SOLIHULL METROPOLITAN BOROUGH
LOCAL PLAN REVIEW

HABITAT REGULATIONS ASSESSMENT
STAGE 1: SCREENING

A Report to: Solihull Metropolitan Borough Council

Report No: RT-MME-126281

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MIDDLEMARCH ENVIRONMENTAL

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REPORT VERIFICATION AND DECLARATION OF COMPLIANCE

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The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

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NON-TECHNICAL SUMMARY

In November 2017, Solihull Metropolitan Borough Council instructed Middlemarch Environmental Ltd to undertake a Habitat Regulations Assessment Screening exercise as part of the evidence base for the ongoing Solihull Local Plan Review. The purpose of the screening exercise is to consider whether the emerging proposals and policies detailed in the Local Plan Review could adversely affect a European Statutory Site, either individually or in combination with other plans and projects, and subsequently if an Appropriate Assessment is required, under Article 6 of the European Council Directive 92/43/EEC.

Solihull Metropolitan Borough Council commenced work on the Solihull Local Plan Review to establish an up-to-date planning framework for the future growth of the Borough to 2033. Consultations on the Scope, Issues and Options document and the Draft Local Plan Review were carried out and completed in 2016 and 2017 respectively and the preparation of the submission draft of the Local Plan Review is ongoing and scheduled to be completed in 2018. The Solihull Local Plan Review updates the existing Solihull Local Plan which was adopted by Solihull Metropolitan Borough Council in December 2013. It includes ten chapters outlining a vision, spatial strategy and 23 policies designed to achieve sustainable growth within the Borough and address the evolving planning challenges facing the borough, such as achieving its housing requirements, meeting the needs of neighbouring authorities and taking advantage of the opportunities provided by High Speed Rail.

In accordance with Articles 6(3) and 6(4) of the European Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna, Solihull Metropolitan Borough Council has a mandatory obligation to assess whether the implementation of the local plan is likely to have a significant effect on any Natura 2000 site, either alone or in combination with other plans. Habitat Regulations Assessment Screening exercises have previously been carried out for the Solihull Local Plan in 2008 and 2012 by Warwickshire Wildlife Trust and Middlemarch Environmental Ltd. During these screening exercises, no significant adverse effects were identified on any European Sites either alone or in combination with other plans or projects. However, this screening report has been prepared independently of those previous assessments, as the Solihull Local Plan Review includes additional policies and proposals from the Solihull Local Plan, and because the last assessment was carried out six years prior to this report. This report therefore provides up-to-date and comprehensive assessment into whether the policies and proposals of the Local Plan Review will have a likely significant effect on a European Site.

The screening exercise identified ten European Sites with potential linkages to the Solihull Metropolitan Borough area. These are as follows:

- Ensor's Pool SAC;
- Cannock Extension Canal SAC;
- Cannock Chase SAC;
- River Wye SAC;
- Elan Valley Woodlands SAC;
- Elenydd-Mallaen SPA;
- Elenydd SAC;
- Humber Estuary SAC;
- Humber Estuary SPA; and,
- Humber Estuary Ramsar.

Polices and proposals of the Solihull Local Plan were screened to determine if they could result in environmental impacts that could lead to a likely significant effect on a European Site within linkages to the Metropolitan Borough Area. Any impacts identified were assessed in accordance with the vulnerabilities of each European Site included in the assessment to determine potential connective impact pathways.

Based on a review of the available evidence base it was concluded that none of the policies and proposals of the Solihull Local Plan Review will result in a significant effect on the Natura 2000 network, either alone or in combination with other plans and projects. Solihull Metropolitan Borough Council, as the Competent Authority, are therefore advised that it will not be necessary for the Solihull Local Plan Review to be taken forward to a Stage 2 Appropriate Assessment. The following recommendations are made:

R1 In accordance with best practice guidance, the findings of this Habitat Regulations Assessment – Screening exercise should be provided to Natural England, as the statutory nature conservation body, to allow further comment and consideration as required; and

R2 All future revisions of the Solihull Local Plan Review should be subject to additional screening to determine if there are any material changes to the policies and proposals of the plan that could give rise to a likely significant effect on a European Site whether alone or in-combination with other plans and projects.

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1. INTRODUCTION

1.1 CONTEXT

In November 2017, Solihull Metropolitan Borough Council (hereafter Solihull MBC) instructed Middlemarch Environmental Ltd to undertake a Habitat Regulations Assessment Screening exercise as part of the evidence base for the ongoing Solihull Local Plan Review. The purpose of the screening exercise is to consider whether the emerging proposals and policies detailed in the Local Plan Review could adversely affect a European Statutory Site, either individually or in combination with other plans and projects, and subsequently if an Appropriate Assessment is required, under Article 6 of the European Council Directive 92/43/EEC.

Middlemarch Environmental has previously carried out a Habitat Regulations Assessment Screening exercise to inform the Solihull Local Plan Submission Document 2011-2028 in 2012, the findings of which are detailed in Report RT-MME-111062. The report complemented and updated an earlier revision of the Habitat Regulations Assessment Screening Exercise compiled by Warwickshire Wildlife Trust in 2008 which accompanied the Solihull Core Strategy 'Issues and Options' Document.

1.2 HABITAT REGULATIONS ASSESSMENT PROCESS

The requirement of land-use plans to carry out a Habitat Regulations Assessment is set out in the Section 6 of the Conservation of Habitats and Species Regulations 2017, which transposes Article 6 of European Council Directive 92/43/EEC *on the conservation of natural habitats and of wild flora and fauna* (Hereafter referred to as 'the Habitats Directive').

Article 6(3) of the Habitats Directive, states that an Appropriate Assessment is required for any plans and projects that are considered likely to have a significant effect on a Natura 2000 site, either individually or in combination with other plans or projects. The competent authority can only agree to the strategic land use plan after having ascertained that it will not adversely affect the integrity of any Natura 2000 sites. Article 6(4) of the Habitats Directive states that where adverse impacts are anticipated, a plan or project may still be agreed provided that there are no alternative solutions and the plan is considered to be of overriding public interest. In such instances appropriate compensatory measures are required to ensure that the overall coherence of the Natura 2000 site network is protected.

The Natura 2000 network is the collective term for European sites that have been designated for the protection of rare, endangered or vulnerable habitats and species listed in Annex 1 or 2 of the Habitats Directive. In accordance with Regulation 8 of the Habitat Regulations, European Sites are defined as designated and candidate Special Areas of Conservation (SAC and cSAC) designated under the Habitats Directive and Special Protection Area (SPA) classified under Article 4(1) or (2) of the European Council Directive 79/409/EEC or 2009/147/EC (hereafter referred to as 'the Birds Directive'). In addition, government guidance set out in the National Planning Policy Framework recommends that additional sites should also afford the same protection as statutory European sites. These include Ramsar sites (as listed in accordance the Convention on Wetlands of International Importance) as well as potential Ramsar (pRamsar), SPA (pSPA) and SAC (pSAC) which are included as Natura 2000 sites for the purpose of this report.

The Habitat Regulations Assessment for land-use plans is divisible into a four-stage process in order to ensure that the land-use plan is compliant with Article 6 (3) and (4) of the Habitats Directive. These stages, and the process behind them, are described below:

Stage 1: Screening
This stage is associated with collecting evidence regarding those parts of the Natura 2000 network that have the potential to be impacted by the plan or project, either alone or in combination with other projects or plans. Where no significant effects are perceived, sites may be screened out of the need for further assessment during Stage 2.

Stage 2: Appropriate Assessment and the Integrity Test
If preliminary scientific evaluation shows that there are reasonable grounds to suggest that a Natura 2000 site may experience significant effects from a project or strategic land-use plan, either alone or in combination, a detailed assessment of likelihood and severity of the perceived impact on the integrity of the Natura 2000 network is undertaken. This assessment is based on a detailed review of the project or plan in conjunction with the structure, function and conservation objectives of each Natura 2000 site. This stage may also include a preliminary assessment regarding the potential for the identified impacts to be mitigated.

Stage 3: Alternative Solutions
Where impacts on the integrity of the Natura 2000 network are perceived, this stage examines alternative ways of achieving the objectives of the project or strategic land-use plan in order to avoid these impacts. Where the potential for adverse impacts remains, and where it is deemed that a project or land-use plan should proceed for Imperative Reasons of Overriding Public Interest (IROPI), an investigation of appropriate mitigation and compensatory measures is undertaken.

Stage 4: Imperative Reasons of Overriding Public Interest and Compensatory Measures
Plans and projects may proceed even where a negative effect on a Natura 2000 site has been identified providing that there are imperative reasons of overriding public interest associated with the plan or project and that suitable compensatory measures can be secured.

This report focuses on Stage 1 – Screening which aims to inform Solihull Metropolitan Borough Council, as the competent authority, whether the Solihull Local Plan Review is likely to have an adverse effect on a European Statutory Site and therefore if an Appropriate Assessment is required.

1.4 PREVIOUS HABITAT REGULATIONS ASSESSMENT IN SOLIHULL

This assessment draws upon the findings of previous Habitat Regulations Assessment Screening exercises carried out for earlier iterations of the Solihull Local Plan, the findings of which are summarised below. However, as the Solihull Local Plan Review includes additional policies and proposals from the Solihull Local Plan, and as the last assessment was carried out six years prior to this report, this screening exercise is carried out independently of the previous screening assessments, rather than as a re-screening of the Solihull Local Plan. This involves scanning for all European Sites that may be vulnerable to likely significant effects and reviewing all policies and proposals of the Solihull Local Plan Review that might give rise to these effects.

2008
A Habitat Regulations Assessment Screening Assessment of the Solihull Core Strategy 'Issues and Options' document was carried out by Warwickshire Wildlife Trust in 2008. The screening assessment identified twelve sites which were subject to preliminary examination to determine likely significant effects that might result from the policies and proposals in the Core Strategy. These sites were:

- Ensors Pool SAC;
- Cannock Extension Canal SAC;
- River Mease SAC'
- Fens Pool SAC;
- Lyppard Grange Ponds SAC;
- Cannock Chase SAC;
- Bredon Hill SAC;
- Pasturefields Salt Marsh SAC;
- Mottey Meadows SAC;
- West Midlands Mosses SAC;
- Midlands Meres and Mosses Phase 1 Ramsar; and,
- Peak District Dales SAC.

This screening process concluded that:

- It is **unlikely** that core strategy policies will directly impact upon any sites.
- Possible impacts may arise as a result of growth and development policies that give rise to **recreational pressure**. Vehicular and aircraft emissions are likely to increase and thus affect local and regional **air quality**, potentially contributing to nitrogen and acid deposition issues at sites located downwind of the borough.
- Further screening is strongly recommended in line with the **precautionary principle** for those sites where impacts are unclear or uncertain.

2012
A further screening exercise of the Solihull Draft Local Plan was carried out by Middlemarch Environmental Ltd in 2012. The screening exercise expanded on the initial screening carried out by Warwickshire Wildlife

Trust in 2008 and focused on four sites where further screening was recommended due to the lack of detail in the policies during the 2008 screening assessment. These were:

- Cannock Extension Canal SAC;
- Cannock Chase SAC;
- Bredon Hill SAC; and,
- Peak District Dales SAC.

The further screening exercise concluded the following:

- **Core Strategy policies will not directly impact upon any of the Natura 2000 sites** put forward for further screening. All sites are located well outside of the borough boundary.
- **No significant effects** are considered likely on any of the Natura 2000 sites put forward for further screening, either alone or in combination with other plans.
- **No further screening is recommended**. It is not considered necessary for the current iteration of the Core Strategy to proceed through any further stages of the Appropriate Assessment process.

In accordance with the precautionary principle, recommendations were made for further consideration of the effects of any individual large-scale developments that may be proposed within the borough during the plan period. Specifically, this relates to any further expansion of Birmingham Airport, and to individual residential developments resulting in a net increase of >100 dwellings.

1.5 REPORT STRUCTURE

This report details the findings of the Phase 1 Screening Assessment for the Solihull Local Plan Review. The findings of the screening assessment are devised into seven chapters. These are as follows:

- Chapter 2 – Methodology;
- Chapter 3 – Scanning and Site Selection
- Chapter 4 – Natura 2000 Sites: Conservation Objectives and Vulnerabilities;
- Chapter 5 – Solihull Local Plan Review: Context and Policies;
- Chapter 6 – Preliminary Assessment;
- Chapter 7 – Discussion and Conclusions; and,
- Chapter 8 – Drawings.

2. METHODOLOGY

This Habitat Regulations Assessment Screening exercise has been undertaken in accordance with guidance detailed in the Habitat Regulations Assessment Handbook complied by DTA Publications.

The purpose of this screening exercise is to report the findings of a preliminary examination of whether the policies and proposals of the Solihull Local Plan Review, will have a likely significant adverse effect on a European Site, either alone or in combination with other plans or projects and whether an Appropriate Assessment, carried out in accordance with Article 6(3) of the Habitats Directive, will be required.

'Likely Significant Effects'
For the purpose of this assessment a likely significant effect is defined in accordance with the Habitat Regulations Assessment Handbook which states:

"A significant effect is any effect that would undermine the conservation objectives for a European Site. There must be a causal connection or link between the subject plan or project and the qualifying features of the site which could result in possible significant effects on the site. These effects may be direct or indirect and the decision as to the existence and scope of possible effects must be judged on a case by case basis."

"As a result of case law, in Waddenzee, irrespective of the normal English meaning of 'likely', in this statutory context 'a likely significant effect' is a 'possible significant effect'; one whose occurrence cannot be excluded on the basis of objective information."

"…if significant effects cannot be excluded on the basis of objective information without extensive investigation, a plan or project should be considered to have a likely significant effect and taken through to an appropriate assessment."

The Habitat Directive and Habitats Regulations are concerned only with effects which are deemed to be adverse. Effects which are beneficial are not considered within the report. Effects that are not significant in accordance with the definition of a 'likely significant effect' can be described as 'insignificant' or a '*de minimus'* or 'trivial' effect. These are effects are those which would not undermine the conservation objectives of a European site.

In accordance with the Habitat Regulations Handbook, 'Objective Information' in this report means information based on clear verifiable fact rather than subjective opinion.

The Solihull Local Plan Review is initially examined for likely significant effects 'alone'. The examination will conclude one of three possible outcomes:

a) The plan alone will have no adverse effect on a European Site at all;
b) The plan will have no likely significant effect on a European site alone, but an insignificant effect is possible; or
c) It cannot be ruled out based on objective information that the plan will not have a likely significant effect on a European Site alone.

The effect of the above outcomes will result in one of the following:

a) The plan will be 'screened out' and no further assessment is required because if the plan does not have any adverse effect at all on a European Site, it cannot reasonably contribute to an adverse effect in combination with other plans and projects;
b) Since the plan will not have any likely significant effect alone but may result in insignificant effects, it is necessary to consider the possibility of these insignificant effects contributing towards a likely significant effect in combination with other plans and projects. If no likely significant effects are identified based on objective information, either alone or in combination, the plan can be 'screened out'. If a likely significant effect cannot be ruled out at this stage, an Appropriate Assessment of in-combination effects will be required; or,
c) If a likely significant effect alone is identified, an Appropriate Assessment is triggered and an in-combination assessment is not required (although in combination effects may be required as part of the Appropriate Assessment).

'The Precautionary Principle'
Implicit in the Habitats Directive is the application of the **precautionary principle**, which requires that the conservation objectives of Natura 2000 should prevail where there is uncertainty whether there will be an impact or not (Oxford Brookes, 2001). The European Commission's Final Communication from the Commission on the Precautionary Principle (European Commission, 2000a) states that the use of the precautionary principle presupposes:

- Identification of potentially negative effects resulting from a phenomenon, product or procedure;
- A scientific evaluation of the risks which because of the insufficiency of the data, their inconclusive or imprecise nature, makes it impossible to determine with sufficient certainty the risk in question (CEC, 2000).

According to best practice guidance, this means that the emphasis for assessment should be on objectively demonstrating, with supporting evidence, that there will be no significant effects on a Natura 2000 site.

Screening Approach
The screening exercise has been carried out in accordance with the approach detailed in Figure 2.1 (adapted from the Habitat Regulations Handbook).

