	Screened out	Screened out
Llangorse Lake SAC	Screened out	Screened out	Screened out	Screened out	Screened out
Usk Bat Sites SAC	Screened out	Screened out	Screened out	Screened out	Screened out
Cwm Clydach Woodlands SAC	Screened out	Screened out	Screened out	Screened out	Screened out
Lyppard Grange Ponds SAC	Screened out	Screened out	Screened out	Screened out	Screened out
Severn Estuary SPA	Screened out	Screened out	Screened out	Screened out	Screened out
Severn Estuary Ramsar	Screened out	Screened out	Screened out	Screened out	Screened out
Severn Estuary SAC	Screened out	Screened out	Screened out	Screened out	Screened out
Walmore Common SPA	Screened out	Screened out	Screened out	Screened out	Screened out

5 Conclusions and Next Steps

5.1 The HRA Screening concluded that the Draft HMWLP could result in the following likely significant effects:

- River Wye SAC (physical damage and loss of habitat, non-physical disturbance, water quality, and non-toxic contamination); and,
- Wye Valley and Forest of Dean Bat Sites SAC (physical damage and loss of offsite functionally linked habitat).

5.2 These effects will require further consideration at the Appropriate Assessment stage to determine whether, in light of any mitigation and avoidance measures, they will result in adverse effects on the integrity of the above sites either alone or in-combination with other plans and projects.

5.3 Mitigation measures are likely to relate to the provision of policy safeguards which commit to site level assessments as new development or phases of operation come forward, and a commitment to the implementation of best practice working methods which seek to avoid and mitigate the potential effects identified.

Recommendations for the Draft HMWLP

5.4 In relation to the River Wye SAC, impacts associated with the effect of physical damage and loss were associated with site allocations M05 and W45 due to their location adjacent to the SAC and the presence of offsite functionally linked wetland habitat which may be utilised by otter. **These potential effects could be mitigated through the provision of policy safeguards within the HMWLP which require site level assessment and a commitment to, and implementation of, best practice working measures in line with a site specific mitigation and avoidance plan**. This type of avoidance and mitigation would also serve to prevent and mitigate potential effects associated with non-physical disturbance, non-toxic contamination and water quality as a result of sites M05 and W45 and policies M3, W6 and Area C, and potential water quality impacts associated with sites M12, M20 and policy M5.

5.5 Policy *M7: Unconventional hydrocarbons* broadly specifies the location of potential unconventional hydrocarbon resources in the south of the county, and associated activities may include hydraulic fracturing for gas. These activities have the potential to degrade the quality of ground water resources and whilst the policy specifies safeguards in relation to protecting European sites, **the wording of policy M7 requires strengthening to recognise that significant impacts can occur from activities occurring outside of the European site boundaries, together with a commitment to undertake site specific HRA assessment for any such proposal as it comes forward for consideration**.

5.6 The potential for likely significant effects on the Wye Valley and Forest of Dean Bat Sites SAC was identified as a result of physical damage and loss of offsite functionally linked woodland habitat present within site allocation M12. This is considered highly precautionary, and **the risk of such an effect could be minimised through the provision of a commitment to site specific assessment where new areas of excavation and associated tree felling is proposed, and if required, the retention of a woodland periphery at the site to prevent habitat severance to horseshoe bat species**.

5.7 At this stage, it is expected that the inclusion of appropriate policy safeguards, together with a commitment to successfully implement them within the Draft HMWLP, would be expected to ensure that adverse effects on integrity will be avoided, either alone or in-combination, but this will require consideration at the Appropriate Assessment stage (alongside the Pre-Submission HMWLP), at which point formal consultation with Natural England as the statutory conservation authority will be also be completed.

Next Steps

Stage 2 of the HRA: Appropriate Assessment

5.8 EC Guidance[29] states that the Appropriate Assessment stage of the HRA 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. A site's integrity depends on it being able to sustain its 'qualifying features' (i.e. those Annex I habitats, Annex II species, and Annex I 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.

Assessing the effects on site integrity

5.9 The Appropriate Assessment focuses on those impacts that are judged likely to have a significant effect on the qualifying features of a European site, or where insufficient certainty regarding this remained at the screening stage. As discussed in **Chapter 1**, a conclusion needs to be reached as to whether or not a policy and/or the plan would adversely affect the integrity of a European site. In order to reach such a conclusion, consideration needs to be given to whether the predicted impacts of the Herefordshire Core Strategy policies (either alone or in combination) have the potential to:

- Delay the achievement of conservation objectives for a site.
- Interrupt progress towards the achievement of conservation objectives for a site.
- Disrupt factors that help to maintain the favourable conditions of a site.
- Interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of a site.

5.10 Based on the Screening findings in **Appendix 2** (and summarised above), an Appropriate Assessment will be required for the River Wye SAC where likely significant effects with respect to physical damage and loss of habitat, non-physical disturbance, water quality, and non-toxic contamination, as a result of the Draft HMWLP were unable to be ruled out during the screening stage. AA will also be required for the Wye Valley and Forest of Dean Bat Sites SAC where likely significant effects from physical damage and loss of offsite functionally linked habitat as a result of the Draft HMWLP were unable to be screened out.

5.11 The conservation objectives for both the River Wye SAC and the Wye Valley and Forest of Dean Bat Sites SAC[30] are to:

"Avoid the deterioration of the qualifying natural habitats and the habitats of qualifying species, and the significant disturbance of those qualifying species, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving Favourable Conservation Status of each of the qualifying features.

Subject to natural change, to maintain or restore:

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

[29] *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.
[30] http://www.naturalengland.org.uk/Images/UK0012642-River-Wye-Afon-Gwy-SAC_tcm6-32033.pdf

5.12 The appropriate assessment will seek to conclude, based on the information available, whether the impacts listed above are likely to affect the integrity of the River Wye SAC and the Wye Valley and Forest of Dean Bat Sites SAC, and if mitigation measures may be implemented to reduce the likelihood or severity of the impact so that adverse effects on integrity may be avoided.

LUC

November 2018

Appendix 1

European Site Information

European Site Information

Site name	Area (ha)	Location	Qualifying features	Key vulnerabilities and environmental conditions to support site integrity	Natural England Conservation Objectives
European Sites within (or partly within) Herefordshire					
River Wye SAC	2234.89	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.	Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation Transition mires and quaking bogs; very wet mires often identified by an unstable 'quaking' surface *Austropotamobius pallipes;* White-clawed (or Atlantic stream) crayfish *Petromyzon marinus;* Sea lamprey *Lampetra planeri;* Brook lamprey *Lampetra fluviatilis;* River lamprey *Alosa alosa;* Allis shad *Alosa fallax;* Twaite shad *Salmo salar;* Atlantic salmon *Cottus gobio;* Bullhead *Lutra lutra;* Otter	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	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, and, • The distribution of qualifying species within the site.

				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, Japanese Knotweed, Giant Hogweed 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.	
Downton Gorge SAC	68.88	Fragmented site lying to the north within the county.	*Tilio-Acerion* forests of slopes, screes and ravines; Mixed woodland on base-rich soils associated with rocky slopes	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.	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,

				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.	and, • The distribution of qualifying species within the site.
River Clun SAC	14.93	Fragmented site both beyond the county boundary to the north within Shropshire and north within the county.	*Margaritifera margaritifera;* Freshwater pearl mussel	**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	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, and, • The distribution of qualifying species within the site.

				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.**	
European Sites outside of Herefordshire but within 15km					
Rhos Goch SAC	67.59	Fragmented site beyond the county boundary to the west within East Wales.	Active raised bogs Transition mires and quaking bogs *Molina* meadows on calcareous, peaty or clayey-silt-laden soils Bog woodland Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*	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.	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.
Llangorse Lake SAC	215.44	Outside of the county boundary to the south west within East Wales.	*Lutra Lutra;*Ottter *Rhinolophus hipposideros:*Lesser horseshoe bat	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.	The vision for this feature is for it to be in a favourable conservation status, where all of 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.