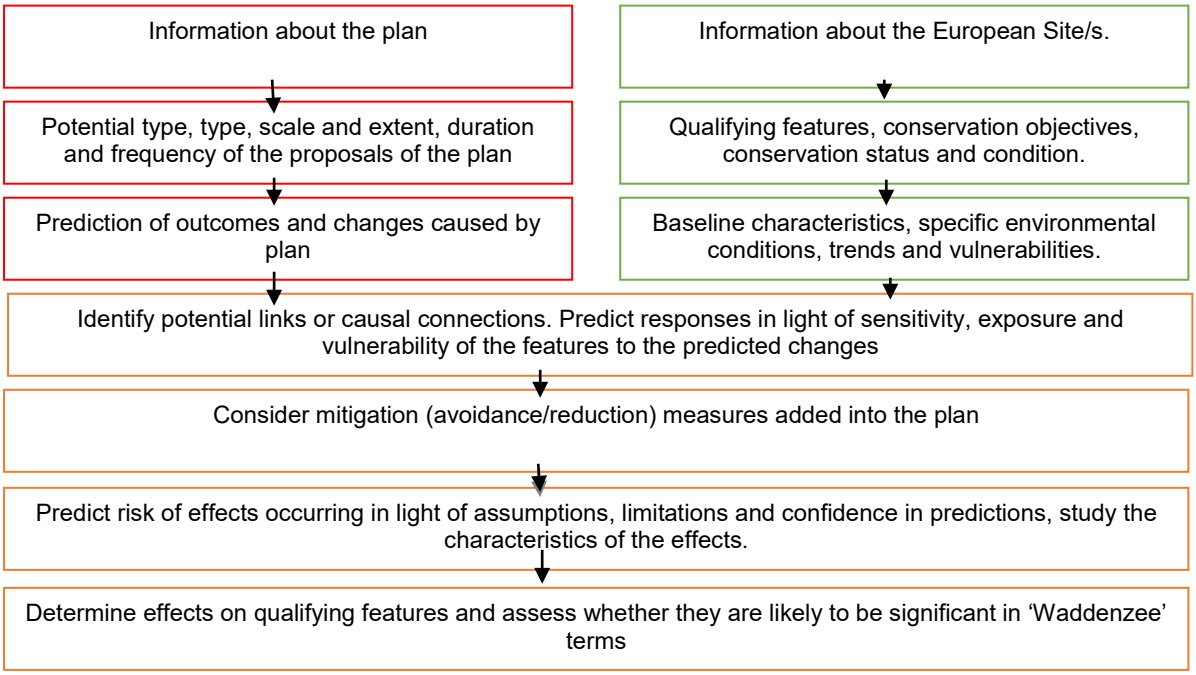


Figure 2.1 – Summary of the approach to screening detailed in this report (taken from the Habitat Regulations Handbook produced by DTA publications).

Scanning and European Site Selection

Natura 2000 sites to be included in the preliminary examination were identified through the approach detailed in Table 2.1.

Scan	Collate	Consider	Select
Scan around geographic location of the plan and as far beyond as necessary for sites that could be affected, looking for casual connections and links between the plan's proposals and qualifying features of the sites	Collate the 'information for assessment' for the sites being scanned to establish their location and boundaries, their qualifying features conservation objectives, conservation status and site condition.	Consider the relevant information and whether 'zones of influence' or significance thresholds or limits' may usefully be applied.	Select the relevant European Sites for assessment and their qualifying features likely to be affected.

Table 2.1: Scanning/Site Selection Process (Adapted from the Habitat Regulations Assessment Handbook)

Scanning comprised a desk study exercise using Natural England's Multi-Agency Geographical Information System for the Countryside (MAGIC) and a review of previous Habitat Regulations Assessment for Solihull and neighbouring authorities. The site boundaries and qualifying features for each Natura 2000 site were reviewed to determine potential casual links or connections to the Solihull Metropolitan Borough area. Natural England were also consulted in November 2017 to discuss the initial scope of the assessment and to seek any additional sites, not yet been formally designated/listed, that may not have been available on the existing database of Natura 2000 Sites but which may be relevant to the assessment.

All sites were subject to subject to initial scanning process as set out in Section F.4 of the Habitat Regulations Assessment Handbook. European Sites which had linkages to the plan area were selected for further consideration about the potential for likely significant effects on the qualifying features. Details of all selected European Sites were collated including the existing baseline conditions or conservation status of the site and the conservation objectives. Details for each site are provided in Chapter 4.

Vulnerabilities for each site were also collated and reviewed in order to inform an examination of the potential for significant effects on each site. Data on vulnerabilities was obtained from the Site Improvement Plan (SIP) for each European Site in England or the relevant Conservation Management Plan in Wales. Where relevant, conservation actions detailed in the SIPs were reviewed in order to inform whether the proposed actions could also be affected and if this would lead to a potential effect on the European Site concerned.

Solihull Local Plan Review

Policies and proposals in the Solihull Local Plan Review were reviewed to identify those which will result in outcomes or changes that could lead to effects on Natura 2000 sites. Each policy or proposal was assigned an initial screening category based on the type, extent and scale of the land use change that it promotes or facilitates. The categories, which are set out in the Habitat Regulations Handbook, are detailed as follows:

a) General statement of policy/general aspiration (Screened out);
b) Policy listing general criteria for testing the acceptability/sustainability of proposals (Screened out);
c) Proposal referred to but not proposed by the plan (Screened out);
d) Environmental protection/site safeguarding policy (Screened out);
e) Policies or proposals which steer change in such a way as to protect European Sites from adverse effects (Screened out);
f) Policy that cannot lead to development or other change (Screened out);
g) Policy or proposal that could not have any conceivable effect on a European Site (Screened out);
h) Policy or proposal the (actual or theoretical) effects of which cannot undermine the conservation objectives (either alone or in combination with other pans and projects) (Screened out);
i) Policy or proposal like to have a significant effect on a site alone (Screened in);
j) Policy or proposal with an effect on a site but not likely to be significant alone (need to check for likely significant effects in combination);
k) Policy or proposal not likely to have a significant effect either alone or in combination (Screened out after applying the in-combination test); and,
l) Policy or proposal likely to have a significant effect on a site in combination (Screened in).

Policies where the category is unknown were subject to further examination using objective information to determine the types of outcomes and changes proposed by the policy/proposal and the subsequent potential for likely significant effects alone or in combination. When reviewing the potential for likely significant effects as a result of a policy/proposal, incorporated mitigation measures including policy considerations or other avoidance measures are considered.

In-combination Assessment

Where a policy or proposal would result in an effect on a European Site that is not significant, the impact is further screened for potential in-combination effects with other relevant plans and projects. The plans and projects considered for the in-combination assessment are selected based on the European Site concerned and the nature of the impact. If the in-combination assessment identifies the potential for a likely significant effect, the specific effects will be taken forward for Appropriate Assessment.

The in-combination assessment is not required if no effects are identified on European Sites. This is because if the plan does not have any adverse effect at all on a European Site, it cannot reasonably contribute to an adverse effect in combination with other plans and projects.

3. SCANNING AND SITE SELECTION

3.1 CONSULTATION

Natural England were consulted in November 2017 to provide initial input into the scope of the assessment, to seek agreement on the Natura 2000 sites to be included in the scanning and screening components of the assessment and to identify if there any additional proposed Natura 2000 sites not identified that should be taken into account in the assessment.

A response was received on 7th and 9th March 2018, from Susan Murray (Urban Planning Lead Advisor) at Natural England. A summary of the consultation emails is provided in Table 3.1 below with the original email responses included in Appendix 1.

Natural England's Comments	Incorporated into the report?
Natural England supports the inclusion of a 15 -20 km radius around the study area for assess Natura 2000 sites.	**Yes** - All sites within a 20 km radius have been included within the preliminary assessment
Assessment should also include sites with a catchment relationship and so sites outside the initial 15-20 km buffer should also be considered.	**Yes** – The scanning process in Section 3.2 details all sites with potential impact pathways to the borough for the purposes of the plan.
Given its connectivity to the River Blythe, which runs through the borough, the Humber Estuary SAC, SPA and Ramsar should be considered at the screening stage.	**Yes** - the Humber Estuary SAC, SPA and Ramsar was identified having potential links to the borough through waste water management.
Updated conservation objectives are available for Ensor's Pool which should be taken into account	**Yes** – Conservation objectives for Ensor's Pool were accessed to inform the assessment, as detailed in Chapter 4.

Table 3.1: Summary of Consultation with Natural England in March 2018.

3.2 SCANNING

In accordance with the Habitat Regulation Assessment Handbook, Natura 2000 sites were initially scanned to determine the sites that have potential links Solihull Metropolitan Borough and are likely to be subject to effects as a result of the policies and proposals detailed in the Solihull Local Plan Review. The findings are detailed in Table 3.2 below.

In accordance with the consultation response received from Natural England on 9th March 2018, the Study Area is defined as the administrative boundary of Solihull Borough plus all land within a 20 km radius.

Types of Plan	Sites to Scan for and Check	Names of Sites Selected	Rationale
1. All Plans (Terrestrial, coastal and marine)	Sites within the geographic area covered by or intended to be relevant to the plan.	Ensors Pool SAC Cannock Extension Canal SAC	Ensors Pool and Cannock Extension Canal SAC are both located within a 20 km radius of the Solihull MBC boundary as recommended by Natural England.
2. Plans that could affect the aquatic environment	Sites upstream or downstream of the plan area in the case of river or estuary sites.	Humber Estuary SAC, SPA and Ramsar	Solihull is situated within the catchment areas of the Tame, Anker and Mease which discharge into the Humber Estuary.
	Open water, peatland, fen, marsh or other wetlands sites with relevant hydrological links to land within the plan area, irrespective of distance from the plan area.	Wye Valley SAC Elan Valley Woodlands SAC Elenydd SAC Elenydd – Mallaen SPA	Solihull is part of the Severn Trent Strategic Grid Water Management Zones which also includes strategic water assets in the Wye and Elan Valley.

Table 3.2: Summary of Scanning and European Site Selection for Solihull Local Plan Review

Types of Plan	Sites to Scan for and Check	Names of Sites Selected	Rationale
3. Plans that could affect the marine environment	Sites that could be affected by changes in water quality, currents or flows; or effects on the inter-tidal or sub-tidal areas or the sea bed, or marine species.	N/A	
4. Plans that could affect the coast	Sites in the same coastal 'cell' or part of the same coastal ecosystem, or where there are interrelationships with or between different physical coastal processes.	N/A	
5. Plans that could affect mobile species	Sites whose qualifying features include mobile species which may be affected by the plan irrespective of the location of the plan's proposals or whether the species would be in or out of the site when they might be affect	N/A	
6. Plans that could increase recreational pressure on European sites potentially vulnerable or sensitive to such pressure	Such European sites within the plan area.	N/A	
	Such European sites within agreed zones of influence or other evidence-based travel distance of the plan area boundaries that may be affected by local recreational or other visitor pressure from within the plan area.	Cannock Chase SAC	Cannock Chase is a locally important recreational site and Area of Outstanding Natural Beauty (AONB) located within 28.3 km from the Solihull boundary.
	Such European sites within an agreed zone of influence or other evidence-based longer travel distance of the plan area, which are major (regional or national) visitor attractions such as European sites which are National Nature Reserves where public visiting is promoted, sites in National Parks, coastal sites and sites in other major tourist or visitor destinations.	N/A	
7. Plans that would increase the amount of development	Sites in the plan area or beyond that are used for, or could be affected by, water abstraction irrespective of distance from the plan area.	Wye Valley SAC Elan Valley Woodlands SAC Elenydd SAC Elenydd – Mallaen SPA	Solihull is part of the Severn Trent's Strategic Grid Water Management Zone which includes strategic water assets in the Elan Valley and Wye Valley.

Table 3.2 [Cont.]: Summary of Scanning and European Site Selection for Solihull Local Plan Review

Types of Plan	Sites to Scan for and Check	Names of Sites Selected	Rationale
7. Plans that would increase the amount of development [Cont.]	Sites used for, or could be affected by, discharge of effluent from waste water treatment works or other waste management streams servicing the plan area, irrespective of the distance from the plan area.	Humber Estuary SAC, SPA and Ramsar	The River Blythe and Cole are the principal rivers for waste water discharge in the borough. These rivers discharge into the Humber estuary via the Tame and Trent.
	Sites that could be affected by the provision of new or extended transport or other infrastructure.	N/A	
	Sites that could be affected by increased deposition of air pollutants arising from the proposals, including emissions from significant increases in traffic.	Cannock Extension Canal SAC	Cannock Extension Canal is located within 20 km of the Solihull Borough and therefore may be vulnerable to increase in traffic emissions.
8. Plans for linear development or infrastructure	Sites within a specified distance from the centre line of the proposed route (or alternative routes) the distance may be varied for differing types of site, qualifying features and in the absence of established good practice standards, distance(s) to be agreed by the statutory nature conservation body.	N/A	
9. Plans that introduce new activities or new uses into the marine, coastal or terrestrial environment	Sites considered to have qualifying features potentially vulnerable or sensitive to the effects of the new activities proposed by the plan.	N/A	N/A
10. Plans that could change the nature, area, extent, intensity, density, timing or scale of existing activities or uses	Sites considered to have qualifying features potentially vulnerable or sensitive to the effects of the changes to existing activities proposed by the plan.	N/A	N/A
11. Plans that could change the quantity, quality, timing, treatment or mitigation of emissions or discharges to air, water or soil.	Sites considered to have qualifying features potentially vulnerable or sensitive to the changes in emissions or discharges that could arise as a result of the plan.	Humber Estuary SAC, SPA and Ramsar	The River Blythe and Cole are the principal rivers for waste water discharge in the borough. These rivers discharge into the Humber Estuary via the Tame and Trent.

Table 3.2 [Cont.]: Summary of Scanning and European Site Selection for Solihull Local Plan Review

Types of Plan	Sites to Scan for and Check	Names of Sites Selected	Rationale
12. Plans that could change the quantity, volume, timing, rate, or other characteristics of biological resources harvested, extracted or consumed.	Sites whose qualifying features include the biological resources which the plan may affect, for example as habitat, or a physical environment on which habitat may develop or which may be disturbed by the extraction or consumption.	N/A	N/A
13. Plans which could introduce or increase, or alter the timing, nature or location of disturbance to species	Sites whose qualifying features are considered to be potentially sensitive to the effects of changes in light or noise that could be brought about by the plan.	N/A	N/A
14. Plans which could introduce or increase, or alter the timing, nature or location of light or noise pollution.	Sites whose qualifying features are considered be potentially sensitive to the effects of changes in light or noise that could be brought about by the plan.	N/A	
15. Plans which could introduce or increase a potential cause of mortality of species.	Sites whose qualifying features are considered to be potentially sensitive to the source of new or increased mortality that could be brought about by the plan.	N/A	

Table 3.2 [Cont.]: Summary of Scanning and European Site Selection for Solihull Local Plan Review

3.3 SITE SELECTION

The scanning process identified ten Natura 2000 sites with potential linkages to the Solihull Local Plan Review area. These sites, which are taken forward for preliminary examination, are as follows:

- Ensors Pool SAC
- Cannock Extension Canal SAC
- Cannock Chase SAC
- River Wye SAC
- Elan Valley Woodlands SAC
- Elenydd SAC
- Elenydd - Mallean SPA
- Humber Estuary SAC
- Humber Flats, Marshes and Coast SPA
- Humber Estuary Ramsar

The location of these sites are shown in Drawing C126281-01-01 in Chapter 9. The designation criteria, conservation objectives and vulnerability of each of the Nature 2000 sites listed above are detailed in Chapter 4.

The following four Natura 2000 sites were ruled out of the scanning process based on the unlikely connective ecological pathways between the sites and the administrative boundaries of Solihull Metropolitan Borough:

- Peak District Dales SAC;
- Severn Estuary SAC;
- Severn Estuary SPA; and,
- Severn Estuary Ramsar.

Peak District Dales SAC

The Peak District Dales SAC is situated 59.5 km to the north of the Solihull Metropolitan Borough Boundary. The SAC was included as one of five sites reviewed within the Habitat Regulations Assessment Screening Exercise for the Solihull Draft Local Plan in 2012 and the Solihull Core Strategy 'Issues and Options' document in 2008. In the 2012 assessment, no impact pathways between the SAC and the policies of the Solihull Local Plan was observed in respect of changes to grazing or drainage, dust from quarrying, impacts on freshwater systems or dominance of sycamore in woodlands. However, recreational impacts and air pollution were subject to a preliminary examination.

Recreational Impacts were not identified as a key vulnerability of the Peak District Dales SAC in the 2012 report. However, much of the site was found to be publicly accessible as part of the wider Peak District National Park and so the potential for recreational disturbance as a result of potential population growth within Solihull Borough was considered. The screening assessment concluded that given the distance between the SAC and the Solihull boundary, the small proportion of overall visitor numbers to the National Park from the West Midlands conurbation and the small proportion of the SAC relative to the wider National Park overall, no significant adverse recreational effects on the Peak District SAC were considered likely. This was reinforced by the fact that no other Habitat Regulations Assessment for neighbouring authorities in the West Midlands, which are proposing greater numbers of housing growth than that proposed for Solihull, identified recreational impacts as a significant adverse effect on the Peak District Dales SAC either individually or in combination with other plans.