Usk Bat Sites SAC	1686.025	Outside of the County boundary to the south west within East Wales, West Wales and the Valleys.	*Rhinolophus hipposideros:*Lesser horseshoe bat *Rhinolophus ferrumequinum:* Greater horseshoe bat *Myotis bechsteinii:* Bechstein's bat *Barbastella barbastellus:* Barbastelle bat	The Usk Valley area contains one of the largest maternity roosts for less horseshoe bats as well as a number of 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.	The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: • The site will support a sustainable population of lesser horseshoe bats in the River Usk area. • The population will 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.

Cwm Clydach Woodlands SAC	28.08	Outside of the County boundary to the south west within West Wales and The Valleys.	*Rhinolophus hipposideros:* Lesser horseshoe bat *Asperulo-Fagetum* beech forests	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	The vision for this feature is for it to be in a favourable conservation status, where all of 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.

				necessary.	
Coed y Cerrig SAC	8.99	Outside of the County boundary to the south west within West Wales and The Valleys.	Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* *Rhinolophus hipposideros:*Lesser horseshoe bat *Viburnum opulus:*Guelder-rose *Prunus padus:*Bird cherry	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	The vision for this feature is for it to be in a favourable conservation status, where all of 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,

				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**.	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.
Sugar Loaf Woodlands SAC	173.09	Outside of the County boundary to the south west within West Wales and The Valleys.	*Quercus petrae:* Sessile Oak *Vaccinium myrtillus:* Bilberry *Deschampsia flexuosa:* Wavy hair-grass	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	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 of 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

				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.	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.
River Usk SAC	967.97	Outside of the County boundary to the south west within East Wales, West Wales and The Valleys.	*Ranunculus fluitans:*Buttercup *Callitricho-Batrachion:*Buttercup *Petromyzon marinus:* Sea lamprey *Lampetra planeri:*Brook lamprey *Lampetra fluviatillis:* River lamprey *Alosa fallax:*Twaite shad *Salmo salar:*Atlantic salmon	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	Conservation Objective for the water course: 1.The capacity of the habitats in the SAC to support each feature at near-natural population levels, 2. The ecological status of the water environment should be sufficient to maintain a stable or increasing population of each feature. 3. Flow regime, water quality and physical habitat should be maintained in, or restored as far as possible to, a near-natural state. 4. All known breeding, spawning and nursery sites of species features should be maintained as suitable habitat as far as possible, except where natural processes

			Cottus gobio: Bullhead *Lutra Lutra:*Otter	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.	cause them to change. 5. 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. 6. The river planform and profile should be predominantly unmodified. 7. River habitat SSSI features should be in favourable condition. 8. 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 9. Natural factors should not be modified. 10. 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. 11. Flow objectives for assessment points in the Usk Catchment Abstraction Management Strategy will be agreed between EA and CCW 12. Levels of nutrients, in particular phosphate, will be agreed between EA and CCW for each Water Framework Directive water body in the Usk SAC.
Wye Valley Woodlands SAC	916.24	Fragmented site outside of the County boundary to the south within Gloucestershire, Herefordshire, and	*Asperulo-Fagetum* beech forests *Tilio-Acerion* forests of slopes, screes and ravines; Mixed woodland on base-	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	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

		Monmouthshire.	rich soils associated with rocky slopes *Taxus baccata* woods of the British Isles, Yew-dominated woodland *Rhinolophus hipposideros;* Lesser horseshoe bat	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 in light of 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.	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, and, • The distribution of qualifying species within the site.

Wye Valley and Forest of Dean Bat Sites SAC	142.70	Outside of the County boundary to the south east within Gloucestershire and Monmouthshire.	*Rhinolophus hipposideros;* Lesser horseshoe bat *Rhinolophus ferrumequinum;* Greater horsehoe bat	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 a 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.	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, and • The distribution of qualifying species within the site.

				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**.	
Severn Estuary SAC	73715.40	Outside of the County boundary to the south east within Bristol City, Gloucestershire, Bath & North East Somerset, Somerset, South Gloucestershire and the Welsh counties of Vale of Glamorgan, Cardiff, Newport and Monmouthshire.	Sandbanks which are slightly covered by sea water all the time; Subtidal sandbanks Estuaries Mudflats and sandflats not covered by seawater at low tide; Intertidal mudflats and sandflats Reefs *Glauco-Puccinellietalia maritimae:* Atlantic salt meadows *Petromyzon marinus:* Sea Lamprey *Lampetra fluviatilis:* River Lamprey *Alosa fallax:* Twaite Shad	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	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, and, • The distribution of qualifying species within the site.

				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**.	
Severn Estuary SPA and Ramsar Site	16,942	Outside of the County boundary to the south east within Bristol City, Gloucestershire, Bath & North East Somerset, Somerset, South Gloucestershire and the Welsh counties of Vale of Glamorgan, Cardiff, Newport and Monmouthshire.	Estuaries *Glauco-Puccinellietalia maritimae:* Atlantic salt meadows *Petromyzon marinus:* Sea Lamprey *Lampetra fluviatilis:* River Lamprey *Alosa fallax:* Twaite Shad *Cygnus columbianus bewickii:*Berwick's Swan *Charadrius hiaticula:*Ringed Plover *Numenius arquata:* Curlew *Calidris alpine alpine:* Dunlin	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	This Ramsar site does not have specific objectives, so we can assume the objectives for the SAC carries over: 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

			*Anas acuta:*Pintail *Tringa tetanus:* Redshank *Tadorna tadorna:*Shelduck	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**.	• The populations of qualifying species, and, • The distribution of qualifying species within the site.
Walmore Common SPA and Ramsar Site	52.85	Outside of the County boundary to the south east within Gloucestershire.	*Cygnus columbianus bewickii*: Bewick's Swan	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'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	No conservation objectives published for the Ramsar site.

				and roosting areas; **increased public access**; and the **increased development of energy production** in the area.	
Lyppard Grange Ponds SAC	1.09	Outside the County boundary to the north east within Worcestershire.	*Triturus cristatus: Great crested newt*	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.**	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, and, • The distribution of qualifying species within the site.

Appendix 2

HRA Screening Matrix

HRA Screening Matrix

Policy / Site Ref.	Name	Type	Discussion	Conclusion of Likely Significant Effect (LSE) either alone or in-combination
Strategic Policies				
MT2	Transport within sites	Strategic Policy	This policy states that planning permission will be granted for minerals or waste development where it is demonstrated that the arrangements for the transport of mineral, waste or other materials within the site minimises the potential for adverse impacts, including greenhouse gas emissions, and optimises the opportunities for green infrastructure. This policy would not result in development because it sets out criteria relating to development and seeks to protect the natural environment.	No LSE
SS8	Resource Management	Strategic Policy	This policy sets out how the use of minerals and waste resources will be directed to contribute positively to addressing climate change. This policy would not result in development because it sets out criteria relating to development and seeks to protect the natural environment.	No LSE
OS4	Access to open space and recreation from minerals and waste development	Strategic Policy	The focus of policy OS4 is on providing outdoor facilities from mineral workings and waste sites that benefit both wildlife and local communities. Recreational pressures have the potential to harm sensitive ecological receptors such as birds. However, the policy recognises that "public access may not be appropriate, or may need to be restricted in some areas, for example due to safety hazards or to protect a particular habitat". Crucially, the European sites located within Herefordshire are not sensitive to recreational pressures or are located sufficient distance from minerals and waste sites to ensure that recreational pressures would not be expected.	No LSE
SD5	Reclamation	Strategic Policy	This policy details the requirements for reclamation. It specifies that satisfactory schemes will include "proposals that deliver landscape scale benefits and/or integrated green infrastructure appropriate to its location". This policy may contribute towards providing benefits for European sites (for example providing flooded gravel pits in proximity to the River Wye SAC which may benefit otter). This policy would not result in development because it sets out criteria relating to development and seeks to protect the natural environment.	No LSE