Air Pollution was also not considered to be a key vulnerability for the Peak District Dales in the 2012 assessment. This is because agricultural and other sources independent of the policies and proposals of the Solihull Draft Local Plan were identified as the key contributor to air pollutants affecting non-woodland habitats in the SAC. Road-based air pollution was also ruled out due to the distance from the SAC to the Solihull boundary. A precautionary measure for further assessment was given in respect of any future expansion of Birmingham Airport due to a potential increase in background levels of NOx and other greenhouse gasses such as CO_2. However, the report identified that no policies relating to the further expansion of the airport were included in the 2012 Local Plan and that aviation was not listed as a key source of NOx deposition in 2005 or as a predicted source in 2020. Subsequently air pollution impacts arising as a result of the Solihull Local Plan, was screened out as having any significant adverse effect on Peak District Dales SAC either individually or in combination with other plans.

Given the distance of the SAC from the Solihull Boundary, and the screening out of potential impact pathways during the 2012 assessment, the Peak District Dales SAC was not considered further in this screening report.

Severn Estuary SAC, SPA and Ramsar

Solihull Metropolitan Borough is situated within the Tame and Mease Catchment Management area. The principal rivers in Solihull Metropolitan Borough are the Rivers Blythe and Cole which are tributaries of the River Tame and discharge into the Humber Estuary. A small proportion of the eastern and southern margins of the borough also falls within the Avon Catchment, although there are no rivers linking the borough directly to the River Avon which is a tributary of the River Severn. According to the Solihull Water Cycle Study (JBA Consulting, 2018), all effluent discharge from waste water treatment plants serving the borough are associated with the Rivers Blythe and Tame. Therefore, impact pathways (aquatic or otherwise) between the plan area and the Severn Estuary SAC, SPA and Ramsar are considered unlikely. The Severn Estuary SAC, SPA and Ramsar are not therefore considered further in this report.

4. EUROPEAN SITES

4.1 ENSOR'S POOL SAC

4.1.1 Qualifying Criteria

The following information is taken from the Joint Nature Conservation Committee (JNCC) site description http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0012646 and accompanying site citation document,

Country: England
Unitary Authority: Warwickshire
Centroid: SP348903
Latitude: 52.3425 N
Longitude: -1.486388889 W
SAC EU Code: UK0012646
Status: Designated Special Area of Conservation (SAC)

Ensor's Pool SAC comprises an abandoned ground-water fed clay pit situated on the western edge of Nuneaton. The SAC is 3.86 ha and comprises Inland water bodies (standing water) habitat (70%), but also includes areas of mesophilic grassland (30%).

Qualifying Habitats

The site does not support any Annex I habitat types. Annex I habitats are neither a primary reason for selection or present as qualifying criteria.

Qualifying Species

The site qualifies under Habitats Directive (92/43/EEC) as it supports a species of importance listed on Annex II of the Directive. This species is white-clawed crayfish *Austropotamobius pallipes*, for which Ensor's Pool is deemed to be one of the best lake populations of the species in England

The JNCC site description states that "*This lowland site in central England represents **white-clawed crayfish Austropotamobius pallipes** in standing water. This 1 ha marl pit holds a very large population, estimated at 50,000. Although crayfish plague outbreaks have occurred in the Midlands, this waterbody is isolated from river systems and is a good example of a 'refuge' site in an important part of the species' former range*".

4.1.2 Conservation Objectives and Baseline Conditions

The conservation objectives and baseline conditions for Ensor's Pool SAC are provided in Table 4.1 below. The conservation objectives were taken from the Conservation Objectives and Supplementary Advice for Ensor's Pool SAC document (Natural England, 2018a). The conservation status and condition assessment was determined through the UK's third Article 17 Habitats Directive Report from 2013 (JNCC, 2013) and Natural England's online Site of Special Scientific Interest Condition Assessment tool.

Qualifying feature	Conservation Objectives	Conservation status	Condition assessment
1092: White-clawed crayfish *Austropotamobius pallipes*	Ensure that the integrity of the site is maintained, and ensure that the site retains its ability to contribute to achieving the Favourable Conservation Status of it Qualifying Features, by maintaining: - The extent and distribution of the habitats of qualifying species; - The structure and function of habitats of qualifying species; and, - The supporting processes on which the habitat of qualifying species rely.	**Bad (Declining) –** Due to declining population size and range of species.	**Unfavourable – Declining** – due to the recorded absence of white clawed crayfish in surveys carried out in 2014 and 2015. It is considered unlikely that white-clawed crayfish remain present in Ensor's Pool. The current reason for decline is unknown.

Table 4.1: Conservation Objectives and Baseline Conditions – Ensor's Pool SAC

4.1.3 Vulnerability of the SAC

The issues to which the SAC is vulnerable are highlighted in Table 4.2. This information has been collated from the Ensor's Pool SAC Site Improvement Plan (Natural England, 2014a).

Issue	Detail	Source of Data
Changes in species distributions	The site was formerly a stronghold for native white-clawed crayfish with a population estimated at around 50,000 animals. However, no crayfish were found during two survey visits in 2014 and 2015. The cause of this decline is currently unclear.	Site Improvement Plan

Table 4.2: Summary of Vulnerability of Ensor's Pool SAC

4.1.4 Site Improvement Plan

The Site Improvement Plan for Ensor's Pool SAC identify a series of actions that are required to address the issues currently affect the conservation status of qualifying features in the SAC.

4.2 CANNOCK EXTENSION CANAL SAC

4.2.1 Qualifying Criteria

The following information is taken from the Joint Nature Conservation Committee (JNCC) site description and accompanying site citation document, both of which are available at http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0012672.

Country: England
Unitary Authority: Staffordshire; Walsall
Centroid: SK 020 058
Latitude: 52 38 59 N
Longitude: 01 58 14 W
SAC EU Code: UK0012672
Status: Designated Special Area of Conservation (SAC)

Cannock Extension Canal extends for a distance of 2.9 km, and runs from Pelsall Junction on the Wyrley and Essington Canal to Norton Canes Docks. The SAC is dominated by standing water habitat, but also includes areas of mesophilic grassland, broadleaved woodland and the built environment.

Qualifying Habitats

The site does not support any Annex I habitat types. Annex 1 habitats are neither a primary reason for selection or present as qualifying criteria.

Qualifying Species

The site qualifies under the Habitats Directive (92/43/EEC) as it supports a species of importance listed on Annex II of the Directive. This species is floating water plantain *Luronium natans*, for which Cannock Extension Canal SAC is identified in the site citation as being one of the best areas in the United Kingdom.

The JNCC site description states that "*Cannock Extension Canal in central England is an example of anthropogenic, lowland habitat supporting **floating water-plantain Luronium natans** at the eastern limit of the plant's natural distribution in England. A very large population of the species occurs in the Canal, which has a diverse aquatic flora and rich dragonfly fauna, indicative of good water quality. The low volume of boat traffic on this terminal branch of the Wyrley and Essington Canal has allowed open-water plants, including floating water-plantain, to flourish, while depressing the growth of emergents*".

4.2.2 Conservation Objectives and Baseline Conditions

The conservation objectives and baseline conditions for Cannock Extension Canal SAC are provided in Table 4.3 below. The conservation objectives were taken from the Conservation Objectives and Supplementary Advice for Cannock Extension Canal SAC document (Natural England, 2016a). The conservation status and condition assessment was determined through the UK's third Article 17 Habitats Directive Report (JNCC, 2013) and Natural England's online Site of Special Scientific Interest Condition Assessment tool.

Qualifying feature	Conservation Objectives	Conservation status	Condition assessment
S1831: Floating water-plantain *Luronium natans*	Ensure that the integrity of the site is maintained, and ensure that the site retains its ability to contribute 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 habitats of qualifying species; - The supporting processes on which the habitat of qualifying species rely. - The populations of qualifying species; and, - The distribution of qualifying species within the site.	**Inadequate (Stable) –** Due to viable but declining population and habitat quality	**Unfavourable – recovering –** Unit 001 was subject to historic silt build up which has now been removed but sources of low level silt in the inflows during high rainfall events are still present. Unit 002 – Standing open water and canal is assessed as favourable

Table 4.3: Conservation Objectives and Baseline Conditions – Cannock Extension Canal SAC

4.2.3 Vulnerability of the SAC

The issues to which Cannock Extension Canal SAC is vulnerable are highlighted in Table 4.4. This information has been collated from the Cannock Extension Canal SAC Site Improvement Plan (Natural England, 2014b).

Issue	Detail	Source of Data
Water pollution	Potential sediment build-up as a result of input and diffuse pollution may affect status and distribution of *Luronium natans* within SAC.	Site Improvement Plan
Overgrazing	Large groups of Canada geese are grazing on the water plants in the canal which could affect the vegetation community including *Luronium natans*	Site Improvement Plan
Invasive Species	Invasive species including water fern *Azolla filiculoides* and water pennywort *Hydrocotyle ranunculoides* have been presetn and eliminated but could pose future damage to native vegetation communities including *Luronium natans*.	Site Improvement Plan
Air Pollution	Nitrogen deposition currently exceeds site relevant critical load due to effects from major roads, industrial estates and farming in the vicinity.	Site Improvement Plan

Table 4.4: Summary of Vulnerability of Cannock Extension Canal SAC

4.2.4 Site Improvement Plan

The Site Improvement Plan for Cannock Extension Canal SAC identifies a series of actions that are required to address the issues currently affect the conservation status of qualifying features in the SAC.

4.3 CANNOCK CHASE SAC

4.3.1 Qualifying Criteria

The following information is taken from the Joint Nature Conservation Committee (JNCC) site description and accompanying site citation document, both of which are available at http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0030107

Country: England
Unitary Authority: Staffordshire
Centroid: SJ982188
Latitude: 52 45 59 N
Longitude: 02 01 36 W
SAC EU Code: UK0030107
Status: Designated Special Area of Conservation (SAC)
Area (ha): 1236.93

Cannock Chase SAC is an extensive area of lowland heath habitat. Other habitats present with the SAC include standing and running water, coniferous woodland, non-forest areas cultivated with woody plants (e.g. orchards) and the built environment.

Qualifying Habitats

The site qualifies under Article 4.1 of the Habitats Directive (92/43/EEC) as it supports two habitats of European importance listed on Annex I of the Directive. European Dry Heaths are listed as a primary reason for selection, and Northern Atlantic Wet Heaths with *Erica tetralix* are listed as a qualifying feature but are not a primary reason for site selection.

The JNCC site description states that "*the area of lowland heathland at Cannock Chase is the most extensive in the Midlands, although there have been losses due to fragmentation and scrub/woodland encroachment. The character of the vegetation is intermediate between the upland or northern heaths of England and Wales and those of southern counties. Dry heathland communities belong to NVC types H8 Calluna vulgaris – Ulex gallii and H9 Calluna vulgaris – Deschampsia flexuosa heaths. Within the heathland, species of northern latitudes occur, such as cowberry Vaccinium vitis-idaea and crowberry Empetrum nigrum. Cannock Chase has the main British population of the hybrid bilberry Vaccinium intermedium, a plant of restricted occurrence. There are important populations of butterflies and beetles, as well as European nightjar Caprimulgus europaeus and five species of bats*".

The quality and importance of the qualifying habitats, as detailed in the site citation, are summarised in Table 4.5.

Qualifying Habitat	Site Coverage (%)	Quality and Importance
European Dry Heaths	75%	Cannock Chase is considered to be one of the best areas in the United Kingdom.
North Atlantic Wet Heaths with *Erica Tetralix*	1.3%	Cannock Chase is considered to support a significant presence.

Table 4.5: Quality and Importance of Qualifying Habitats for Cannock Chase SAC

Qualifying Species

The JNCC site description for the Cannock Chase SAC does not identify any Annex II species that are either a primary reason for a selection or are present as a qualifying criterion. The SAC citation does, however, indicate the presence of Annex II species within the site. These are:

- White-clawed crayfish *Austropotamobius pallipes*, identified as being present; and,
- Great crested newt *Triturus cristatus*, identified as being present with a population size of between 11 and 50 animals.

4.3.2 Conservation Objectives and Baseline Conditions

The conservation objectives and baseline conditions for Cannock Extension Canal SAC are provided in Table 4.6 below. The conservation objectives were taken from the Conservation Objectives and Supplementary Advice for Cannock Chase SAC document (Natural England, 2018b). The conservation status and condition assessment was determined through the UK's third Article 17 Habitats Directive Report (JNCC, 2013) and Natural England's Site of Special Scientific Interest Condition Assessment tool.

Qualifying feature	Conservation Objectives	Conservation status (UK)	Condition assessment
H4010 Northern Atlantic wet heaths Erica tetralix; Wet heathland with cross-leaved heath.	Ensure that the integrity of the site is maintained, and ensure that the site retains its ability to contribute to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring: - The extent and distribution of the habitats of qualifying natural habitats; - The structure and function (including typical species) of qualifying natural habitats; and, - The supporting processes on which the qualifying natural habitats rely.	**Bad (Stable)** – Due to unfavourable and declining condition of heathland although short-term trends are stable.	Condition assessment does not distinguish between habitat types. 5.40% of SSSI in favourable condition. 91.84% in unfavourable (recovering) condition. 23.76% in unfavourable (no change) condition.
H4030 European dry heaths	As above	**Bad (Stable) -** Due to unfavourable and declining condition of heathland although short-term trends are stable.	

Table 4.6: Conservation Objectives and Baseline Conditions – Cannock Chase SAC

4.3.3 Vulnerability of the SAC

The issues to which Cannock Chase SAC is vulnerable are highlighted in Table 4.7. This information has been collated from sources including JNCC SAC citation and the Site Improvement Plan for Cannock Chase SAC (Natural England, 2014c).

Issue	Detail	Source of Data
Recreational Pressure	Much of the SAC falls within the well-used country park, therefore visitor pressure is a key issue. Activities including dog walking, horse riding, mountain biking and off-track activities such as orienteering can all cause disturbance and result in erosion, new track creation and vegetation damage.	JNCC SAC Standard Data Form
Undergrazing	Grazing is a necessary management tool to diversify the physical structure of the heathland habitats by creating habitat mosaic that support its special fauna. Grazing has been restricted latterly due to the presence of plant fungal disease *Phytophthora pseudosyringae* on bilberry and the need to control this throughout the site	Site Improvement Plan
Drainage	The water supply and historic drainage of the site may be impacting on the distribution and extent of qualifying wetland vegetation.	Site Improvement Plan
Hydrological changes	The reduction in valley mire towards a drier vegetation type suggests an as yet unknown source of hydrological change.	Site Improvement Plan
Disease	The plant fungal disease *Phytophthora pseudosyringae* is widespread on the main body of Cannock Chase on a major part on the heathland vegetation. The outbreak is considered to be the worst in the country.	Site Improvement Plan
Air pollution/ impact of atmospheric nitrogen deposition	Nitrogen deposition on Cannock Chase SAC currently exceeds the relevant critical loads for the site leading to a potential increase in bramble and a shorter *Calluna vulgaris* life cycle.	Site Improvement Plan

Table 4.7: Summary of Vulnerability of Cannock Chase SAC

Issue	Detail	Source of Data
Wild fire/arson	Accidental and deliberate fires have previously caused major damage to Cannock Chase over the decadesand may continue to be a threat to heathland vegetation and associated species.	Site Improvement Plan
Invasive species	A range of invasive species are present on site and in the surrounding land which could, if left unmanaged, damage the dry and wet heath communities.	Site Improvement Plan

Table 4.7[Cont.]: Summary of Vulnerability of Cannock Chase SAC

4.3.4 Site Improvement Plan

The Site Improvement Plan for Cannock Chase SAC identify a series of actions that are required to address the issues currently affect the conservation status of qualifying features in the SAC.

4.4 RIVER WYE SAC

4.4.1 Qualifying Criteria

The following information is taken from the Joint Nature Conservation Committee (JNCC) site description and accompanying site citation document, both of which are available at http://jncc.defra.gov.uk/ProtectedSites/SACselection/sac.asp?EUCode=UK0012642

Country:	England/Wales
Unitary Authority:	East Wales, Gloucestershire, Wiltshire, and Bath/Bristol area, Herefordshire, Worcestershire, Warwickshire, West Wales and The Valleys
Centroid:	SO 109369
Latitude:	52 01 23 N
Longitude:	03 17 58 W
SAC EU Code:	UK0012642
Status:	Designated Special Area of Conservation (SAC)
Area (ha):	2147.64

The River Wye SAC is a large river on the border of England and Wales with a large geographically mixed catchment and a clear vegetative transition between the upland and lower reaches. The SAC principally comprises Inland water bodies (52.5%) with tidal rivers, estuaries sand flats, lagoons (9.5%), salt marches, salt pastures and salt steppe (1.5%) Bogs, marshes water-fringed vegetation and fens (3.1%), heath and scrub (1%) dry grassland (5.3%) mesophile grassland (2.4%) improved grassland 10.4%) broad-leaved deciduous woodland (12.3%) inland rocks screes and sands (0.2%) and other land (1.8%).

Qualifying Habitats

The site qualifies under the Habitats Directive (92/43/EEC) as it supports two habitats of European importance listed on Annex I of the Directive. Watercourses of plan to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation are listed as a primary reason for selection, and Transition mires and quaking bogs are listed as a qualifying feature but are not a primary reason for site selection.

The JNCC site description states that "*Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation for which this is considered to be one of the best areas in the United Kingdom. Transition mires and quaking bogs for which the area is considered to support a significant presence.*".

Qualifying Species

The site qualifies under the Habitats Directive (92/43/EEC) as it supports the following species of importance listed on Annex II of the Directive

- White-clawed crayfish *Austropotamobius pallipes*, the welsh River Wye is the best know site for this species in Wales;
- Sea lamprey *Petromyzon marinus*, the site provides exceptionally good quality habitat for sea lamprey and supports a heathy population;
- Brook lamprey *Lampetra planeri* the site provides exceptionally good quality habitat for brook lamprey and supports a heathy population;
- River lamprey *Lampetra fluviatillis*, the site provides exceptionally good quality habitat for brook lamprey and supports a heathy population;
- Twaite shad *Alosa fallax*, the site has long abundant population of these species and provides suitable habitat in the form of good water quality, unobstructed main channel and depp pools for congregation before spawning;
- Atlantic salmon *Salmo salar*, the site constitutes the most famous and productive river in wales for the species and includes high quality spawning grounds and juvenile habitat in the main channel and tributaries;
- Bullhead *Cottus gobio*, the site is composed of a diverse river system representing the habitat conditions in which bullhead occurs in Britain;
- Otter *Lutra lutra*, the site holds the densest and most well-established otter population in Wales; and,
- Allis shad *Alosa alosa*.

4.4.2 Conservation Objectives and Baseline Conditions

The conservation objectives and baseline conditions for River Wye SAC are provided in Table 4.8 below. The conservation objectives were taken from the Conservation Objectives and Supplementary Advice for River Wye SAC document (Natural England, 2016b) and the River Wye Core Management Plan (Countryside Council for Wales, 2008a). The conservation status and condition assessment was determined through the UK's third Article 17 Habitats Directive Report (JNCC, 2013), the River Wye Core Management Plan and Natural England's online Site of Special Scientific Interest Condition Assessment tool.

Conservation Objectives: Ensure that the integrity of the site is maintained, and ensure that the site retains its ability to contribute to achieving the favourable conservation status of its qualifying features, by maintaining or restoring:

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

Qualifying feature	Conservation status in UK	Condition Assessment (Wales)	Condition Assessment (England)
H3260. Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho Batrachion vegetation; Rivers with floating vegetation often dominated by water-crowfoot	**Bad (Improving)** – Due to unfavourable but improving structure and functions of the watercourses in UK.	**Unfavourable –** due to water quality issues from diffuse pollution in the middle reaches of the river.	See Table 4.9 below
H7140. Transition mires and quaking bogs;	**Bad (Declining)** – Due to unfavourable structure and functions of between 5- 25% of qualifying habitat in UK.	**Unfavourable** - due to undergrazing.	See Table 4.9 below
S1092 White-cawed crayfish Austropotamobius pallipes	**Bad (Declining) –** Due to declining population size and range of species.	**Unfavourable (declining) –** due to major decline of abundance and distribution of species.	See Table 4.9 below
S1095 Sea lamprey Petromyzon marinus	**Unknown** – Due to the population and habitat extent being currently unknown.	**Favourable -** due to density of ammoceotes exceeding target density of 0.1m^{2}.	See Table 4.9 below
S1096 Brook lamprey Lampetra planeri	**Favourable** – As habitat range, habitat and future prospects are assessed as favourable.	**Unfavourable (Unclassified) –** Due to uncertainty regarding data for species.	See Table 4.9 below
S1099 River lamprey Lampetra fluviatillis	**Inadequate (Improving)** – due to poor population levels and future prospects but population is currently stable.	**Unfavourable (Unclassified) –** Due to uncertainty regarding data for species.	See Table 4.9 below
S1102 Allis shad Alosa alosa	**Bad (Stable) –** due to the low but stable populations levels	**Unfavourable (Unclassified) –** Due to uncertainty regarding data for species.	See Table 4.9 below
S1103 Twaite shad Alosa fallax	**Inadequate (Stable)** – due to low range and low but stable population	**Unfavourable (Unclassified) –** Due to uncertainty regarding data for species.	See Table 4.9 below
S1106 Atlantic salmon Salmo salar	**Inadequate (Stable**) – Due to population being low but stable.	**Unfavourable (Unclassified) –** Due to uncertainty regarding data for species.	See Table 4.9 below

Table 4.8: Conservation Objectives and Baseline Conditions – River Wye SAC

Qualifying feature	Conservation status in UK	Condition Assessment (Wales)	Condition Assessment (England)
S1163 Bullhead Cottus gobio	**Unknown** – Due to unknown population size and future prospects.	**Unfavourable (Unclassified) –** Due to uncertainty regarding data for species.	See Table 4.9 below
S1355 Otter *Lutra lutra*	**Favourable** - As habitat range, habitat and future prospects are assessed as favourable.	**Unfavourable –** due to lack of suitable breeding opportunities in the middlem reaches of the river.	See Table 4.9 below

Table 4.8 [Cont.]: Conservation Objectives and Baseline Conditions – River Wye SAC

Condition Assessment (England)
Table 4.9 below details the three SSSIs that make up the River Wye SAC in England and the proportion of each SSSI in favourable or unfavourable condition.

SSSI	Condition Summary of SSSI (%)			
	Favourable	Unfavourable (Recovering)	Unfavourable (No change)	Unfavourable (Declining)
River Wye SSSI	12.69%	87.31%	0.00%	0.00%
River Lugg SSSI	0.00%	100.00%	0.00%	0.00%
Upper Wye Gorge SSSI	29.41%	70.59%	0.00%	0.00%

Table 4.9: Condition Summary of component SSSIs that make up River Wye SAC in England.

4.4.3 Vulnerability of the SAC

The issues to which the River Wye SAC is vulnerable are highlighted in Table 4.10. This information has been collated from the River Wye SAC Site Improvement Plan (Natural England, 2014d).

Issue	Detail	Source of Data
Water pollution	Sedimentation and diffuse pollution are key issues in the catchment including upland acidification and use of pesticides for agriculture.	Site Improvement Plan
Physical modification	Small scale development, such as public access improvements, is impacting on the hydromorhology and character of the river. An impedance of natural functions such as gravel and woody debris input also occur as a result of the Elan Valley reservoirs and low tree/shrub cover.	Site Improvement Plan
Invasive species	Himalayan balsam *Impatiens glandulifera*, Japanese knotweed *Fallopia japonica*, giant hogweed *Heracleum mantegazzianum* and hybrids are present throughout the catchment. Other invasive species such as the killer shrimp *Dikerogammarus villosus* are also a threat.	Site Improvement Plan
Hydrological changes	Urban drainage and new development can affect hydrology. Poor siting of infrastructure can also cause excessive run-off.	Site Improvement Plan
Forestry and Woodland management	There is a need to balance woodland management levels with fisheries, navigation and flood risk. Clearfell management of upland conifer plantations can lead to sediment and nitrate release into the watercourse.	Site Improvement Plan
Fisheries: freshwater	The management of the bank by river users is not always compatible with the SAC features (i.e. digging steps and mowing banks.	Site Improvement Plan
Fisheries: fish stocking	Fish stocking is continuing at present but is being phased out by Natural Resources Wales.	Site Improvement Plan

Table 4.10: Summary of Vulnerability of River Wye SAC

Issue	Detail	Source of Data
Water abstraction	There is a need to integrate environmental regulations with public water supply and agriculture. The Elan Valley reservoirs and dams do not allow natural patterns in water flow and work is underway to agree a revised set of reservoir release rules.	Site Improvement Plan
Public access/disturbance	The high usage of the river by canoeists, anglers navigation and dog walkers has the potential to cause disturbance to SAC species and habitats.	Site Improvement Plan
Air Pollution: impact of atmospheric nitrogen deposition	Nitrogen deposition exceeds site relevant critical loads with respect to the SAC's transition mire habitat in Wales.	Site Improvement Plan
Inappropriate scrub control	Increased scrub and woodland is affecting the structure and composition of the transitional mire and quaking bog at Colwyn Brook Marshes. This is due to changing change in hydrological processes and/or due to the change in grazing pressure.	Site Improvement Plan
Undergrazing	Undergrazing is affecting the structure and composition of the transitional mire and quaking bog at Colwyn Brook Marshes	Site Improvement Plan
Transportation and service corridors	Potential for impact on SAC features when undertaking work on Network Rail's assets.	Site Improvement Plan

Table 4.10 [Cont.]: Summary of Vulnerability of River Wye SAC

4.4.4 Site Improvement Plan

The Site Improvement Plan for River Wye SAC identifies a series of actions that are required to address the issues currently affect the conservation status of qualifying features in the SAC.

4.5 ELAN VALLEY WOODLANDS SAC

4.5.1 Qualifying Criteria

The following information is taken from the Joint Nature Conservation Committee (JNCC) site description and accompanying site citation document, both of which are available at http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUcode=UK0030145.

Country: Wales
Unitary Authority: East Wales
Centroid: SN923638
Latitude: 52 15 43 N
Longitude: 03 34 44 W
SAC EU Code: UK0030145
Status: Designated Special Area of Conservation (SAC)
Area (ha): 438.74

The Elan Valley Woodlands/Coetiroedd Cwm Elan SAC principally comprises broad-leaved deciduous woodland (68.8%) with heath, scrub, maquis and phygrana (23.3%), dry grassland (6%), inland rocks, screes, sands, permanent snow and ice (1.9%)

Qualifying Habitats

The site qualifies under the Habitats Directive (92/43/EEC) as it supports three habitats of European importance listed on Annex I of the Habitats Directive. Old sessile oak woods with Ilex and Blechnum in the British Isles is listed as a primary reason for selection, and European dry heaths and Tilio-Acerion forests of slope, screes and ravines are listed as a qualifying feature but are not a primary reason for site selection. The Tilio-Acercion forests are listed as a priority feature.

Qualifying Species

The JNCC site description for the Elan Valley Woodlands SAC does not identify any Annex II species that are either a primary reason for a selection or are present as a qualifying criterion.

4.5.2 Conservation Objectives and Baseline Conditions

The conservation objectives and baseline conditions for the Elan Valley Woodlands SAC are provided in Table 4.11 below. The conservation objectives and condition assessment are summarised from the Core Management Plan for Elenydd-Mallaen SAC, Elenydd SPA, Elan Valley Woodlands SAC and Mynydd Mallaen SAC (Countryside Council for Wales, 2008b). This plan should be consulted for a full overview of the conservation objectives. The conservation status was determined through the UK's third Article 17 Habitats Directive Report from 2013 (JNCC, 2013).

Qualifying feature	Conservation Objectives	Conservation status	Condition assessment
91A0. Old sessile oak woods with Ilex and Blechnum in the British Isles	Old sessile oak woodland remains a significant and conspicuous feature of the upland valley sides and are particularly well developed and extensive. The woodlands have good structure, with a canopy dominated by sessile oak, a sparse understorey and areas of dead wood. Habitat conditions suitable for the sensitive bryophyte and lichen communities will be maintained.	**Bad (Declining)** – due to areas extent of unfavourable woodlands and impacts of nitrogen critical load exceedance.	**Unfavourable** - A condition assessment from 2004 indicates that's whilst three units may be favourable, inappropriate grazing is still thought to be a problem.

Table 4.11: Conservation Objectives and Baseline Conditions – Elan Valley Woodlands SAC

Qualifying feature	Conservation Objectives	Conservation status	Condition assessment
4030. European dry heaths;	The extent, quality and diversity of heath vegetation within the constituent sites is maintained and, where possible, degraded heath is restored to good condition. Heathland will have good structure and provide suitable habitats for uncommon plants and breeding birds. All factors affecting the achievement of these conditions are under control.	**Bad (Stable) -** Due to unfavourable and declining condition of heathland although short-term trends are stable.	Favourable – A condition assessment in 2004 identified that invasive rhododendron was maintained within acceptable limits and air pollution is not a significant problem in woodland fringe areas.
9180. Tilio-Acerion forests of slopes, screes and ravines	The extent and distribution of ash woodlands are maintained. Ash woodland plants are thriving and negative indicator plants of nutrient enrichment or non-native shrubs are not common. Deadwood is present. All factors affecting the achievement of these conditions are under control.	**Bad (Declining) –** due to 25% of habitat in unfavourable condition and ongoing threat of nitrogen critical load exceedance.	Favourable – The woodlands are on inaccessible cliffs and so are not threatened by grazing.

Table 4.11 [Cont.]: Conservation Objectives and Baseline Conditions – Elan Valley Woodlands SAC

4.5.3 Vulnerability of the SAC

The issues to which the Elan Valley Woodlands SAC is vulnerable are highlighted in Table 4.12. This information has been collated from the Core Management Plan for Elenydd-Mallaen SAC, Elenydd SPA, Elan Valley Woodlands SAC and Mynydd Mallaen SAC.

Issue	Detail	Source of Data
Invasive species	Invasive Rhododendron is under continuing management but may be a future threat.	Core Management Plan
Forestry and woodland management	Heathland is subject to encroachment by conifers and woodland is losing some structures in areas due to under management.	Core Management Plan
Inappropriate scrub control	The heathland areas are subject to bracken invasion and is losing some variation in structure due to potential lack of grazing.	Core Management Plan
Overgrazing	Overgrazing is identified as a potential ongoing issue associated with many of the woodland units.	Core Management Plan

Table 4.12: Summary of Vulnerability of Elan Valley Woodlands SAC

4.6 ELENYDD-MALLAEN SPA

4.6.1 Qualifying Criteria

The following information is taken from the Joint Nature Conservation Committee (JNCC) site description and accompanying site citation document, both of which are available at http://jncc.defra.gov.uk/default.aspx?page=2064.

Country: Wales
Unitary Authority: Carmarthenshire, Ceredigion, Powys
Latitude: 52 16 08 N
Longitude: 03 43 43 W
SAC EU Code: UK0030145
Status: Classified Special Protection Ara (SPA)
Area (ha): 30022.14

The JNCC website describes the SPA as:

"*Elenydd-Mallaen is located in the uplands of central Wales. The extensive site includes heath and blanket mire dominated uplands (rising to about 460 m) and is intersected by valleys containing woodlands and grassland. It is one of the most important areas of hill land for nature conservation in Wales. Crags are frequent throughout the site. The site is especially important for a number of breeding raptors, some of which are resident throughout the year. The diversity and quality of upland habitats provide an abundance of suitable feeding and nesting sites*."

Qualifying Species

The site qualifies under Article 4.1 of the Birds Directive by supporting populations of European importance including the following species listed on Annex 1 of the Directive:

- Merlin *Falco columbarius* – 7 pairs representing 0.5% of breeding population in Great Britain;
- Peregrine *Falco peregrinus* – 15 pairs representing 1.3% of breeding population in Great Britain; and,
- Red kite *Milvus milvus* – 15 pairs representing 9.4% of breeding population in Great Britain.

4.6.2 Conservation Objectives and Baseline Conditions

The conservation objectives and baseline conditions for the Elan Valley Woodlands SAC are provided in Table 4.13 below. The conservation objectives and condition assessment are summarised from the Core Management Plan for Elenydd-Mallaen SAC, Elenydd SPA, Elan Valley Woodlands SAC and Mynydd Mallaen SAC (Countryside Council for Wales, 2008b). This plan should be consulted for a full overview of the conservation objectives. The conservation status was determined through the bird trends data available on the British Trust for Ornithology website (BTO, 2017).

Qualifying feature	Conservation Objectives	Conservation status	Condition assessment
A074. Breeding red kite *Milvus milvus*	The SPA will: - Support at least 15 pairs of breeding red kites or 0.5% of British population - Maintain the use of traditional nesting and roosting sites; - Maintain the extent of semi-natural feeding habitat and carrion; - Control all factors affecting the achievement of these conditions.	**Favourable** – Population size was approaching 2,500 pairs in 2012 which amount to rapid increase in long-term trend.	**Favourable –** The extent of potential feeding habitat within the sites and carrion availability are deemed to support the breeding population in the long - term

Table 4.13: Conservation Objectives and Baseline Conditions – Elenydd-Mallaen SPA

Qualifying feature	Conservation Objectives	Conservation status	Condition assessment
A098. Breeding merlin *Falco columbarius*	The SPA will: - Continue to support at least 7 pairs of breeding merlin's or 0.5% of the British population - maintain the use of traditional nest sites; - maintain areas of suitable semi-natural feeding grounds; - Control all factors affecting the achievement of these conditions.	**Favourable –** Population size was 1200 (900-1500) pairs in 2008 and probably increasing in the long-term	**Favourable** – A survey in 2011 identified 11 probable breeding pairs, indicating that feature condition was favourable maintained.
A103 Breeding peregrine *Falco peregrinus*	The SPA will: - Continue to support at least 15 pairs of breeding peregrines or 0.5% of British population - maintain the use of traditional nest sites; - maintain areas of suitable semi-natural feeding grounds; - Control all factors affecting the achievement of these conditions	Stable – UK Population size was 1505 pairs in 2014. Population increase in England but decreasing in Wales	**Favourable** –The extent of potential feeding habitat within the site is believed to be sufficient to support the breeding population.