Policy / Site Ref.	Name	Type	Discussion	Conclusion of Likely Significant Effect (LSE) either alone or in-combination
Mineral-related policies				
M1	Mineral Strategy	Minerals Policy	This policy sets out the approach to the "sustainable winning and working of mineral resources in Herefordshire. This is policy would not result in development because it sets out criteria relating to development.	No LSE
M2	Safeguarding of mineral resources from sterilisation	Minerals Policy	This policy sets out the circumstances where non-minerals related development would be permitted in minerals safeguarding areas. This policy would not result in development because it sets out criteria relating to development and seeks to protect the natural environment.	No LSE
M3	The winning and working of sand and gravel	Minerals Policy	This policy specifies that "*sand and gravel extraction shall be permitted at the following locations*", and therefore directs development to location (e.g. Wellington Quarry) where potential likely significant effects on the River Wye SAC have been identified as a result of non-toxic contamination, non-physical disturbance, water quantity and quality and physical loss and damage.	**Yes - Potential for LSE to River Wye SAC due to:** **- physical damage or loss** **- Non-toxic contamination** **- Non-physical disturbance** **- Water quality (run-off / discharge)** **- Water quantity (abstraction)**
M4	The winning and working of crushed rock (limestone)	Minerals Policy	This policy specifies that "crushed rock extraction shall be permitted at the following locations", and therefore directs development to locations. Nevertheless, the locations specified have been considered under the site specific allocation and areas of search (see below) and none of the specified locations is predicted to result in likely significant effects either alone or in-combination. The policy also specifies that 'other areas of search' but this does not specify locations and any such location would be subject to the assessment under the habitat regulations and only permitted where likely significant effects or adverse effects on integrity can be prevented.	No LSE
M5	The winning and working	Minerals Policy	This policy specifies proposals for sandstone extraction at Westonhill Wood Delves	**Yes - Potential for LSE to**

Policy / Site Ref.	Name	Type	Discussion	Conclusion of Likely Significant Effect (LSE) either alone or in-combination
	of building stone (sandstone)		where potential likely significant effects on the River Wye SAC have been identified as a result of water quality.	**River Wye SAC due to:** **- Water quality (run-off)**
M6	Borrow Pits	Minerals Policy	This policy would not result in development because it sets out criteria relating to development.	No LSE
M7	Unconventional hydrocarbons	Minerals Policy	This policy sets out the principles of development in relation to unconventional hydrocarbons (UH). It also broadly specifies the location of potential UH resources in the south of the county, and potentially in proximity to the River Wye SAC. Exploration, appraisal and production phases of this activity may each involve hydraulic fracturing for gas. These activities have the potential to affect ground water resources in particular and could therefore result in likely significant effects when the disturbance of ground water resources may lead to changes in water quality. The policy specifies that "*Surface proposals will only be permitted where they would be outside the following designated areas: Areas of Outstanding Natural Beauty; protected groundwater source areas; World Heritage sites; Special Protection Areas; Special Areas of Conservation; Ramsar sites; and Sites of Special Scientific Interest",* but this fails to recognise that such activities can affect European sites from beyond the site boundary. As a result, uncertainty remains as to whether this policy could result in likely significant effects and additional policy wording and commitment to mitigation and avoidance is likely to be required to ensure the potential for harm to European sites in avoided. Therefore the potential for UH activities to result in likely significant effects as a result of changes in water quality requires consideration at the appropriate assessment stage.	**Yes - Potential for LSE to River Wye SAC due to:** **- Water quality (run-off)**
Waste-related policies				
W1	Waste Strategy	Waste policy	This policy would not result in development because it sets out criteria relating to the waste strategy.	No LSE
W2	Solid waste management requirements	Waste policy	This policy would not result in development because it sets out criteria relating to waste management requirements.	No LSE

Policy / Site Ref.	Name	Type	Discussion	Conclusion of Likely Significant Effect (LSE) either alone or in-combination
W3	Agricultural waste management	Waste policy	This policy would not result in development because it sets out criteria relating to management of agricultural waste and seeks to protect the natural environment. The policy sets out when planning permission would be granted, and specifies the requirement for implementing best practice for water protection and the requirement for EIA as a process of assessing and reducing impacts.	No LSE
W4	Waste water management	Waste policy	This policy sets out set out guiding principles for new waste water development, making clear the preference for existing works to be upgraded and expanded as appropriate. The policies recognises that the River Wye SAC Nutrient Management Plan identifies that sewage treatment works discharges are a main contributor to the baseline source apportionment, and that more stringent discharge levels at the sewage treatment works across Herefordshire are likely to be required to achieve conservation targets. This policy specifies that planning permission will be granted to the statutory water and sewerage undertaker to extend, upgrade, or make provision for new infrastructure necessary. It will not in itself lead to development which would affect European sites and will seek to provide the infrastructure which would reduce existing pressures. This policy will therefore not result in likely significant effects	No LSE
W5	Preferred locations for solid waste treatment facilities	Waste policy	This policy specifies that sustainable waste treatment will be delivered through a combination of small and large scale facilities focussed at the following locations: small scale facilities located at any industrial estate or strategic employment area; large scale facilities located at any strategic employment area; and at Leominster Household Waste Site and Household Waste Recovery Centre; Ledbury Household Waste Recovery Centre; Kington Household Waste Recovery Centre; and the Former City Spares site, Watery Lane, Hereford. Each of these site locations has been assessed individually, and it has been concluded that they will not result in likely significant effects.	No LSE
W6	Preferred locations for construction, demolition and excavation waste facilities	Waste policy	This policy identifies preferred locations for construction, demolition and excavation waste management facilities, including at Wellington Quarry where potential likely significant effects on the River Wye SAC have been identified.	**Yes - Potential for LSE to River Wye SAC due to:** **- physical damage or loss** **- Non-toxic contamination**

Policy / Site Ref.	Name	Type	Discussion	Conclusion of Likely Significant Effect (LSE) either alone or in-combination
				- Non-physical disturbance **- Water quality (run-off / discharge)** **- Water quantity (abstraction)**
W7	Waste management operational expectations	Waste policy	This policy would not result in development because it sets out criteria relating to waste management requirements.	No LSE
Mineral Site Allocations				
M03a	Upper Lyde Quarry	Sand and gravel	Given distance from European sites there is no potential for direct physical damage or loss, non-toxic contamination or non-physical disturbance. A review of aerial imagery indicates that the site does not share habitat, or ecological connectivity with European sites which would lead to indirect (offsite) physical damage or loss. Main roads associated with the site include A4110 and A49. These roads do not intersect with the River Wye SAC at locations where transition mire occurs (the component of SAC specified in the SIP as being sensitive to air quality) and therefore LSE associated with air quality are considered unlikely. Detailed consideration of the air quality effects are provided in Chapter 4. LSEs to other European sites relating to air pollution have been ruled out on account of distance. The site does not share hydrological connectivity with European sites, and therefore there is no source-pathway-receptor model by which a likely significant effect associated with water quality or quantity could occur.	No LSE
M03b	Land adjacent Upper Lyde Quarry (east)	Sand and gravel	As per M03a	No LSE
M03d	Land north east of Upper Lyde Quarry	Sand and gravel	As per M03a	No LSE