Table 4.13 [Cont.]: Conservation Objectives and Baseline Conditions – Elenydd-Mallaen SPA

4.6.3 Vulnerability of the SAC

The issues to which the Elenydd-Mallaen SPA is vulnerable are highlighted in Table 4.14. This information has been collated from the Core Management Plan for Elenydd-Mallaen SAC, Elenydd SPA, Elan Valley Woodlands SAC and Mynydd Mallaen SAC.

Issue	Detail	Source of Data
Habitat extent	Current habitat extent deemed appropriate for breeding pairs of classified species	Core Management Plan
Availability of carrion	Weather plays a major role in mortality and carcasses in remote areas for red kites.	Core Management Plan
Disturbance	Potential for nest abandonment as a result of public disturbance.	Core Management Plan
Roosting sites	Many kites gather to roost in the Hafod area.	Core Management Plan

Table 4.14: Summary of Vulnerability of Elenydd-Mallaen SPA

4.7 ELENYDD SAC

4.7.1 Qualifying Criteria

The following information is taken from the Joint Nature Conservation Committee (JNCC) site description and accompanying site citation document, both of which are available at http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUcode=UK0030145.

Country: Wales
Unitary Authority: East Wales, West Wales and The Valleys
Centroid: SN824704
Latitude: 52 19 09 N
Longitude: 03 43 36 W
SAC EU Code: UK0012928
Status: Designated Special Area of Conservation (SAC)
Area (ha): 8609.1

The Elenydd SAC principally comprises bog, marshes, water-fringed vegetation and fens (58%), mesophile grassland (18.2%), dry grassland (16.1%) heath, scrub, maquis and garrigue, phygrana (6.2%), inland rocks, screes, sands, permanent snow and ice (0.5%) and other land (0.3%).

Qualifying Habitats

The site qualifies under the Habitats Directive (92/43/EEC) as it supports four habitats of European importance listed on Annex I of the Habitats Directive. Calaminarian grasslands of the Violetalia calaminariae and blanket bogs are listed as a primary reason for selection, and oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoeto-Nonojuncetea and European dry heaths are listed as a qualifying feature but are not a primary reason for site selection. The blanket bogs are listed as a priority feature.

Qualifying Species

The site qualifies under the Habitats Directive (92/43/EEC) as it supports a species of importance listed on Annex II of the Directive. This species is floating water plantain *Luronium natans*, for which Elenydd SAC is identified in the site citation as being one of the best upland oligotrophic lakes in Wales.

4.7.2 Conservation Objectives and Baseline Conditions

The conservation objectives and baseline conditions for Elenydd SAC are provided in Table 4.15 below. The conservation objectives and condition assessment are summarised from the Core Management Plan for Elenydd-Mallaen SAC, Elenydd SPA, Elan Valley Woodlands SAC and Mynydd Mallaen SAC (Countryside Council for Wales, 2008b). This plan should be consulted for a full overview of the conservation objectives. The conservation status was determined through the UK's third Article 17 Habitats Directive Report (JNCC, 2013).

Qualifying feature	Conservation Objectives	Conservation status	Condition assessment
6130. Calaminarian grassland of the Violetalia calaminariae	The habitat covers its current measures area and is expanding. Lichens dominate metal rich spoil from mine workings, tips, walls and other built structures. Lichens, mosses, ferns and a few higher plants are present on rock outcrops on cliffs, open cuts and shaft entrances. Heath, shrub and trees are scarce or absent, tall herbs are grazed and less than 10% of area comprise bare ground. Non-native species occupy less than 1% of cover. All factors affecting the achievement of these conditions are maintained.	**Bad (Stable)** – Due to the unfavourable structure and function of 25% of habitat but with some slight improvements in the short term.	**Unfavourable** – Based on condition assessment in 2005 which indicating declining status due to recreational disturbance and lack of remedial management.

Table 4.15: Conservation Objectives and Baseline Conditions – Elenydd SAC

Qualifying feature	Conservation Objectives	Conservation status	Condition assessment
7130.Blanket Bogs	The extent, quality, and diversity of the blanket bog vegetation with the constituent sites are maintained and degraded bog is restored to good condition. Populations of uncommon bog plants are stable or increasing. The bogs provide suitable habitat for breeding birds and invertebrates. Peat profiles with important pollen records are maintained. All factors affecting the achievement of these conditions are maintained.	Bad (Declining) – due to the unfavourable structure and function of more than 25% of blanket bogs and declining future prospects.	**Unfavourable** – Based on condition assessment in 2002 due to insufficient cover of positive indicator plants and continuing failure to meet targets for atmospheric pollutants.
3130. Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoeto-Nonojuncetea	The area contains several upland lakes with mildly acidic, nutrient-poor water and stoney bed with associated water plants. The extent and composition of vegetation in each lake in stable and increasing. The population of rare stoneworts is maintained, stable and increasing. Population of negative indicators are absent or maintained or below acceptable levels. Low nutrient and shade levels are maintained All factors affecting the achievement of these conditions are maintained.	**Inadequate (improving)** – due to unfavourable structure and functioning in 5-25% of area but with short term improvements.	**Unfavourable** – Surveys in 2003 and 2004 identified that the water quality of the lakes were in unfavourable condition possibly due to general atmospheric pollution.
4030. European dry heaths	The extent, quality and diversity of heath vegetation within the constituent sites is maintained and, where possible, degraded heath is restored to good condition. Heathland will have good structure and provide suitable habitats for uncommon plants and breeding birds. All factors affecting the achievement of these conditions are under control.	**Bad (Stable) -** Due to unfavourable and declining condition of heathland although short-term trends are stable.	**Unfavourable** – based on a subjective assessment in 2004 which indicated insufficient dwarf shrub cover and continuing failure to meet targets for deposition of atmospheric pollutants.
S1831: Floating water-plantain *Luronium natans*	The floating water plantain populations are viable throughout the plan area and growth, genetic exchange and reproductive cycle will be completed successfully. Near natural hydrological and geomorphological processes will be maintained in the lakes and non-native species will be absent. All factors affecting the achievement of these conditions are under control	**Inadequate (Stable) –** Due to viable but declining population and habitat quality	**Unfavourable** – Surveys of water plants from 2003 and 2004 recorded floating water plantain but acid neutralising capacity appeared to below limits and further information is needed before condition can be determined favourable.

Table 4.15 [Cont.]: Conservation Objectives and Baseline Conditions – Elenydd SAC

4.7.3 Vulnerability of the SAC

The issues to which the Elenydd SAC is vulnerable are highlighted in Table 4.16. This information has been collated from the Core Management Plan for Elenydd-Mallaen SAC, Elenydd SPA, Elan Valley Woodlands SAC and Mynydd Mallaen SAC.

Issue	Detail	Source of Data
Water clarity	Floating water plantain can only thrive where there is good light penetration of the lake bed	Core Management Plan
Water quality	Oligotrophic lakes and associated plant communities are vulnerable to acidification from distant/diffuse sources and nutrients from adjacent catchment	Core Management Plan

Table 4.16: Summary of Vulnerability of Elenydd SAC

Issue	Detail	Source of Data
Hydrology	Water fluctuations are being caused by the use of the SAC to support public abstraction at Foel requiring top up from Claerwen Reservoir.	Core Management Plan
Air quality	Air pollution may be a source of acidifcation in and nutrient loading in the lakes, bogs and heathland.	Core Management Plan
Disturbance	Vegetation may be vulnerable to excavations, vehicle and stock trampling.	Core Management Plan
Grazing pressure	A balance needs to be achieved to prevent over or under grazing on Calaminarian grassland	Core Management Plan
Burning	Burning is not appropriate management for heathland and bog habitats.	Core Management Plan
Erosion	Erosion generally caused by uncontrolled fires, vehicle use and heavy fires.	Core Management Plan
Peat erosion	Natural cycle of peat erosion and deposition can be disrupted by burning, heaving grazing pollution and vehicle damage.	Core Management Plan
Drainage	New drains within the bog could cause surface drying and peat erosion.	Core Management Plan

Table 4.16 [Cont.]: Summary of Vulnerability of Elenydd SAC

4.8 HUMBER ESTUARY SAC

4.8.1 Qualifying Criteria

The following information is taken from the Joint Nature Conservation Committee (JNCC) site description and accompanying site citation document, both of which are available at http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0030170.

Country:	England
Unitary Authority:	East Yorkshire and northern Lincolnshire, Extra-Regio, Lincolnshire
Centroid:	SO838110
Latitude:	53 35 21 N
Longitude:	00 44 04 W
SAC EU Code:	UK00
Status:	Designated Special Area of Conservation (SAC)
Area (ha):	36657.15

The Humber Estuary is the second-largest coastal plain estuary in the UK and the largest coastal plain estuary on the east coast of Britain. The SAC principally comprises estuaries sand flats, lagoons (94.9%), salt marches, salt pastures and salt steppe (4.4%), coastal sand dunes, sand beaches and Machair (0.4%) and Bogs, marshes water-fringed vegetation and fens (0.4%).

Qualifying Habitats

The site qualifies under the Habitats Directive (92/43/EEC) as it supports ten habitats of European importance listed on Annex I of the Directive. Estuaries and Mudflats and sandflats not covered by seawater at low tide are listed as a primary reason for selection. The following habitats are listed as a qualifying feature but are not a primary reason for site selection:

- Sandbanks which are slightly covered by sea water all the time;
- Coastal lagoons*;
- Salicornia and other annuals colonising mud and sand;
- Atlantic salt meadows (Glauco-Puccinellietalia maritimae);
- Embryonic shifting dunes;
- Shifting dunes along the shoreline with Ammophila arenaria (White dunes);
- Fixed coastal dunes with herbaceous vegetation (Grey dunes)*; and,
- Dunes with Hippopha rhamnoides.

* Priority Feature

Qualifying Species

The site qualifies under Article 4.1 of the Habitats Directive (92/43/EEC) as it supports three species of importance listed on Annex II of the Directive. These species are:

- Sea lamprey *Petromyzon marinus*;
- River lamprey *Lampetra fluviatillis*; and,
- Grey seal *Halichoerus grypus*.

4.8.2 Conservation Objectives and Baseline Conditions

The conservation objectives and baseline conditions for the Humber Estuary SAC are provided in Table 4.17 below. The conservation objectives were taken from the Conservation Objectives and Supplementary Advice for Humber Estuary SAC document (Natural England, 2014e). The conservation status and condition assessment was determined through the UK's third Article 17 Habitats Directive Report from 2013 (JNCC, 2013) and Natural England's online Site of Special Scientific Interest Condition Assessment tool.

Conservation Objectives

Ensure that the integrity of the site is maintained, and ensure that the site retains its ability to contribute to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- The extent of qualifying natural habitats and habitats of qualifying species;
- The structure and function of qualifying natural habitats;
- The structure and function of the habitats of qualifying species

- The supporting process 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.

Qualifying feature	Conservation Objectives	Conservation status	Condition assessment
1130. Estuaries	As above	**Bad (Declining)** – based unfavourable structure and function in 40.6% of habitat	See Table 4.18 below
1140. Mudflats and sandflats not covered by seawater at low tide	As above	**Bad (Declining)** – based on unfavourable structure and function in 26.7% of resource	See Table 4.18 below
1110. Sandbanks which are slightly covered by sea water all the time	As above	**Inadequate (Stable)** – based on unfavourable structure and function in 10.9% of resource and stable short-term trends.	See Table 4.18 below
1150. Coastal lagoons	As above	**Inadequate (Stable)** – based on unfavourable structure and function in 5.5% of resource and stable short-term trends.	See Table 4.18 below
1310. Salicornia and other annuals colonising mud and sand	As above	**Bad (Stable)** – based unfavourable structure and function in over 25% of resource and stable short-term trends.	See Table 4.18 below
1330. Atlantic salt meadows (Glauco-Puccinellietalia maritimae	As above	**Bad (Stable)** – based unfavourable structure and function in over 25% of resource and stable short-term trends.	See Table 4.18 below
2110. Embryonic shifting dunes	As above	**Bad (Declining)** - based unfavourable structure and function in over 25% of resource and potential decline due to Nitrogen critical load exceedance.	See Table 4.18 below
2120. Shifting dunes along the shoreline with Ammophila arenaria (White dunes);	As above	**Bad (Declining)** - based unfavourable structure and function in over 25% of resource and potential decline due to Nitrogen critical load exceedance.	See Table 4.18 below
2130. Fixed dunes with herbaceous vegetation (Grey dunes)	As above	**Bad (Declining)** - based unfavourable structure and function in over 25% of resource and potential decline due to Nitrogen critical load exceedance.	See Table 4.18 below
2160. Dunes with Hippopha rhamnoides	As above	**Bad (Improving)** - based unfavourable structure and function in over 25% of resource but improving short-term trends.	See Table 4.18 below
S1095 Sea lamprey *Petromyzon marinus*	As above	**Unknown** – Due to the population and habitat extent being currently unknown.	See Table 4.18 below
S1099 River lamprey *Lampetra fluviatillis*	As above	**Inadequate (Improving)** – due to poor population levels and future prospects but population is currently stable.	See Table 4.18 below
1364. Grey Seal *Halichoerus grypus*	As above	Favourable – due to continual increase in population size in long-term.	See Table 4.18 below

Table 4.17: Conservation Objectives and Baseline Conditions – Humber Estuary SAC

Condition Assessment

Table 4.18 below details the four SSSIs that make up the Humber Estuary SAC designation and proportion of each SSSI in favourable or unfavourable condition.

SSSI	Condition Summary of SSSI (%)			
	Favourable	Unfavourable (Recovering)	Unfavourable (No change)	Unfavourable (Declining)
Humber Estuary SSSI	7.54%	91.21%	0.17%	1.09%
North Killingholme SSSI	0.00%	74.35%	25.65%	0.00%
Saltfleetby-Theddlethorpe Dunes SSSI	78.78%	21.22%	0.00%	0.00%
The Lagoons SSSI	0.00%	100.00%	0.00%	0.00%

Table 4.18: Condition Summary of component SSSIs that make up Humber Estuary SAC.

4.8.3 Vulnerability of the SAC

The issues to which the Humber Estuary SAC is vulnerable are highlighted in Table 4.19. This information has been collated from the Humber Estuary SAC Site Improvement Plan (Natural England, 2015).

Issue	Detail	Source of Data
Water pollution	A sag in the dissolved oxygen in the tidal River Ouse is below threshold and may cause barrier to sea lamprey when they are migrating through the area in summer months. Phosphates from a former Aluminium smelting plant and surrounding clay pits may also be an issue for water quality.	Site Improvement Plan
Coastal Squeeze	Loss of designated SAC features by sea level rise and presence of fixed defences affecting every salt marsh or mudflats where salt marsh is absent	Site Improvement Plan
Changes in species distribution	Unknown spawning sites for river and sea lamprey. Further information is needed to prevent deterioration.	Site Improvement Plan
Undergrazing	Introduction of grazing for adjacent SPA birds needs to be investigated to determine potential impacts on saltmarsh and sand dune features	Site Improvement Plan
Invasive species	The presence of invasive plant species such as Himalayan balsam and Japenese knotweed is a catchment wide issue alongside the presence of marine invasive species such as the slipper limpet *Crepidula fornicata* and Chinese mitten crab *Eriocheir sinensis*	Site Improvement Plan
Natural changes to site conditions	Changes in topography and habitats in the inner estuary may be leading to a reduction of important habitats. Increasing sediment loads, storm events changes in water levels and sluice functioning and climate change are also likely to influence habitat conditions and need to be better understood.	Site Improvement Plan
Public access/disturbance	Recreational activities such as dog walking, birders and off-road vehicles could be contributing toward a decline in breeding birds.	Site Improvement Plan
Fisheries: commercial, marine and estuarine	The stocking of native and non-native freshwater fish is having an adverse impact on aquatic macrophytes and water quality.	Site Improvement Plan
Direct land take from development	An illegal flood defence has been created on the Hessle forshore where material has been dumped.	Site Improvement Plan
Air pollution: impact of atmospheric nitrogen deposition	Nitrogen deposition exceeds site relevant critical loads.	Site Improvement Plan

Table 4.19: Summary of Vulnerability of Humber Estuary SAC

Issue	Detail	Source of Data
Direct impact from third party	Commercial scale collection of *Salicornia* occurs near Saltfleetby.	Site Improvement Plan

Table 4.19 [Cont.]: Summary of Vulnerability of Humber Estuary SAC

4.8.4 Site Improvement Plan

The Site Improvement Plan for Humber Estuary SAC identifies a series of actions that are required to address the issues currently affect the conservation status of qualifying features in the SAC.

4.9 HUMBER ESTUARY SPA

4.9.1 Qualifying Criteria

The following information is taken from the Joint Nature Conservation Committee (JNCC) site description and accompanying site citation document, both of which are available at http://jncc.defra.gov.uk/default.aspx?page=1996.

Country:	England
Unitary Authority:	East Riding of Yorkshire, North Lincolnshire, North-east Lincolnshire.
Latitude:	53 37 58 N
Longitude:	00 00 39 W
SPA EU Code:	UK9006111
Status:	Designated Special Area of Conservation (SAC)
Area (ha):	15202.53

The JNCC website describes the Humber Estuary SPA as follows:

"*The Humber Flats, Marshes and Coast is located on the east coast of England and comprises extensive wetland and coastal habitats within the Humber Estuary. The Estuary drains a catchment of some 24,240 spaure kilometres and provides the largest single point of freshwater from Britain into the North Sea. It has the second highest tidal range in Britain (7.2 m) and approximately one-third of the estuary is exposed as mud or snad-flats at low tide*."

Qualifying Species

The site qualifies under Article 4.1 of the Birds Directive by supporting populations of European importance or supporting including the following species listed on Annex 1 of the Directive:

- Great bittern *Botaurus stellaris* (non-breeding) – 4 individuals (4% of GB population);
- Great bittern *Botaurus stellaris* (breeding) – 2 booming males (10.5% of the GB population);
- Eurasian marsh harrier *Circus aeruginosus* (breeding) – 10 breeding females (6.3% of GB population);
- Hen harrier *Circus cyaneus* (non-breeding) – 8 individuals (1.1% of GB population);
- Pied avocet *Recurvirostra avosetta* (non-breeding) - 59 individuals (1.7% of GB population);
- Pied avocet *Recurvirostra avosetta* (breeding) – 64 pairs (8.6% of the GB population);
- European golden plover *Pluvialis apricaria* (non-breeding) – 30,709 individuals (12.3% of GB population);
- Ruff *Philomachus pugnax* (non-breeding) – 128 individuals (1.4% of GB population);
- Bar-tailed *godwit Limosa lapponica* (non-breeding) – 2752 individuals (4.4% of GB population); and,
- Little tern *Sterna albifrons* (breeding) – 51 pairs (2.1% of breeding population).

The site also qualifies under Article 4.2 of the Birds Directive for supporting populations of European importance of the following migratory species:

- Common shelduck *Tadorna tadorna* (non-breeding) – 4,464 individuals (1.5% of NW Europe breeding population);
- Red knot *Calidris canutus* (non-breeding) – 28,165 individuals (6.3% of *islandica* subspecies)
- Dunlin *Calidris alpina* (non-breeding) – 22,222 individuals (1.7% of NW non-breeding population of *alpina* subspecies)
- Black-tailed godwit *Limosa limosa islandica* (non-breeding) – 1,113 individuals (3.2% of wintering *islandica* subspecies)
- Common redshank *Tringa tetanus* (non-breeding) – 4,632 individuals (3.6% of *brittanica* subspecies);
- Red knot *Calidris canutus* (non-breeding) – 18,500 passage individuals (4.1% of *islandica* subspecies);
- Dunlin *Calidris alpina* (non-breeding) – 20,269 passage individuals (1.5% of *alpina* subspecies)
- Black-tailed godwit *Limosa limosa islandica* (non-breeding) – 915 passage individuals (2.6% of *islandica* subspecies); and,
- Common redshank *Tringa tetanus* (non-breeding) – 7,462 passage individuals (5.7% of *brittanica* subspecies).

The site is also qualifies under Article 4.2 of the Birds Directive for its water bird assemblage (c.154,000 birds during the winter and passage period.

4.9.2 Conservation Objectives and Baseline Conditions

The conservation objectives and baseline conditions for the Humber Estuary SAC are provided in Table 4.20 below. The conservation objectives were taken from the Conservation Objectives for Humber Estuary SPA document (Natural England, 2014e). The conservation status was determined through the bird trends data available on the British Trust for Ornithology website (BTO, 2017). The condition assessment was determined using Natural England's online Site of Special Scientific Interest Condition Assessment tool.

Conservation Objectives

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

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

Qualifying feature	Conservation Objectives	Conservation status	Condition assessment
A021. Great bittern *Botaurus stellaris* (non-breeding)	As above	**Unfavourable –** Winter population is 600 males with identified winter range and population decline (1981 – 2007/2010)	See Table 4.21 below.
A021. Great bittern *Botaurus stellaris* (breeding)	As above	**Unfavourable** – Due to small breeding population and recent breeding range decline (1981-2010)	See Table 4.21 below.
A048. Common shelduck *Tadorna tadorna* (non-breeding)	As above	**Unfavourable** – Winter population 61,000 individuals but recent winter range and population decline (1981 – 2010/2007)	See Table 4.21 below.
A081. Eurasian marsh harrier *Circus aeruginosus* (breeding)	As above	**Unfavourable** - due to small population size (400 pairs) and recent breeding population and range decline (1981 – 2007/2010)	See Table 4.21 below.
A082. Hen harrier *Circus cyaneus* (non-breeding)	As above	**Unfavourable –** Population at 575 pairs in UK in 2016 showing slight decline since 2014 survey.	See Table 4.21 below.
A132. Pied avocet *Recurvirostra avosetta* (non-breeding)	As above	**Unfavourable** – Winter population at 7500 individuals with recent winter population and range decline (1981-2007/2010)	See Table 4.21 below.
A132. Pied avocet *Recurvirostra avosetta* (non-breeding)	As above	**Unfavourable** – breeding population at 1500 pairs with recent breeding population and range decline (1981 – 2007/2010)	See Table 4.21 below.
A140. European golden plover *Pluvialis apricaria* (non-breeding)	As above	**Favourable** – UK winter population at 400,000 individuals having recovered from sharp decline in 2011.	See Table 4.21 below.
A143. Red knot *Calidris canutus* (non-breeding)	As above	**Unfavourable** – Winter population at 320,000 individuals but with recent winter population and range decline (1981-2007/2010).	See Table 4.21 below.

Table 4.20: Conservation Objectives and Baseline Conditions – Humber Estuary SPA

Qualifying feature	Conservation Objectives	Conservation status	Condition assessment
A149. Dunlin *Calidris alpina* (non-breeding)	As above	**Unfavourable** – Winter population is 350,000 but with recent winter population and range decline (1981-2007/2010).	See Table 4.21 below.
A151. Ruff *Philomachus pugnax* (non-breeding)	As above	**Unfavourable** – Winter population at 800 individuals but with recent winter population and range decline (1981-2007/2010).	See Table 4.21 below.
A156. Black-tailed godwit *Limosa limosa islandica* (non-breeding	As above	**Unfavourable** – winter population at 43,000 individuals but with recent winter population and range decline (1981-2007/2010).	See Table 4.21 below.
A157. Bar-tailed godwit *Limosa lapponica* (non-breeding.	As above	**Unfavourable** – Winter population at 38,000 individuals but with recent winter population and range decline (1981-2007/2010).	See Table 4.21 below.
A162. Common redshank *Tringa tetanus* (non-breeding)	As above	**Unfavourable** – Winter population at 120,000 individuals but with recent winter population and range decline (1981-2007/2010).	See Table 4.21 below.
A195. Little tern *Sterna albifrons* (breeding).	As above	**Unfavourable** – Breeding population at 1900 pairs but with recent breeding population and range decline (1981-2007/2010).	See Table 4.21 below.

Table 4.20 [Cont.]: Conservation Objectives and Baseline Conditions – Humber Estuary SPA

Condition Assessment

Table 4.21 below details the four SSSIs that make up the Humber Estuary SPA designation and proportion of each SSSI in favourable or unfavourable condition.

SSSI	Condition Summary of SSSI (%)			
	Favourable	Unfavourable (Recovering)	Unfavourable (No change)	Unfavourable (Declining)
Humber Estuary SSSI	7.54%	91.21%	0.17%	1.09%
North Killingholme SSSI	0.00%	74.35%	25.65%	0.00%
Saltfleetby-Theddlethorpe Dunes SSSI	78.78%	21.22%	0.00%	0.00%
The Lagoons SSSI	0.00%	100.00%	0.00%	0.00%

Table 4.21: Condition Summary of component SSSIs that make up Humber Estuary SPA.

4.9.3 Vulnerability of the SPA

The issues to which the Humber Estuary SPA is vulnerable are highlighted in Table 4.22. This information has been collated from the Humber Estuary SAC Site Improvement Plan (Natural England, 2015)

Issue	Detail	Source of Data
Water pollution	Phosphates from a former Aluminium smelting plant and surrounding clay pits may also be an issue for water quality.	Site Improvement Plan
Coastal Squeeze	Loss of designated SAC features by sea level rise and presence of fixed defences affecting every salt marsh or mudflats where salt marsh is absent	Site Improvement Plan

Table 4.22: Summary of Vulnerability of Humber Estuary SPA

Issue	Detail	Source of Data
Changes in species distribution	There are declines in populations of SPA bird features due to unknown factors	Site Improvement Plan
Undergrazing	Lack of grazing by livestock has resulted in suitable habitat no longer being maintained for roosting/loafing SPA birds.	Site Improvement Plan
Invasive species	The presence of invasive plant species such as Himalayan balsam and Japanese knotweed is a catchment wide issue alongside the presence of marine invasive species such as the slipper limpet *Crepidula fornicata* and Chinese mitten crab *Eriocheir sinensis*	Site Improvement Plan
Natural changes to site conditions	Changes in the topography and habitats in the inner estuary may lead to a reduction of important habitats such as mudflats. The causes are as yet unknown	Site Improvement Plan
Public access/disturbance	Recreational disturbance could be contributing to the declines of breeding and migratory birds populations at certain locations including Earl Halton, Skitter, Barton Pits Faxfeet and Welwick. Dog walkers, birds and other regularly occurring activities may be causing disturbance.	Site Improvement Plan
Fisheries: Fish stocking	Overstocking in the clay pits of the estuaries may be causing a decline in macrophytes and water quality which may negatively impact SPA water birds.	Site improvement plan
Fisheries: commercial, marine and estuarine	Commercial fishing activities are being assessed to determine if management and appropriate mitigation measures are required.	Site Improvement Plan
Direct land take from development	An illegal flood defence has been created on the Hessle forshore where material has been dumped.	Site Improvement Plan
Air pollution: impact of atmospheric nitrogen deposition	Nitrogen deoposition exceeds site relevant critical loads.	Site Improvement Plan
Shooting/scaring	There is unauthorised wildfowling and game bird management in areas such as Haverfield Quarries. Implications for the PSA are unknown.	Site Improvement Plan
Direct Impact from third party	Commercial scale collection of Salicornia is occurring near Salfleetby.	Site Improvement Plan
Inappropriate scrub control	Successional scrub encroachment on grassland and reedbeds at Haverfield Quarries could reduce likelihood of breeding by marsh harrier	Site Improvement Plan

Table 4.22 [Cont.]: Summary of Vulnerability of Humber Estuary SPA

4.9.4 Site Improvement Plan

The Site Improvement Plan for Humber Estuary SAC identifies a series of actions that are required to address the issues currently affect the conservation status of qualifying features in the Humber Estuary SPA.

4.10 HUMBER ESTUARY RAMSAR

4.10.1 Qualifying Criteria

The following information is taken from the Joint Nature Conservation Committee (JNCC) site description and accompanying site citation document, both of which are available at http://jncc.defra.gov.uk/default.aspx?page=1996.

Country:	England
Unitary Authority:	City of Kingston upon Hull, East Riding of Yorkshire, Humberside, Lincolnshire, North East Lincolnshire and North Lincolnshire.
Latitude:	53 32 59 N
Longitude:	00 00 03 W
Ramsar Code:	UK11031
Status:	Designated Ramsar Site
Area (ha):	37987.8

The Humber Estuary Ramsar Information Sheet (JNCC, 2008) describes the site as follows:

"*The Humber Estuary is the largest macro-tidal estuary on the British North Sea Coast. It drains a catchment of some 24,240 square kilometres and is the site of the largest single output of reshwater from Britain into the North Sea… The Estuary regularly supports internationally important numbers of waterfowl in winter and nationally important breeding populations in summer."*

Qualifying Features

The site qualifies under the following Ramsar criteria:

Ramsar Criteria 1 – the site is a representative example of a near-natural estuary with the following component habitats: dune systems and humid dune slacks, estuarine waters, intertidal mud and sand flats, saltmarshes, and coastal brackish/saline lagoons.

Ramsar Criteria 3 – the site supports a breeding colony of grey seals Halichoerus grpus at Donna Nook. It is the second largest grey seal colony in England and the furthest south regular breeding site on the east coast.

Ramsar Criteria 5 – the site supports an assemblage of non-breeding waterfowl deemed to be of international importance (153,934 individuals)

Ramsar Criteria 6 – the site supports the following species populations occurring at levels of international importance:

- European golden plover *Pluvialis apricaria*– representing 2.2% and 3.8% of the passing and wintering *altifrons* subspecies population (respectively);
- Red knot *Calidris canutus* – representing 4.1% and 6.3% of the passage and wintering *islandica* subspecies population (respectively);
- Dunlin *Calidris alpine* – representing 1.5% and 1.7% of the passage and wintering *alpina* subspecies population (respectively);
- Black-tailed godwit *Limosa limosa* – representing 2.6% and 3.2% of the passage and wintering *islandica* subspecies population (respectively);
- Bar-tailed *godwit Limosa lapponica* – representing 2.3% of the wintering *lapponica* subspecies population
- Common redshank *Tringa tetanus* – representing 1.5% and 3.6% of the passage and wintering *brittanica* subspecies population (respectively); and,
- Common shelduck *Tadorna tadorna* – representing 1.5% of the breeding northwest European population.

Ramsar Criteria 8 – the site acts as an important migration route for both river lamprey Lampetra fluviatilis and sea lamprey Petromyzon marinus between coastal waters and their spawning areas.

4.10.2 Conservation Objectives and Baseline Conditions

There are no available conservation objectives and baseline conditions for the Humber Estuary Ramsar. However, as the criterion for listing of the Ramsar correspond with the qualifying habitat and species assemblages in the Humber Estuary SAC and SPA, the conservation objectives and conservation status are assumed to accord with those set out in the Humber Estuary SAC Conservation Objectives document (Natural England, 2014e). Condition assessment is based on the overall status of the four component Sites of Species Scientific Interest (SSSI) that make up the Ramsar designation using Natural England's online Site of Special Scientific Interest Condition Assessment tool..

Conservation Objectives

Ensure that the integrity of the site is maintained, and ensure that the site retains its ability to contribute to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- The extent of qualifying natural habitats and habitats of qualifying species;
- The structure and function of qualifying natural habitats;
- The structure and function of the habitats of qualifying species
- The supporting process 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.

Condition Assessment

Table 4.23 below details the four SSSIs that make up the Humber Estuary Ramsar designation and proportion of each SSSI in favourable or unfavourable condition.

SSSI	Condition Summary of SSSI (%)			
	Favourable	Unfavourable (Recovering)	Unfavourable (No change)	Unfavourable (Declining)
Humber Estuary SSSI	7.54%	91.21%	0.17%	1.09%
North Killingholme SSSI	0.00%	74.35%	25.65%	0.00%
Saltfleetby-Theddlethorpe Dunes SSSI	78.78%	21.22%	0.00%	0.00%
The Lagoons SSSI	0.00%	100.00%	0.00%	0.00%

Table 4.23: Condition Summary of component SSSIs that make up Humber Estuary Ramsar

4.10.3 Vulnerability of the SAC

The issues to which the Humber Estuary SPA is vulnerable are highlighted in Table 4.24. This information has been collated from the Humber Estuary SAC Site Improvement Plan.

Issue	Detail	Source of Data
Disturbance to Vegetation through cutting/clearing	Reedbeds being cut and cleared on margins of pits associated with angling.	Ramsar Information Sheet
Vegetation/succession	Lack of reedbed management leading to scrub encroachment.	Ramsar Information Sheet
Water diversion for irrigation/domestic/industrial use	Abstraction causes reduced freshwater input.	Ramsar Information Sheet
Overfishing	Substantial lamprey by-catch in eel nets in River Ouse.	Ramsar Information Sheet
Pollution – domestic sewerage	Reduced dissolved oxygen in River Ouse is a barrier to fish migration.	Ramsar Information Sheet
Pollution – agricultural fertilisers	Reduced dissolved oxygen in River Ouse is a barrier to fish migration.	Ramsar Information Sheet

Table 4.24: Summary of Vulnerability of Humber Estuary SPA

Issue	Detail	Source of Data
Recreational/tourism disturbance	Illegal access by motorised recreational vehicles and craft.	Ramsar Information Sheet
Other factor	Coastal squeeze causing loss of intertidal habitats and saltmarsh due to sea level rise and fixed defenses	Ramsar Information Sheet

Table 4.24 [Cont.]: Summary of Vulnerability of Humber Estuary SPA

5. THE SOLIHULL LOCAL PLAN REVIEW

In 2015, Solihull Metropolitan Borough Council commenced work on the Solihull Local Plan Review to establish an up-to-date planning framework for the future growth of the future growth of the Borough to 2033. Consultations on the Scope, Issues and Options document and the Draft Local Plan Review were carried out and completed in 2016 and 2017 respectively and the preparation of the submission draft of the Local Plan Review is ongoing and scheduled to be completed in 2018.