Policy / Site Ref.	Name	Type	Discussion	Conclusion of Likely Significant Effect (LSE) either alone or in-combination
M04	Shobdon Quarry	Sand and gravel	Given distance from European sites there is no potential for direct physical damage or loss, non-toxic contamination or non-physical disturbance. A review of aerial imagery indicates that the site does not share habitat, or ecological connectivity with European sites which would lead to indirect (offsite) physical damage or loss. Main roads associated with the site include A4110 and A44. These roads do not intersect with the River Wye SAC at locations where transition mire occurs (the component of SAC specified in the SIP as being sensitive to air quality) and therefore LSE associated with air quality are considered unlikely. Detailed consideration of the air quality effects are provided in Chapter 4. LSEs to other European sites relating to air pollution have been ruled out on account of distance and connectivity. The site does not share hydrological connectivity with European sites, and therefore there is no source-pathway-receptor model by which a likely significant effect associated with water quality or quantity could occur.	No LSE
M05a	Wellington Quarry	Sand and gravel	Given proximity to River Wye SAC there is potential for minerals workings to result in direct physical damage or loss, both directly to the SAC and indirectly as a result of loss of functionally linked offsite habitat for otter. Given proximity to River Wye SAC there is potential for non-toxic contamination associated with dust production, non-physical disturbance including noise and lighting which may disturb otter. The A49 is the main road associated with the site. This road does not intersect with the River Wye SAC at locations where transition mire occurs (the component of SAC specified in the SIP as being sensitive to air quality) and therefore LSE associated with air quality are considered unlikely. Detailed consideration of the air quality effects are provided in Chapter 4. LSEs to other European sites relating to air pollution have been ruled out on account of distance. The site shares direct hydrological connectivity with the River Wye SAC, and therefore contaminated run-off and sediment discharge has the potential to result in LSE via a direct source-pathway-receptor mechanism. Extraction to facilitate site operations may also contribute to low flows in the River Ludd which may affect fish, otter and riparian vegetation as a result of changes in water quantity. This site does not share direct hydrological connectivity with other European sites, or is located a sufficient distance (e.g. over 35km from Severn Estuary) to enable LSEs to be ruled out. Therefore LSEs associated with water quality and quantity is limited to the River Wye SAC only.	**Yes - Potential for LSE to River Wye SAC due to:** **- physical damage or loss** **- Non-toxic contamination** **- Non-physical disturbance** **- Water quality (run-off / discharge)** **- Water quantity (abstraction)**

Policy / Site Ref.	Name	Type	Discussion	Conclusion of Likely Significant Effect (LSE) either alone or in-combination
M05b	Land adjacent Wellington Quarry (west)	Sand and gravel	Given its distance from the River Wye SAC impacts associated with physical loss and damage, non-toxic contamination, non-physical disturbance, and water quantity and quantity have been ruled out. In terms of air pollution, the A49 is the main road associated with the site. This road does not intersect with the River Wye SAC at locations where transition mire occurs (the component of SAC specified in the SIP as being sensitive to air quality) and therefore LSE associated with air quality are considered unlikely. Detailed consideration of the air quality effects are provided in Chapter 4. LSEs to other European sites relating to air pollution have been ruled out on account of distance. This site does not share direct hydrological connectivity with other European sites, or is located a sufficient distance (e.g. over 35km from Severn Estuary) to enable LSEs to be ruled out.	No LSE
M05c	Land adjacent Wellington Quarry (north west)	Sand and gravel	As per M05b	No LSE
M05d	Land adjacent Wellington Quarry (Dinmore Manor Estate)	Sand and gravel	As per M05a	**Yes - As per M05a**
M05e	Land adjacent Wellington Quarry (east of A49)	Sand and gravel	As per M05b	No LSE
M05g	Land east of Wellington Quarry	Sand and gravel	As per M05a	**Yes - As per M05a**

Policy / Site Ref.	Name	Type	Discussion	Conclusion of Likely Significant Effect (LSE) either alone or in-combination
M07a	Leinthall Quarry	Crushed rock	Given distance from European sites there is no potential for direct physical damage or loss, non-toxic contamination or non-physical disturbance. A review of aerial imagery indicates that the site does not share habitat, or ecological connectivity with European sites which would lead to indirect (offsite) physical damage or loss. Main roads associated with the site include the A4110. This road does not intersect with the River Wye SAC at locations where transition mire occurs (the component of SAC specified in the SIP as being sensitive to air quality) and therefore LSE associated with air quality are considered unlikely. Where the A4110 connects with the A4113 at Leintewardine, c.5.5km to the north of the site, the road is located 90m to the east of the River Clun SAC. Nevertheless, the SAC is located upstream from this location and is designated for the presence of freshwater pearl mussel which is not considered particularly susceptible to the effects of air pollution. As a result, the potential for LSEs as a result of air pollution from traffic associated with this site has been ruled out. Detailed consideration of the air quality effects are provided in Chapter 4. LSEs to other European sites relating to air pollution have been ruled out on account of distance and connectivity. The site does not share hydrological connectivity with European sites, and therefore there is no source-pathway-receptor model by which a likely significant effect associated with water quality or quantity could occur.	No LSE
M07b	Land west of Leinthall Quarry	Crushed rock	As per M07a	No LSE
M10a	Perton Quarry	Crushed rock	Given the distance from European sites (3km to east of River Wye SAC) there is no potential for direct physical damage or loss, non-toxic contamination or non-physical disturbance. A review of aerial imagery indicates that the site does not share habitat, or ecological connectivity with European sites which would lead to indirect (offsite) physical damage or loss. Main roads associated with the site are likely to include the A438. This road does not intersect with the River Wye SAC at locations where transition mire occurs (the component of SAC specified in the SIP as being sensitive to air quality) and therefore LSE associated with air quality are considered unlikely. As a result, the potential for LSEs on the River Wye SAC as a result of air pollution from traffic associated with this site has been ruled out. Detailed consideration of the air quality effects are provided in Chapter 4. LSEs to other European sites relating to air pollution have been ruled out on account of distance and a lack of connectivity. The site does not share hydrological connectivity with European sites, and therefore there is no source-pathway-receptor model by which a likely significant effect associated with water quality or quantity could occur.	No LSE

Policy / Site Ref.	Name	Type	Discussion	Conclusion of Likely Significant Effect (LSE) either alone or in-combination
M10b	Land north west of Perton Quarry	Crushed rock	As per M10a	No LSE
M12	Callow Delve	Building stone	Given the distance from European sites (2.6km to the northwest of the Wye Valley and Forest of Dean Bat Sites SAC, and 3km to northwest of River Wye SAC) there is no potential for direct physical damage or loss, non-toxic contamination (e.g. dust) or non-physical disturbance (e.g. noise, light or vibration) to affect European sites. The site is located 2.6km to the northwest of the Wye Valley and Forest of Dean Bat Sites SAC and has direct functional habitat connectivity with the SAC via a network of woodlands which provide optimal habitat for the horseshoe bat species for which this site is designated. These species rely upon continued connectivity of woodlands and other linear habitat corridors for movement, foraging and commuting. They also frequently utilise caves for hibernating. A review of aerial imagery indicates that the periphery of the site supports woodland habitat which is likely to provide suitable habitat for bat foraging and commuting. Furthermore, old buildings occur in relatively close proximity which may support roosting horseshoe bats, which comprise part of and contribute to the SAC population. In addition, the site is an active open quarry, and whilst due to the active nature of the quarrying activities it is unlikely to support features suitable for roosting or hibernating bats, it is possible that minerals workings could create or reveal suitable features in the future. Precautionary safeguards are recommended to ensure that there is sufficient confidence that activities at the site would avoid harm to horseshoe bat species either through damage to potential future roosting sites, or through habitat severance. This is likely to include a commitment to undertake a project level assessment of the potential effect of site operations on horseshoe bat species as new areas are targeted for mineral workings, and to ensure that the proposed mineral workings do not clear areas of peripheral woodland habitats which may be important in maintaining commuting routes for these species. Following recent case law, such mitigation measures cannot be considered at the screening stage and therefore the potential for LSEs to result in adverse effects on the Wye Valley and Forest of Dean Bat Sites SAC as a result of off-site habitat loss, either alone or in-combination, will require consideration at the Appropriate Assessment stage. Main roads associated with the site are likely to include the A466 and the A40. These roads do not intersect with the River Wye SAC at locations where transition mire occurs (the component of SAC specified in the SIP as being sensitive to air quality) and therefore LSE associated with air quality are considered unlikely. As a result, the potential for LSEs on the River Wye SAC as a result of air pollution from traffic associated with this site has been ruled out. Detailed consideration of the air quality effects are provided in Chapter 4. LSEs to other European sites relating to air pollution have been ruled out on account of distance and a lack of connectivity.	**Yes** **Potential for LSE to River Wye SAC due to:** **- Water quality (run-off)** **Potential for LSE to Wye Valley and Forest of Dean Bat Sites SAC due to** **_ as a result of off-site physical loss**

Policy / Site Ref.	Name	Type	Discussion	Conclusion of Likely Significant Effect (LSE) either alone or in-combination
			The western edge of the site is situated immediately adjacent to Mally Brook which discharges into River Wye SAC approximately 3.7km downstream. As a result run-off of chemicals, sediment or contaminated water has the potential to result in likely significant effects on the SAC. This could be avoided with relative ease through a commitment to and implementation of appropriate mitigation safeguards including best practice working methods. However, following recent case law, these cannot be considered at the screening stage and therefore the potential for LSEs to result in adverse effects on the River Wye SAC, either alone or in-combination will require consideration at the Appropriate Assessment stage. The site does not share direct hydrological connectivity with other European sites, and therefore with the exception of the River Wye SAC, there is no source-pathway-receptor model by which a likely significant effect associated with water quality or quantity could occur. The potential for water related effects on the Severn Estuary have been ruled out due to its considerable distance downstream (c30km) at which point any sources of impact would have dissipated.	
M13	Black Hill Delve	Building stone	Given distance from European sites there is no potential for direct physical damage or loss, non-toxic contamination or non-physical disturbance. A review of aerial imagery indicates that the site does not share habitat, or ecological connectivity with European sites which would lead to indirect (offsite) physical damage or loss. Main roads associated with the site are likely to include the A438 and the A465. These roads do not intersect with the River Wye SAC at locations where transition mire occurs (the component of SAC specified in the SIP as being sensitive to air quality) and therefore LSE associated with air quality are considered unlikely. As a result, the potential for LSEs on the River Wye SAC as a result of air pollution from traffic associated with this site has been ruled out. Detailed consideration of the air quality effects are provided in Chapter 4. LSEs to other European sites relating to air pollution have been ruled out on account of distance and a lack of connectivity. The site does not share hydrological connectivity with European sites, and therefore there is no source-pathway-receptor model by which a likely significant effect associated with water quality or quantity could occur.	No LSE
M16	Llandraw Delve	Building stone	As M13	No LSE
M17	Pennsylvani Delves	Building stone	As M13	No LSE
M18	Sunnybank Delve	Building stone	As M13	No LSE

Policy / Site Ref.	Name	Type	Discussion	Conclusion of Likely Significant Effect (LSE) either alone or in-combination
M20	Westonhill Wood Delve	Building stone	The site is located 300m to the south of the River Wye SAC, and therefore there is potential for impacts associated with non-toxic contamination (dust) and non-physical disturbance (noise, light and vibration) to affect the SAC. Nevertheless, the site is separated from the SAC by the B4352 and is enclosed along its northern boundary by a belt of linear broadleaved woodland. As a result, there is negligible potential for factors associated with non-toxic contamination or non-physical disturbance to result in likely significant effects on the River Wye SAC, and these impacts have been ruled out. Main roads associated with the site are likely to include the A438. This road does not intersect with the River Wye SAC at locations where transition mire occurs (the component of SAC specified in the SIP as being sensitive to air quality) and therefore LSE associated with air quality are considered unlikely. As a result, the potential for LSEs on the River Wye SAC as a result of air pollution from traffic associated with this site has been ruled out. Detailed consideration of the air quality effects are provided in Chapter 4. LSEs to other European sites relating to air pollution have been ruled out on account of distance and a lack of connectivity. The site is located 300m upslope from the River Wye SAC and the western edge of the site is situated immediately adjacent to a brook at Merbach which flows directly into the River Wye SAC. As a result run-off of chemicals, sediment or contaminated water has the potential to result in likely significant effects on the SAC. This could be avoided with relative ease through a commitment to and implementation of appropriate mitigation safeguards. However, following recent case law, these cannot be considered at the screening stage and therefore the potential for LSEs to result in adverse effects on the River Wye SAC, either alone or in-combination will require consideration at the Appropriate Assessment stage. The site does not share direct hydrological connectivity with other European sites, and therefore with the exception of the River Wye SAC, there is no source-pathway-receptor model by which a likely significant effect associated with water quality or quantity could occur.	**Yes - Potential for LSE to River Wye SAC due to:** **- Water quality (run-off)**

Policy / Site Ref.	Name	Type	Discussion	Conclusion of Likely Significant Effect (LSE) either alone or in-combination
Area of Search	Area A	Crushed rock	Given the distance of this area from European sites there is no potential for direct physical damage or loss, non-toxic contamination or non-physical disturbance. This area does not share ecological connectivity with European sites which would lead to indirect physical damage or loss occurring (for example through loss of offsite functionally linked land). Main roads associated with this area include A4110 and A44. These roads do not intersect with the River Wye SAC at locations where transition mire occurs (the component of SAC specified in the SIP as being sensitive to air quality) and therefore LSE associated with air quality are considered unlikely. Detailed consideration of the air quality effects are provided in Chapter 4. LSEs to other European sites relating to air pollution have been ruled out on account of distance and a lack of connectivity with this area. The area does not share hydrological connectivity with European sites, and therefore there is no source-pathway-receptor model by which a likely significant effect associated with water quality or quantity could occur.	No LSE
Area of Search	Area D	Crushed rock	As per Area A	No LSE
Area of Search	Area B	Sand and gravel	As per Area A	No LSE

Policy / Site Ref.	Name	Type	Discussion	Conclusion of Likely Significant Effect (LSE) either alone or in-combination
Area of Search	Area C	Sand and gravel	This area includes much of the River Ludd flood plain, which is a component of the River Wye SAC north of Hereford. There is potential for minerals workings in this area, when in close proximity the River Wye SAC to result in direct physical damage or loss, both directly to the SAC and/or indirectly as a result of loss of functionally linked offsite habitat for otter (e.g. gravel pits and scrub). There is also potential for mineral operations in this area to result in LSEs to the River Wye SAC as a result of non-toxic contamination associated with dust production, and non-physical disturbance including noise and lighting which may disturb otter. The A49 and A4103 are the main roads serving this area. These roads do not intersect with the River Wye SAC at locations where transition mire occurs (the component of SAC specified in the SIP as being sensitive to air quality) and therefore LSE associated with air quality are considered unlikely. Detailed consideration of the air quality effects are provided in Chapter 4. LSEs to other European sites relating to air pollution have been ruled out on account of distance. Depending on the location and nature of potential minerals workings in this area, site locations may share direct hydrological connectivity with the River Wye SAC, and therefore contaminated run-off and sediment discharge has the potential to result in LSE via source-pathway-receptor mechanisms. Extraction to facilitate site operations may also contribute to low flows in the River Ludd which may affect fish, otter and riparian vegetation as a result of changes in water quantity. This area does not share direct hydrological connectivity with other European sites, or is located a sufficient distance (e.g. over 35km upstream from the Severn Estuary SAC/SPA/Ramsar) to enable LSEs to be ruled out. Therefore LSEs associated with water quality and quantity is limited to the River Wye SAC only.	**Yes - Potential for LSE to River Wye SAC due to:** **- physical damage or loss** **- Non-toxic contamination** **- Non-physical disturbance** **- Water quality (run-off / discharge)** **- Water quantity (abstraction)**
Waste Site Allocations				
W05	Leominster HWS and HWRC	Municipal non-hazardous WTS and HWRC	Given distance from European sites there is no potential for direct physical damage or loss, non-toxic contamination or non-physical disturbance. A review of aerial imagery indicates that the site do not share habitat, or ecological connectivity with European sites which would lead to indirect (offsite) physical damage or loss. Main roads associated with the site include A44 and A49. These roads do not intersect with the River Wye SAC at locations where transition mire occurs (the component of SAC specified in the SIP as being sensitive to air quality) and therefore LSE associated with air quality are considered unlikely. Detailed consideration of the air quality effects are provided in Chapter 4. LSEs to other European sites have been ruled out on account of distance.	No LSE