The Solihull Local Plan Review updates the existing Solihull Local Plan which was adopted by Solihull Borough Council in December 2013. Since its adoption, the Solihull Local Plan was subject to a legal challenge which resulted in the housing figures in the plan being deleted and remitted back to the Council for reconsideration. Furthermore, the examination of the Birmingham Development Plan identified that the city was unable to address its housing requirements and that neighbouring authorities, including Solihull Metropolitan Borough, was required to review their housing requirements in order to accommodate some of the housing shortfall.

During this period, phase one of the Government's plans for High Speed Rail has also received royal assent and construction of the proposed route through Solihull Borough is scheduled to be undertaken, and completed, within the Local Plan period of 2011 to 2028. The proposals with the Borough include the construction of a new interchange station situated on green belt land adjacent to the M42 and NEC/Airport creating additional planning challenges not previously addressed in the Solihull Local Plan.

5.1 POLICY SCREENING

The draft Solihull Local Plan Review includes ten chapters outlining a vision, spatial strategy and 23 policies designed to achieve sustainable growth within the Borough and address the planning challenges outlined above. Each chapter and policy of the Local Plan Review were subject to an initial screening to determine if they could give rise to ecological effects on the Natura 2000 network, alone or in combination with other policies or proposals within the plan. The findings of this initial policy screening are summarised in Table 5.1.

Chapter	Policies	Screened in/out
Chapter 1: Introduction	N/A	**Screened out** – Administrative text
Chapter 2: Borough Portrait	N/A	**Screened out** – Administrative text
Chapter 3: Challenges	N/A	**Screened out** – Administrative text
Chapter 4: Vision	N/A	**Screened out** – General statement of policy/general aspiration
Chapter 5: Spatial Strategy	N/A	**Screened out** - Policy listing general criteria for testing the acceptability/sustainability of proposals.
Chapter 6: Sustainable Economic Growth	Policy P1 – UK Central Hub	Policy could potentially lead to type of change or variation in existing activity and so likelihood of significant effect on Natura 2000 network, alone or in combination, cannot be ruled out at Preliminary examination stage.
	Policy P1A – Blythe Valley Business Park	Policy could potentially lead to type of change or variation in existing activity and so likelihood of significant effect on Natura 2000 network, alone or in combination, cannot be ruled out at Preliminary examination stage.
	Policy P2 – Maintain Strong, Competitive Town Centres	Policy could potentially lead to type of change or variation in existing activity and so likelihood of significant effect on Natura 2000 network, alone or in combination, cannot be ruled out at Preliminary examination stage.

Table 5.1 [Cont.] – Summary of initial Policy Screening

Chapter	Policies	Screened in/out
	Policy P3 – Provision of Land for General Business and Premises	Policy could potentially lead to type of change or variation in existing activity and so likelihood of significant effect on Natura 2000 network, alone or in combination, cannot be ruled out a
Chapter 7: Providing Homes for All	Policy P4 – Meeting Housing Needs	**Screened out** – Policy for which the effect cannot undermine the conservation objects of a European Site alone or in combination.
	Policy P5 – Provision of Land for Housing	Policy could potentially lead to type of change or variation in existing activity and so likelihood of significant effect on Natura 2000 network, alone or in combination, cannot be ruled out at this stage.
	Policy P6 – Provision of Sites for Gypsies and Travellers	Policy could potentially lead to type of change or variation in existing activity and so likelihood of significant effect on Natura 2000 network, alone or in combination, cannot be ruled out at Preliminary examination stage.
Chapter 8: Improving Accessibility and Encouraging Sustainable Travel	Policy P7 – Accessibility and Ease of Access	**Screened out** – Policy listing general criteria for testing acceptability/sustainability of proposals
	Policy P8 – Managing Travel Demand and Reducing Congestion	**Screened out** – Policy for which the effect cannot undermine the conservation objects of a European Site alone or in combination.
	Policy P8A – Rapid Transit	**Screened out** – Policy for which the effect cannot undermine the conservation objects of a European Site alone or in combination.
Chapter 9: Protecting and Enhancing Our Environment	Policy P9 – Mitigating and Adapting to Climate Change	**Screened out** – Environmental Protection / Site safeguarding policy
	Policy P10 – Natural Environment	**Screened out** – Environmental Protection / Site safeguarding policy
	Policy P11 – Water Management	**Screened out** – Environmental Protection / Site safeguarding policy
	Policy P12 – Resource Management	Policy could potentially lead to type of change or variation in existing activity and so likelihood of significant effect on Natura 2000 network, alone or in combination, cannot be ruled out at Preliminary examination stage.
	Policy P13 – Minerals	Policy could potentially lead to type of change or variation in existing activity and so likelihood of significant effect on Natura 2000 network, alone or in combination, cannot be ruled out at Preliminary examination stage.
	Policy P14 – Amenity	**Screened out –** Environmental Protection / Site safeguarding policy
Chapter 10: Promoting Quality of Place	Policy P15 – Securing Design Quality	**Screened out** – Policy does not lead to development other change.
	Policy P16 – Conservation of Heritage Assets and Local Distinctiveness	**Screened out** – Environmental Protection / Site safeguarding policy
	Policy P17 – Countryside and Green Belt	**Screened out** – Environmental Protection / Site safeguarding policy
11. Health and Supporting Local Communities	Policy P18 – Health and Wellbeing	**Screened out** – Policy does not lead to development other change.

Table 5.1 [Cont.] – Summary of initial Policy Screening

Chapter	Policies	Screened in/out
	Policy P19 Range and Quality of Local Services	**Screened out** – Policy for which the effect cannot undermine the conservation objects of a European Site alone or in combination.
	Policy P20 – Provision for Open Space Children's Play, Sport, Recreation and Leisure	**Screened out** – Policy for which the effect cannot undermine the conservation objects of a European Site alone or in combination.
12. Delivery and Monitoring	Policy P21 – Developer Contributions and Infrastructure Provision	**Screened out** – Policy does not lead to development other change.

Table 5.1 [Cont.] – Summary of initial Policy Screening

5.2 POLICY SUMMARY AND POTENTIAL EFFECTS

Table 5.2 summarises the potential environmental effects arising from the implementation of the policies and proposals detailed in the Solihull Local Plan that are to be considered in the Preliminary Assessment in Chapter 6.

Policy/ Proposal	Description	Potential Ecological Impacts			
		Air quality	**Hydrology (Water Quantity)**	**Hydrology (Water Quality)**	**Recreational Pressures**
Policy P1 – UK Central Hub	- Support for future commercial development of the UK central hub area including Arden Cross, the National Exhibition Centre (NEC), Birmingham Airport, Jaguar Landover, and Birmingham Business Park. - No specific proposals are detailed.	Yes – Policy Supports future growth of UK Hub and so could be associated with increased commercial activity and subsequent increase in vehicle emissions.	Yes – An increase in commercial activity may result in increased demands for water abstraction for commercial uses.	Yes – An increase in commercial activity is may result in an increased demand for waste water treatment and management.	-
Policy P1A – Blythe Valley Business Park	- Support for development of the Blythe Valley Business Park for commercial and ancillary uses. - No specific proposals are detailed.	Yes – Policy supports future growth of Blythe Valley Business Park and so could be associated with increase commercial activity and subsequent increases in vehicle emissions.	Yes – An increase in commercial activity may result in increased demands for water abstraction for commercial uses.	Yes – An increase commercial activity may result in increased demands waste water treatment and management for commercial uses.	-
Policy P2 – Maintaining Strong, Competitive Town Centres.	- Support for development of town centres in Solihull, Shirley and Chelmsley Wood. - Aspiration of up to 11,700sqm of commercial and leisure facilities, 74,620 sqm of new office, 1400 new homes and 100 new homes near the train station. - Site allocations are set out in the Town Centre Masterplan 2016-2036.	Yes – Policy supports future growth of Solihull Town Centre and so could be associated with increase commercial activity and subsequent increases in vehicle emissions.	Yes – An increase in commercial activity may result in increased demands for water abstraction for commercial uses.	Yes – An increase commercial activity may result in increased demands waste water treatment and management for commercial uses.	-
Policy P3 – Provision of land for General Business and Premises	- Support for new land for general business premises across the borough. - Site allocations include eight site allocations comprising up to 35.5 ha (excluding potential site availability of strategic sites in Policies P1 and P1A.	Yes – Policy allocates land for general business use and so could be associated with increase commercial activity and subsequent increases in vehicle emissions.	Yes – An increase in commercial activity may result in increased demands for water abstraction for commercial uses.	Yes – An increase commercial activity may result in increased demands waste water treatment and management for commercial uses.	Policy P3 – Provision of land for General Business and Premises

Table 5.2 (cont): Summary of Potential Environmental Effects of Broad Policy Areas

Policy	Description	Potential Ecological Impacts			
		Air quality	**Hydrology (Water Quantity)**	**Hydrology (Water Quality)**	**Recreational Pressures**
Policy P5: Provision of Land for Housing	- Allocation for at least 6,522 net additional homes (a total of 15,029 over plan period 2014-2033) - Identifies housing allocation sites required to meet housing targets.	Yes – Policy allocates land for future residential development in the borough which will result in an increased population with subsequent increases in household and vehicle emissions.	Yes – Future housing allocations may increase demands for water abstraction for domestic use.	Yes – Future housing allocations may increase demands for waste water treatment and management for domestic use.	Yes – Future housing allocations will result in an increased population with potential recreational demands for accessible green spaces within or surrounding the borough.
Policy P6: Provision of Land for Gypsies and Travellers	- Criteria for determining the allocation of future gypsy/traveller sites - No specific allocations or proposals are given.	-	Yes – Allocation of additional gypsy/traveller sites may increase demands for water abstraction alone or in combination with other policies in the plan.	-	
Policy P12: Resource Management	- Support for new waste management facilities. - Criteria for determining new waste management allocations. - No specific waste management allocations are given.	Yes - Policy sets out criteria for determining location of future waste management facilities which could lead to an increase in commercial activity and subsequent vehicle/ industrial emissions.	-	Yes – Depending on future location, waste management facilities could result in increased demand for waste water treatment and management.	-
Policy P13: Minerals	- Minerals safeguarding area included on the proposals map. - Provision for sand and gravel extraction although no site allocations are given.	Yes – Policy promotes and sets out criteria for future minerals proposals which may increase commercial activity and subsequent levels of vehicle emissions.	-	-	-

Table 5.2 (cont): Summary of Potential Environmental Effects of Broad Policy Areas

6. PRELIMINARY EXAMINATION

This section details the preliminary examination of whether the identified ecological impacts of the Solihull Local Plan Review will have any adverse effects on the ten Natura 2000 sites that have connective links to the Metropolitan Borough area. The potential for Likely Significant Effects in combination with other plans are summarised in Chapter 7.

6.1 ENSORS'S POOL

Section 4.1 highlights that Ensor's Pool SAC is vulnerable to the following key issues:

- Change in species composition

6.1.1 Changes in Species Composition

According to the Site Improvement Plan for Ensor's Pool, the SAC comprises an abandoned clay pit on the western edge of Nuneaton in Warwickshire. The pool is 3.79 ha in size with an average depth of 8 m which is ground-water fed. The most recent survey of Ensor's Pool in September and October 2014 did not find any of the qualifying species - white-clawed crayfish. The Site Improvement Plan for Ensor's Pool SAC states that the cause of the apparent decline is unclear. One of the proposed actions detailed in the Site Improvement Plan for Ensor's Pool SAC is to investigate the possible cause of white-clawed crayfish decline. Therefore, consideration is given to the potential to impact on the investigative works being carried out and any other measures that may be required to address the issue.

Direct Effects
The SAC is located 9 km to the east of Solihull Metropolitan Borough and is surrounded by urban development associated with the town of Nuneaton and Bedworth. Given the proximity of the borough to the SAC, and the intervening land issues, no direct effects such as physical habitat loss or fragmentation leading to a change in species composition in the SAC are likely as a result of the policies and proposals detailed in the Solihull Local Plan Review.

Water Abstraction
Both Solihull Metropolitan Borough and Ensor's Pool are located within the Tame, Anker and Mease Catchment area. Water Abstractions in this catchment are managed through the Tame, Anker and Mease Catchment Abstraction Management Strategy (CAMS) (Environment Agency, 2013) , which provides information about the water resources available and the environmental controls that will employed when issuing or reviewing abstraction licences in the catchment. Ensor's Pool SAC is identified in CAMS as site which affords very high protection and one for which the Environment Agency has a duty to maintain and improve the site in accordance with the Habitats Directive. The CAMS subsequently outlines that any water management strategy, or licence, determined by the Environment Agency should not result in the degradation of the SAC. In view of these abstraction licence controls issued by the Environment Agency, it is unlikely that there will be any water abstraction effects on species composition in Ensor's Pool SAC as a result of the policies and proposals detailed in the Solihull Local Plan Review.

Waste Water Management
As part of the Joint Warwickshire Partnership Water Cycle Study (Aecom, 2016), the effects of Waste Water Management were considered for designated sites within the Warwickshire Area. The study consulted Environment Agency about potential discharges into Ensor's Pool SAC. The Environment Agency stated that an investigation was carried out into the main inputs into the pool and that it was discovered that there are no permitted discharges into the SAC and that the SAC is predominantly fed via land drains from a farm. No connection between the SAC and waste water treatment in the Warwickshire study area was identified. Given the intervening distance of Solihull Metropolitan Borough from the SAC, the intervening land uses and the current restriction on discharges into the SAC, no waste water management effects leading to a change in species composition in the SAC are likely as a result of the policies and proposals detailed in the Solihull Local Plan Review.

6.2 CANNOCK EXTENSION CANAL SAC

Section 4.2 highlights that the SAC is vulnerable to the following key issues:

- Water pollution
- Overgrazing
- Invasive species
- Air pollution

6.2.1 Water Pollution

The Site Improvement Plan for Cannock Extension Canal SAC outlines that the SAC has previously been vulnerable to historic sediment loads, which have since been resolved. A consultation response from Natural England cited in the Habitat Regulations Assessment of the Black Country Joint Core Strategy Screening Report (UE associates, 2010) states that;

"*It is now clear that any road drainage reaching the canal is only off a very short stretch of the B4154 and, as a consequence, any increase in road traffic along this road resulting from the proposal of either your own authorities or that of the Black Country Authorities.*

Indeed, it is now clear that the polluted water originates off Wyrley Common and matters are now in hand to resolve that issue.

As a consequence, Natural England agrees that it is not necessary for you to proceed to the next stages of the HRA in terms of this particular issue."

However, the Site Improvement Plan (Natural England, 2014b), which post-dates the Natural England response, also identifies that heavy rainfall events still cause stained inflows in the SAC indicating a continuing, albeit low sediment loading. Further assessment work is proposed to investigate if the previous sediment control works are working and to understand the flow from other land surrounding the site and to assess all inflows from boats moorings and roads.

Cannock Extension Canal SAC is situated 18.8 km to the northwest of Solihull Metropolitan Borough and is separated by the urban areas of Birmingham and Walsall. All land uses, roads, and moorings within or adjacent to the SAC, which are likely to be subject to further investigation into sources of water pollution, are outside of the Solihull Metropolitan Borough. Furthermore, there are no identified historical linkages between sources of water pollution in the SAC and Solihull Metropolitan Borough. It is therefore concluded that the policies and the proposals of the Solihull Local Plan Review will have no effects with regards to water pollution in the SAC, or on any associated remedial actions proposed.

6.2.2 Overgrazing

There are no identified linkages between overgrazing pressure from geese in Cannock Extension Canal SAC and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no contributing effects on overgrazing within the SAC or any effect associated remedial actions that are proposed.

6.2.3 Invasive Species

There are no identified linkages between the cause or spread of invasive non-native species in the Cannock Extension Canal SAC and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no contributing effects on the spread of non-native invasive species in the SAC or on any associated remedial actions proposed.

6.2.4 Air Quality

The Site Improvement Plan for the Cannock Extension Canal SAC (Natural England, 2014b) identifies that the site exceeds its critical load with regards to nitrogen deposition and outlines that a Site Nitrogen Action Plan should be produced to control, reduce and ameliorate atmospheric nitrogen impacts. At the time of writing it is unknown whether this plan has been produced, however it is evident that any continued increase in nitrogen deposition has the potential to result in a deleterious effect on the sensitive species for which the

SAC is designated. It is necessary, therefore, to consider the likelihood of the implementation of the Solihull Local Plan Review providing a measurable contribution to baseline nitrogen levels at the SAC. Atmospheric nitrogen can occur from both local sources and long-range sources (including pollution imported from Europe and further field), therefore this section considers the potential for policies from the Local Plan to contribute to both.