Policy / Site Ref.	Name	Type	Discussion	Conclusion of Likely Significant Effect (LSE) either alone or in-combination
			The site does not share hydrological connectivity with European sites, and therefore there is no source-pathway-receptor model by which a likely significant effect could occur.	
W07	Ledbury HWRC	HWRC	Given distance from European sites there is no potential for direct physical damage or loss, non-toxic contamination or non-physical disturbance. A review of aerial imagery indicates that the site do not share habitat, or ecological connectivity with European sites which would lead to indirect (offsite) physical damage or loss. Main roads associated with the site include A438, A499, and A417. These roads do not intersect with the River Wye SAC at locations where transition mire occurs (the component of SAC specified in the SIP as being sensitive to air quality) and therefore LSE associated with air quality are considered unlikely. Detailed consideration of the air quality effects are provided in Chapter 4. LSEs to other European sites have been ruled out on account of distance. The site does not share hydrological connectivity with European sites, and therefore there is no source-pathway-receptor model by which a likely significant effect could occur.	No LSE
W10	Kington HWRC	HWRC	Given distance from European sites there is no potential for direct physical damage or loss, non-toxic contamination or non-physical disturbance. A review of aerial imagery indicates that the site do not share habitat, or ecological connectivity with European sites which would lead to indirect (offsite) physical damage or loss. Main roads associated with the site include A44, A480 and A4111. These roads do not intersect with the River Wye SAC at locations where transition mire occurs (the component of SAC specified in the SIP as being sensitive to air quality) and therefore LSE associated with air quality are considered unlikely. Detailed consideration of the air quality effects are provided in Chapter 4. LSEs to other European sites have been ruled out on account of distance. The site does not share hydrological connectivity with European sites, and therefore there is no source-pathway-receptor model by which a likely significant effect could occur.	No LSE

Policy / Site Ref.	Name	Type	Discussion	Conclusion of Likely Significant Effect (LSE) either alone or in-combination
W13	Former Lugg Bridge Quarry	Physical Treatment	The site is a former active quarry located 180m to the east of the River Wye SAC, to the northeast of Hereford. The site is separated from the River Wye SAC by pastoral field and linear belt of woodland and dense scrub. On account of the distance and intervening habitat, there is negligible potential for direct physical damage or loss, non-toxic contamination or non-physical disturbance. A review of aerial imagery indicates that the site do not share habitat, or ecological connectivity with European sites which would lead to indirect (offsite) physical damage or loss. Main roads associated with the site include A465 and the A4103. These roads do not intersect with the River Wye SAC at locations where transition mire occurs (the component of SAC specified in the SIP as being sensitive to air quality) and therefore LSE associated with air quality are considered unlikely. Detailed consideration of the air quality effects are provided in Chapter 4. LSEs to other European sites have been ruled out on account of distance and a lack of functional connectivity. The site does not share hydrological connectivity with European sites, and therefore there is no source-pathway-receptor model by which a likely significant effect could occur.	No LSE
W19	City Spares MRS	Car Breaker	The site is located 850m to the south of the River Wye SAC, at the southern edge of Hereford. The site is separated from the River Wye SAC by an extensive area of urban land use. On account of the distance and intervening habitat, there is negligible potential for direct physical damage or loss, non-toxic contamination or non-physical disturbance. A review of aerial imagery indicates that the site do not share habitat, or ecological connectivity with European sites which would lead to indirect (offsite) physical damage or loss. The main road associated with the site is the A49. This road does not intersect with the River Wye SAC at locations where transition mire occurs (the component of SAC specified in the SIP as being sensitive to air quality) and therefore LSE associated with air quality are considered unlikely. Detailed consideration of the air quality effects are provided in Chapter 4. LSEs to other European sites have been ruled out on account of distance and a lack of functional connectivity. The site does not share hydrological connectivity with European sites, and therefore there is no source-pathway-receptor model by which a likely significant effect could occur.	No LSE

Policy / Site Ref.	Name	Type	Discussion	Conclusion of Likely Significant Effect (LSE) either alone or in-combination
W43	Upper Lyde Quarry (M03)	Mineral site - inert waste disposal	Given distance from European sites there is no potential for direct physical damage or loss, non-toxic contamination or non-physical disturbance. A review of aerial imagery indicates that the site do not share habitat, or ecological connectivity with European sites which would lead to indirect (offsite) physical damage or loss. Main roads associated with the site include A4110 and A49. These roads do not intersect with the River Wye SAC at locations where transition mire occurs (the component of SAC specified in the SIP as being sensitive to air quality) and therefore LSE associated with air quality are considered unlikely. Detailed consideration of the air quality effects are provided in Chapter 4. LSEs to other European sites have been ruled out on account of distance. The site does not share hydrological connectivity with European sites, and therefore there is no source-pathway-receptor model by which a likely significant effect could occur.	No LSE
W44	Shobdon Quarry (M04)	Mineral site - inert waste disposal	Given distance from European sites there is no potential for direct physical damage or loss, non-toxic contamination or non-physical disturbance. A review of aerial imagery indicates that the site does not share habitat, or ecological connectivity with European sites which would lead to indirect (offsite) physical damage or loss. Main roads associated with the site include A4110 and A44. These roads do not intersect with the River Wye SAC at locations where transition mire occurs (the component of SAC specified in the SIP as being sensitive to air quality) and therefore LSE associated with air quality are considered unlikely. Detailed consideration of the air quality effects are provided in Chapter 4. LSEs to other European sites relating to air pollution have been ruled out on account of distance and connectivity. The site does not share hydrological connectivity with European sites, and therefore there is no source-pathway-receptor model by which a likely significant effect could occur.	No LSE

Policy / Site Ref.	Name	Type	Discussion	Conclusion of Likely Significant Effect (LSE) either alone or in-combination
W45	Wellington Quarry (M05)	Mineral site - inert waste disposal	Given proximity to River Wye SAC there is potential for minerals workings to result in direct physical damage or loss, both directly to the SAC and indirectly as a result of loss of functionally linked offsite habitat for otter. Given proximity to River Wye SAC there is potential for non-toxic contamination associated with dust from waste disposal, and non-physical disturbance including noise and lighting which may disturb otter. The A49 is the main road associated with the site. This road does not intersect with the River Wye SAC at locations where transition mire occurs (the component of SAC specified in the SIP as being sensitive to air quality) and therefore LSE associated with air quality are considered unlikely. Detailed consideration of the air quality effects are provided in Chapter 4. LSEs to other European sites relating to air pollution have been ruled out on account of distance. The site shares direct hydrological connectivity with the River Wye SAC, and therefore contaminated run-off and sediment discharge has the potential to result in LSE via a direct source-pathway-receptor mechanism. Extraction to facilitate site operations may also contribute to low flows in the River Ludd which may affect fish, otter and riparian vegetation as a result of changes in water quantity. This site does not share direct hydrological connectivity with other European sites, or is located a sufficient distance (e.g. over 35km from Severn Estuary) to enable LSEs to be ruled out. Therefore LSEs associated with water quality and quantity is limited to the River Wye SAC only. Due to their distance from the River Wye SAC and a lack of functional connectivity, site allocations W45b, c, e and f are not predicted to result in likely significant effects, and therefore the potential for LSEs is limited to W45a and d only.	**Yes (sites W45a, and W45d only) - Potential for LSE to River Wye SAC due to:** **- physical damage or loss** **- Non-toxic contamination (dust)** **- Non-physical disturbance (light and noise disturbance)** **- Water quality (run-off / discharge)** **- Water quantity (abstraction)**
W58	Rotherwas Industrial Estate	Strategic Employment Site	This is an existing industrial estate. A new waste site would be expected to be absorbed into a plot that becomes vacant within the industrial estate, and therefore it would not add any further impacts than what's already taking place on sites of this nature.	No LSE
W59	Westfields Trading Estate	Strategic Employment Site	As per W58	No LSE
W60	Three Elms Trading Estate	Strategic Employment Site	As per W58	No LSE
W61	Holmer Road, Hereford	Strategic Employment Site	As per W58	No LSE
W62	Leominster Enterprise Park	Strategic Employment Site	As per W58	No LSE

Policy / Site Ref.	Name	Type	Discussion	Conclusion of Likely Significant Effect (LSE) either alone or in-combination
W63	Southern Avenue, Leominster	Strategic Employment Site	As per W58	No LSE
W64	Land between Little Marcle Road and Ross Road, Ledbury	Strategic Employment Site	As per W58	No LSE
W65	Model Farm, Ross-on-Wye	Strategic Employment Site	As per W58	No LSE
W66	Moreton Business Park, Moretonon- Lugg	Strategic Employment Site	As per W58	No LSE

Appendix 3

Other Relevant Plans and Projects

Other Relevant Plans and Projects

Neighbouring Local Plans

Forest of Dean Core Strategy: Adopted Version (2012)

Forest of Dean District lies to the south east of Herefordshire.

Housing: The Core Strategy sets out housing allocations for the settlements within the Forest of Dean up to 2026 as follows:

- Cinderford and Ruspidge Urban Area – around 1,050 new homes
- Lydney – around 1,900 new homes
- Coleford (includes Milkwall, Coalway, Mile End, Berry Hill) – around 650 new homes
- Newent - around 350 new homes
- Tutshill and Sedbury – around 111 new homes
- Bream – around 100 new homes
- Drybrook – around 100 new homes
- Mitcheldean – around 101 new homes
- Newnham – around 65 new homes
- Whitecroft-Pillowell-Yorkley – around 45 new homes
- Lydbrook-Joys Green – around 82 new homes
- Other villages and rural – around 608 new homes

Priority will be given to development on previously developed land and on sites identified for housing in the development plan. No new greenfield sites will be released unless it can be proven that land is not available from other sources and is needed to meet the plan's requirements.

Employment: The Core Strategy sets out employment land allocations for the settlements within the Forest of Dean as follows:

- Cinderford – around 26ha
- Lydney – around 30ha
- Coleford – around 6.8ha
- Newent – around 5ha
- Villages – intensification, redevelopment and diversification will be supported on sites that are well linked to settlements and services.

HRA Findings: HRA for the adopted Core Strategy was undertaken and is reported in Appendix 10 of the SA Report for the Adopted Core Strategy (February 2012). **The HRA screening concluded that the Core Strategy will not result in any significant negative impacts on identified sites**, although there will be a need for HRA Screening, with the possibility of an Appropriate Assessment requirements, at later stages of the planning processes, when development proposals are more detailed. The HRA considered the potential for in-combination effects to arise from the Forest of Dean Core Strategy along with other plans and strategies, and there were three plans where the potential impacts were uncertain (West of England Joint Waste Strategy, Shoreline Management Plan and a New Nuclear power station at Oldbury). In these cases it was concluded that there was insufficient detail at this stage to assess, with any degree of accuracy, the potential impacts and that, proposals will need to assess their in-combination effects with the Core Strategy at their appropriate decision making stages.

South Worcestershire Development Plan: Adopted Version (2016)

Malvern Hills District lies to the east of Herefordshire. The Development Plan DPD has been prepared jointly with the two other South Worcestershire authorities, Worcester City and Wychavon (neither of which adjoin Herefordshire).

Housing: The Development Plan DPD makes provision for 28,400 dwellings (net) during the plan period, to be

distributed as follows:

- Malvern Hills (excluding the Wider Worcester Area) – 5,650
- Wychavon (excluding the Wider Worcester Area) – 10,600
- Wider Worcester Area – 12,150

Employment: The Core Strategy makes provision for about 280ha of employment land during the plan period, to be distributed as follows:

- Malvern Hills (excluding the Wider Worcester Area) – 40ha
- Wychavon (excluding the Wider Worcester Area) – 120ha
- Wider Worcester Area – 120ha

HRA Findings: The HRA (Appropriate Assessment) Report for the South Worcestershire Development Plan Pre-Submission Consultation (November 2012) sets out the findings of both the screening and Appropriate Assessment stages of the HRA. There has been two additional HRA addendum reports since 2012, Habitats Regulations Assessment Addendum Report (September 2014) and Habitats Regulations Assessment Further Addendum Report (September 2015). The 2012 screening assessment concluded that there was uncertainty with regard to the potential for significant effects on Bredon Hill SAC and Lyppard Grange SAC as a result of increased disturbance, in particular from increased recreational activity. The screening assessment also identified uncertainty with regard to the potential for significant in-combination effects on seven European sites as a result of changes water levels and five European sites as a result of changes to water quality. Based on the precautionary approach these issues were progressed through to the AA stage to be considered in more detail. The AA considered the potential for the SWDP to have adverse effects on the integrity of identified European sites through increased disturbance (recreational activity) and reduced water levels and quality. It concluded that the likelihood of proposed development increasing the number of people using Lyppard Grange Ponds SAC is minimal - especially given the much larger areas of open space available for recreation within approximately 300 meters of the site. It therefore concluded that the SWDP will not have adverse effects on the integrity of the Lyppard Grange Ponds SAC through increased disturbance. Considering the location and size of proposed development in relation to Bredon Hill SAC and that recreational activity is not an issue at the site, the AA also concluded that the SWDP will not have adverse effects on the integrity of the SAC either alone or in combination through increased disturbance.

The AA found that the mitigation provided by Pre-Submission policies and current regulatory processes (EA Review of Consents) would ensure that the potential impacts of proposed development on the water environment would be minimised. **It was concluded that the SWDP will not have adverse in combination effects on the integrity of the identified European sites through reduced water levels or water quality.**

The 2014 screening assessment concluded that the key change to the Plan, the increased housing requirement, which has risen from 23,200 to 28,400 dwellings, is not likely to result in any further significant effects that were not considered through the previous HRA work in 2012. The additional site allocations proposed are not in locations that are likely to result in a significant increase in recreational activity at either Bredon Hill SAC or Lyppard Grange SAC. The finding of no adverse effect on the integrity of these sites as a result of increased disturbance is therefore still considered valid. While the increased housing requirement will increase water abstraction and sewerage discharge (consented) it is considered, given the evidence set out in the Water Cycle Study Updated (2014) and the mitigation provided through SWDP policies, regulatory processes (EA Review of Consents) and available at the project level will ensure that there are no adverse in combination effects on European sites as a result of reduced water levels and quality. Overall, **the screening concluded that the proposed Main Modifications do not significantly affect the findings of the HRA (AA) Report published in November 2012.**

The 2015 screening assessment concluded that the proposed Main Modifications do not significantly affect the findings of the previous HRA work and that the conclusion that the SWDP will not have adverse effects on the integrity of European sites either alone or in combination is still valid. Most of the proposed changes are associated with provision of improved clarity and consistency, correcting minor errors, updated information such as planning permissions submitted/granted, and the outcomes of discussions with statutory consultees including the Environment Agency & Historic England.

Shropshire Core Strategy: Adopted Version (2011)

Shropshire lies to the north of Herefordshire.

Housing: The Core Strategy sets out how housing development within the county will be phased as follows:

- 2006-2011 - 1,190 dwellings per annum
- 2011-2016 - 1,390 dwellings per annum
- 2016-2021 - 1,390 dwellings per annum
- 2021-2026 - 1,530 dwellings per annum

Overall, around 27,500 new homes will be delivered up to 2026, and they will be distributed as follows:

- Central Shropshire - 8,250–8,800 dwellings.
- North West Shropshire - 5,775–6,325 dwellings.
- North East Shropshire - 5,500–6,050 dwellings.
- South Shropshire - 3,575–4,125 dwellings.
- East Shropshire - 3,025–3,575 dwellings together with additional housing provision of up to 1,000 dwellings, if required, for returning military personnel.

Employment: The Core Strategy states that up to 290 hectares of employment land will be provided in Shropshire up to 2026, to be distributed as follows.

- Central Shropshire - 95-105 hectares employment land, of which 85 – 95 hectares will be in Shrewsbury.
- North West Shropshire - 55-65ha.
- North East Shropshire - 50-60ha.
- South Shropshire - 35-45ha.
- East Shropshire - 30-40ha.

HRA Findings: The February 2010 Stage 2 Habitats Regulations Assessment Report for the Shropshire Core Strategy **found that the Core Strategy was not likely to have a significant effect on any of the European sites in the county, provided that adequate HRA work is carried out in relation to the Site Allocations and Management of Development DPD**. A number of the Core Strategy policies propose development which has the potential to affect European sites; however the precise location will be determined through the Site Allocations DPD, therefore it was considered to be more appropriate to carry out the full Appropriate Assessment in relation to this development through the HRA of the Site Allocations DPD.

Now that the Core Strategy has been adopted, the Site Allocations and Management of Development (SAMDev) Plan is being progressed and a Stage 3 Habitats Regulations Assessment Report (January 2013) has now been produced in relation to the Draft Consultation Document. That HRA Report has concluded that while six of the SAMDev Draft Development Management Policies could be screened out of the HRA process and do not require further consideration in lower tier plans, 10 of the SAMDev Draft Development Management Policies have been identified as Code C (meaning that they are elements of the plan/options that could or would be likely to have a significant effect alone and will require the plan to be subject to an Appropriate Assessment before the plan may be adopted). However, all 10 policies meet the three criteria for the HRA decision to be passed down to lower tier document. **The HRA of the Site Allocation and Management of Development Local Plan Document known as SAMDev Draft Development Management Policies therefore showed no likely significant effects on any European Sites** provided that HRA decisions for 10 of the draft policies are passed down to the next tier of the plan-making process or in some cases to planning application stage.

Monmouthshire County Council Adopted Local Development Plan 2011-2021 (February 2014)

Monmouthshire lies to the south west of Herefordshire.

Housing: The LDP sets out the spatial approach that is being taken to housing provision in Monmouthshire, with the main focus for new housing development being within or adjoining the Main Towns of Abergavenny, Chepstow and Monmouth. A smaller amount of new housing development is provided in the Severnside sub-region, particularly at Magor/Undy and Caldicot/Portskewett. A small amount of new housing development is also directed to the Rural Secondary Settlements of Usk, Raglan and Penperlleni. Provision will be made to meet a need for around 4,500 residential units in the plan period 2011-2021, to be distributed as follows:

- Abergavenny – 566 new homes
- Chepstow – 675 new homes
- Monmouth – 825 new homes
- Caldicot – 210 new homes
- Portskewett – 325 new homes
- Magor/Undy – 631 new homes
- Caerwent – 152 new homes
- Rogiet – 53 new homes
- Sudbrook – 244 new homes
- Usk – 53 new homes
- Raglan – 75 new homes
- Penperlleni – 122 new homes
- Llanfoist – 245 new homes

Seven strategic housing sites are identified at Abergavenny (Deri Road, Mardy), Caldicot/Portskewett (Crick Road, Portskewett), Chepstow (Land at Fairfield Mabey, Chepstow), Monmouth (Land at Wonastow Road, Monmouth), Magor/Undy (Rockfield Farm, Undy and Land at Vinegar Hill, Undy) and Sudbrook (Former Paper Mill, Sudbrook).

Employment: The Draft Deposit LDP makes provision for employment land including:

- 37ha at Magor suitable for employment development of regional or sub regional significance.
- Around 5-6ha at each of the Main Towns of Abergavenny (Llanfoist), Chepstow and Monmouth.

HRA Findings: The October 2012 HRA Report for the LDP describes the screening and Appropriate Assessment work that was undertaken. The screening assessment concluded that the Deposit LDP (including site allocations) would not have likely significant effects alone on European sites, if the recommended policy safeguards are incorporated into the Plan. These changes were incorporated into the LDP, and the SA and HRA Changes Log recognised this and reached a final conclusion of no likely significant effects on European sites.

The screening work identified four main areas of impact arising that may have the potential for significant in combination effects on the integrity of the identified European sites: water resources, water quality, disturbance (including habitat loss and fragmentation) and air quality. These issues were taken forward into the AA and considered in further detail. The AA assessed that there is uncertainty with regard to the potential adverse impacts of the LDP acting in combination with surrounding plans and projects. To address this uncertainty the AA proposed a number of mitigation measures, including recommendations to strengthen the mitigation provided by certain LDP policies. **The AA concluded that the LDP will not have adverse effects on the integrity of European sites as the recommended mitigation measures have been incorporated into the Plan**.

The AA conclusions were revisited in the **February 2014 HRA Addendum**, which took into account the changes made in the final version of the LDP. It did not change the conclusions of the 2012 HRA Report and **concluded that the LDP will still not have adverse effects on the integrity of European sites**.

The Monmouthshire Local Development Plan (LDP) 2011-2021 was adopted on 27 February 2014 and became operative on this date.

Powys Local Development Plan 2011-2026: Adopted Version (April 2018)

Powys lies to the west of Herefordshire.

Housing: The Local Development Plan sets out a projected increase in housing which would see the development of 4,600 new homes over the Plan period seeing an average increase of 300 dwellings per annum. In planning to deliver this dwelling requirement, the LDP also includes a flexibility allowance for sites that may not be developed in the plan period. An additional contingency has therefore been added. Consequently the plan makes provision for 5,588 dwellings in order to meet the dwelling requirement of 4,500 dwellings (300 p.a.).

Employment: To meet employment needs over the Plan period 2011-2026, and to maximise the opportunities presented by Local Growth Zones and other regeneration initiatives, the LDP identifies 45 ha for employment purposes,

which equates to 3.3 ha per annum.

The Assessment Study also highlighted a high level of business start-ups, self- employment and micro and small businesses which emphasises that Powys' employment growth and needs cannot be accommodated solely on allocated employment sites as such provision caters primarily for larger scale employment development. Therefore, alongside the allocation of employment land, policies are included in the LDP to facilitate small scale employment development to support new and existing businesses.

HRA Findings: The Draft HRA Report for the Pre-Deposit Proposals (March 2012) took a precautionary approach and highlighted the potential for Powys' LDP to adversely affect the integrity of 28 European Sites, either alone or in-combination with other plans or projects. However, due to the early stage of the Plan, these effects were uncertain in all cases. The screening process also highlighted the potential for in-combination effects with other plans, including from Herefordshire's Core Strategy in relation to pollution from adjacent road drains/houses/chemicals, development (engineering/contamination) and recreation and leisure. In order to ensure that Powys' LDP does not have a significant negative effect, detailed policies need to be developed to mitigate the 'in-combination' effect of development on the identified sites. The deposit proposals will be assessed and if necessary AA will be undertaken to inform the deposit plan, which is currently due to be consulted on in June 2014.

The 2018 HRA: Screening of the Inspector's Matters Arising Changes report concluded that further HRA screening was not necessary. The changes proposed were not considered to be significant and served to clarify or enhance the policy guidance set out by the Plan. HRA Screening of the new Policy RE1 as proposed by IMAC 5, has **determined that the new policy would not result in a Likely Significant Effect to any European Sites (SAC, SPA, Ramsar Sites) or their associated features, either alone or in combination with other Plans or projects.**

The 2018 LDP Plan has not changed since the final screening.

Brecon Beacons Local Development Plan: Adopted version (December 2013)

The Brecon Beacons National Park lies to the west of Herefordshire.

Housing: The LDP has identified a supply of land to provide an estimated 2,045 dwellings over the LDP period. Land is allocated for 960 dwellings with 96 to be provided at Brecon, 102 at the key settlements (Crickhowell, Hay-on-Wye and Talgarth), 234 at the Level 3 settlements (Bwlch, Gilwern, Libanus, Llanbedr, Llanigon, Llanspyddid and Pennorth). A further 70 will be provided at a site near Glangrwyney.

Employment: The identified requirement for employment land within the Brecon Beacons National Park over the LDP period is 1.5ha. This requirement is to be met through the development of employment and mixed use allocations for B Class purposes. A number of employment site allocations are made at Brecon and Talgarth as well as two existing brownfield sites.

HRA Findings: The Sustainability Appraisal Report for the LDP (November 2013) includes a section describing the work that has been undertaken on the Habitats Regulations Assessment throughout the preparation of the LDP and states that the screening exercise concluded that there would be no likely significant effects on European sites. **Therefore, in-combination effects with the Herefordshire Core Strategy are not considered likely.**

In accordance with the requirement of Section 69 of the 2004 Planning and Compulsory Purchase Act, on 17 December 2017, the Authority commenced the Review of its LDP. The 2007-2022 Plan was adopted by the Brecon Beacons National Park Authority on 17 December 2013. The Delivery Agreement (June 2018) is incorporating its project plan and its policy for involving the community in revision of the LDP.