Local Sources

The potential for the Local Plan Review to contribute to an increase in nitrogen deposition from local sources is considered to be negligible due to the large spatial distance between the SAC and the Solihull MBC boundary. The Site Improvement Plan for the Cannock Extension Canal SAC identifies that the main contributing sources to nitrogen accumulation are major roads, industrial estates and farming practices. The latter two categories are both described in Natural England's Atmospheric Nitrogen Theme Plan (IPENS) (Natural England, 2015c), which identifies two main forms of atmospheric nitrogen. These are oxides of nitrogen (NOx), which are derived mostly from processes involving combustion (power stations, factories, vehicle engines) and ammonia (NH_3) which principally originates from agricultural sources. The contribution of these two sources to nitrogen deposition in Natura 2000 sites varies depending on the site and its relative location, in that sites closer to urban areas are likely to be more affected by combustion sources, such as industrial areas or motorway corridors whilst rural sites could be more affected by agricultural sources. Implementation of the Solihull Local Plan Review will, however, have no influence on agricultural emissions, and only limited influence on industry within the Solihull MBC boundary only (over 18 km from the SAC boundary), and will therefore have not contribute to nitrogen deposition from local sources.

Major roads are slightly more complex, because although the majority of additional traffic arising from the implementation of the Local Plan will be focused within the borough of Solihull, it is anticipated that the increases in housing, minerals sites and support for further development around key business areas such as UK Central and Blythe Valley Business Park will lead to an increase in vehicle movements outside of the borough boundary. Natural England state that transport is known to be the single largest source of NOx emissions (NECR199) (Natural England, 2016c), with pollution relating to the road network generally accepted to be concentrated within a 200 m radius of a major road (Ricardo-AEA, 2016) cited in Natural England (2017). Reference to mapped sources indicates that the majority of the linear expanse of the SAC is located well away from major roads, with the exception of the northernmost tip which lies within 200 m of the A5. Given the large intervening distance between the SAC and the borough boundary it is anticipated that any increase in traffic along the A5 emanating from within the borough would be diffuse and minor, and would be highly unlikely to result in a measurable increase in NOx deposition within the SAC.

Long-range Sources

Categorising the contribution to baseline nitrogen levels that could occur from long-range sources is more complex, as this effectively takes into account all potential NOx emissions throughout the UK and beyond. It is outside the scope of the current screening study to define the extent to which the implementation of the Local Plan could contribute to NOx deposition at such a large scale, however it is evident from the plan policies that it will not make a significant contribution to the level of air pollution arising from agricultural sources, either alone or in combination with other plans. Furthermore, applications for industrial sites would be subject to review and assessment against air pollution policy criteria detailed in Policy P14 of the Solihull Local Plan Review and therefore potential future sources of long-range diffuse air pollution can be mitigated or controlled to ensure that they do not make a significant contribution to diffuse air pollution over the plan period.

Seven policies in the Solihull Local Plan Review (Policies P1A, P1, P2, P3, P5 P12 and P13) promote forms of development that could contribute towards an increase in atmospheric nitrogen through the increase of vehicle movements; however, this will be alleviated to some extent by policies P8, P8A and P18 targeted towards improvements in sustainable public transport, as well as from national and local targets for reductions in greenhouse gas emissions. In July 2017 DEFRA published the Air Quality Plan for Tackling Roadside Nitrogen Dioxide Concentrations in the West Midlands (UK0035) (Department for Environment, Food and Rural Affairs, 2017) which includes the Solihull Metropolitan Borough area and Cannock Extension Canal SAC. This document, whilst focussed on NO_2 only, uses measured and modelled data to inform projections for NO2 emissions within the West Midlands agglomeration zone and concludes that whilst NO_2 emissions for 2015 were higher than target levels, compliance with targets is anticipated by 2021 as a result of measures including transport modal shift (e.g. investment in public transport, park and rides etc), with further reductions over the plan period to 2030. Therefore, the Solihull Local Plan Review is not considered to make a significant contribution to long-range air pollution from vehicle movements, either alone or in-combination, during the plan period.

6.3 CANNOCK CHASE SAC

Section 4.3 highlights that the favourable conservation status of the SAC is vulnerable to the following key issues:

- Recreational pressure;
- Undergrazing;
- Drainage;
- Hydrological changes;
- Disease;
- Air pollution;
- Wildfire/arson; and,
- Invasive species.

6.3.1 Recreational Pressure

Recreational pressure is not identified as a key vulnerability in the Site Improvement Plan for Cannock Chase SAC. However, much of the SAC falls within the well used Cannock Chase Country Park, therefore the sensitive qualifying habitats in the SAC are potentially vulnerable to disturbance resulting from visitor pressure. These effects have been subject to a comprehensive study carried out by Footprint Ecology (2009) which informed the Core Strategies of the four neighbouring authorities in Cannock Chase District, South Staffordshire District, Lichfield District and Stafford Borough. The study identified that the Core Strategies combined could contribute to an approximate 9% increase in visits to the SAC and that adverse effects relating to visitor pressure could not be avoided if development is undertaken within a 400 m radius of the SAC or where large development are undertaken within an easy travel distance. The study also calculated a theoretical 'zone of influence' for adverse effects arising from recreational pressure using data generated by a Staffordshire University study into the number and spatial distribution of visitors to the wider Cannock Chase Area of Outstanding Natural Beauty (AONB). The 'zone of influence' was determined at 12 miles (19.3 km) from the SAC boundary as this encompassed the area from which 75% of visits to the SAC occur. Although, the report caveats that developments greater than 100 dwellings outside the zone of influence may also contribute to visitor pressure.

The outcome of the assessment was that a Visitor Impact Mitigation Strategy was produced by Footprint Ecology (2010). The strategy focusses on promoting responsible access within Cannock Chase SAC and ensuring no net increase in visitor pressure by attracting people away from the sensitive habitats of the SAC or the site altogether. This includes measures grouped into four areas including Habitat Management, Access Management, Visitor Infrastructure – Publicity, Education and Awareness Raising; and Alternative Sites. The Visitor Impact Mitigation Strategy was adopted by Cannock Chase SAC Partnership which incorporates all local authorities within a revised Zone of Influence area of 15 km (Cannock Chase, South Staffordshire, Lichfield, East Staffordshire and Wolverhampton City Council).

Solihull Metropolitan Borough is located 28.3 km from the edge of the Cannock Chase SAC, and as such is well outside the calculated zone of influence. The Solihull Local Plan Review includes policies that increase the number of housing, which may contribute towards visitor numbers at the SAC. However, there are other large recreational open spaces such as Sutton Park available within close proximity to the Metropolitan Borough, along with parks and natural accessible green space within the Metropolitan Borough itself which offer closer alternatives than those provided by Cannock Chase SAC. This is further supported by Policy P18 of the Solihull Local Plan Review which promotes access improvements to the green infrastructure network and the protection of open spaces to reduce the need to travel to access open space. Any residual visitor pressure on the SAC from Solihull is therefore unlikely to exceed that anticipated by the Footprint Ecology study and will be mitigated through the increase visitor carrying capacity delivered by the adopted Visitor Impact Mitigation Strategy. The policies and proposals of the Solihull Local Plan Review are not therefore considered to have an adverse effect on Cannock Chase SAC with regards to an increase in visitor/recreational pressure.

6.3.2 Undergrazing

The Site Improvement Plan for Cannock Chase SAC identifies that conservation grazing actions needed to restore the dry and wet heathland habitats in the SAC have been impeded by the presence of the plant fungal disease *Phytophthora pseudosyringae* on bilberry. The SAC has been subject to five years of monitoring to

better understand the disease and how it moves across the site and a grazing management plan is being produced that will ensure no greater risk of disease spread from grazing than from that posed by people, deer and dogs.

There are no identified linkages between the spread of the plant fungal disease *Phytophthora pseudosyringae* which has restricted grazing on Cannock Chase SAC and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan will therefore have no effect on the current undergrazing issues or the remedial actions proposed for the SAC.

6.3.4 Drainage

The Site Improvement Plan for Cannock Chase SAC identifies that the water supply to wetland habitats needs further investigation. It further states that there are artificial and historic drainage structures in the Oldacre Valley that need to be assessed to establish their impact on the wetland vegetation.

There are no identified linkages between the artificial and historic drainage structures in the Oldacre Valley and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan will therefore have no effect on the current drainage issues or the remedial actions proposed for the SAC.

6.3.5 Hydrological Issues

The Site Improvement Plan for Solihull Local Plan identifies that there has been a reduction in the extent of Valley Mire and a change in the vegetation communities in the Sher Brook Valley that is indicating a drier wetland vegetation type. The plan states that further investigations will be required to assess the hydrology in the Sher Brook Catchment area in order to inform restoration proposals.

There are no identified hydrological linkages between the Sher Brook Valley and Solihull Metropolitan Borough as the Sher Brook Catchment forms part of the wider Trent Valley Catchment, whilst Solihull Metropolitan Borough is located in the Tame, Anker and Mease and the Avon Valley Catchment. The policies and proposals of the Solihull Local Plan will therefore have no effect on the current hydrological issues or the remedial actions proposed for the SAC.

6.3.6 Disease

There are current no identified linkages between the outbreak or spread of *Phytophthora pseudosyringae* in Cannock Chase SAC and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will have no effect on the current disease issue or on the remedial actions proposed for the SAC.

6.3.7 Air Pollution

The Site Improvement Plan for the Cannock Chase SAC (Natural England, 2009c) identifies that the site exceeds its critical load with regards to nitrogen deposition and outlines that a Site Nitrogen Action Plan should be produced to control, reduce and ameliorate atmospheric nitrogen impacts. As detailed for Cannock Extension Canal SAC in Section 6.2.4, the potential for the Local Plan Review to contribute to an increase in nitrogen deposition from local sources is considered to be negligible due to the large spatial distance between the SAC and the Solihull MBC boundary. The Site Improvement Plan for the Cannock Chase SAC does not identify specific contributing sources to nitrogen accumulation but major roads, industrial estates and farming practices are likely to be the primary sources for the two main forms of atmospheric nitrogen (NOx and NH_3). Implementation of the Solihull Local Plan Review will, however, have no influence on agricultural emissions, and only limited influence on industry within the Solihull MBC boundary only (over 28 km from the SAC boundary), and will therefore not contribute to nitrogen deposition from local sources.

As detailed for Cannock Extension Canal SAC above, the majority of additional traffic arising from the implementation of the Local Plan will be focused within the Metropolitan Borough, although it is anticipated that increases in housing, minerals sites and support for further development around key business areas such as UK Central and Blythe Valley Business Park could lead to an increase in vehicle movements outside of the borough boundary. Natural England (2016c) state that transport is known to be the single largest source of NOx emissions (NECR199), with pollution relating to the road network generally accepted to be concentrated within a 200 m radius of a major road (Ricardo-AEA, 2016). Reference to mapped sources indicates that a proportion of the SAC is located well away from major roads, but northern and southern areas

do lie within 200 m of the A51 and the A460. However, given the large intervening distance between the SAC and the borough boundary and that alternative routes on the strategic road network are available in the wider area, it is anticipated that any increase in traffic along these roads emanating from within the borough would be minor, and would be highly unlikely to result in a measurable increase in NOx deposition within the SAC.

Cannock Chase SAC is outside of the West Midlands agglomeration zone and therefore it is beyond the scope of this report to examine or differentiate the potential contribution of the Solihull Local Plan Review to all long-range sources of air pollution potentially affecting the SAC. However, given the mitigating policies detailed in the Solihull Local Plan and the additional measures proposed within the Air Quality Plan for Tackling Roadside Nitrogen Dioxide Concentrations in the West Midlands, it is considered that such long-range air pollution would not make a significant contribution to long-range pollution from vehicle movements, either alone or in-combination, during the plan period.

6.3.8 Wildfire/Arson

Accidental and deliberate fires are identified in the Site Improvement Plan as historically causing major damage to Cannock Chase. Subsequently actions are identified to ensure that the fire break network is robust and that a restoration plan in the event of a fire are in place to aid recovery.

There are currently no identified linkages between accidental and deliberate fires in Cannock Chase SAC and Solihull Metropolitan Borough. The policies and proposals in the Solihull Local Plan Review will have no effect on wildfire issues or the remedial actions proposed for the SAC.

6.3.9 Invasive Species

A range of invasive species are currently present in the SAC and management objectives have focussed on monitoring and controlling certain aggressive species to prevent damage to the dry and wet heathland habitats. The Site Improvement Plan also sets out proposals to raise awareness with neighbouring landowners to help prevent the risk of spread of invasive species.

There are currently no identified linkages between the spread of invasive species within Cannock Chase SAC and Solihull Metropolitan Borough. The Policies and proposals of the Solihull Local Plan Review will therefore have no effect on the current invasive species issues or the remedial actions proposed for the SAC.

6.4 RIVER WYE SAC

Section 4.4 highlights that the favourable conservation status of the SAC is vulnerable to the following key issues:

- Water pollution;
- Physical modification;
- Invasive species;
- Hydrological changes;
- Forestry and woodland management;
- Fisheries: freshwater;
- Fisheries: fish stocking;
- Water abstraction;
- Public access/disturbance;
- Air pollution;
- Inappropriate scrub control;
- Undergrazing; and
- Transportation and service corridors.

6.4.1 Water Pollution

Sedimentation and diffuse source pollution are identified as key issues associated with water quality in the SAC. The Site Improvement Plan for the River Wye (Natural England 2014d) identifies that sources of diffuse pollution include pesticide use along with cumulative effects associated with cropping patterns in the catchment such as planting of maize, siting of potato fields, irrigation needs and levels of poultry manure. Localised point sources also of concern include mining waste, raised metal concentrations and phosphates. The plan identifies the need for a Diffuse Water Pollution Plan and Nutrient Management Plan to manage water pollution issues.

The water pollution issues identified are principally associated with the Wye Catchment and so there are no identified linkages between the localised sources of water pollution and Solihull Metropolitan Borough which is located in the Tame, Anker and Mease Catchment. The policies and proposals will have no effect on the current water pollution issues or the remedial actions proposed for the SAC.

6.4.2 Physical Modification

The relatively near-natural river system in the SAC is vulnerable to small scale development along the river, localised erosion from riverbank easement works and the presence of a series of weirs along the River Lugg. The Site Improvement Plan identifies the need for a River Restoration Plan to address the existing modification issues.

There are no identified linkages between physical modifications of the River Wye SAC and Solihull Metropolitan Borough. The Policies and Proposals of the Solihull Local Plan Review will therefore have no effect on the current river modification issues identified and the remedial actions proposed for the SAC.

6.4.3 Invasive Species

There are no identified linkages between the presence or spread of invasive non-native species within the River Wye SAC and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan will therefore have no effect on the current invasive species issues within the SAC or on any associated remedial actions proposed.

6.4.4 Hydrological Changes

Hydrological changes from urban drainage and new development are considered risks to the hydrology for the SAC. According the Site Improvement Plan for the River Wye SAC, the principal sources of concern are associated with forestry, land use and new transport infrastructure (roads, drainage) in the catchment. The lack of trees in the catchment is also considered to be a limiting factor in managing run off from steeper land.

Whilst the Solihull Local Plan will result in new urban development, the proposals will be situated entirely within Solihull Borough which is located principally within the Tame, Anker and Mease Catchment and therefore there are no identified linkages with the localised hydrological changes identified within the Site

Improvement Plan. The policies and proposals of the Solihull Local Plan Review will therefore have no effect on the current hydrological changes or the remedial action proposed for the SAC.

6.4.5 Forestry and Woodland Management

There are no identified linkages between the forestry and woodland management issues identified in the River Wye SAC Site Improvement Plan and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effect on the current forestry and woodland management issues and the remedial action proposed for the SAC.

6.4.6 Fisheries: Freshwater

There are no identified linkages between the freshwater fisheries issues identified in the River Wye SAC Site Improvement Plan and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effect on current issues associated freshwater fisheries or the remedial action proposed for the SAC.

6.4.7 Fisheries: Fish Stocking

There are no identified linkages between the fish stocking issues identified in the River Wye SAC Site Improvement Plan and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effect on current issues associated fish stocking or the remedial actions proposed for the SAC.

6.4.8 Water Abstraction

The Site Improvement Plan for the River Wye SAC (Natural England, 2014d) identifies that the flow of the river does not follow near natural patterns because of the effects of the Elan Reservoirs and the releases made from the dams. It states that work is underway to assess and agree a revised set of reservoir release rules that will require changes to the operating agreement so that impacts on hydro-morphology and ecology can be resolved. In addition, the plan outlines that changes will be made to both river regulation and abstraction licences to ensure the best use of water to balance public water supply and environmental needs.

Water Abstractions in this catchment are managed through the River Wye Catchment Abstraction Management Strategy (CAMS) (Natural Resources Wales and the Environment Agency, 2015), which provides information about the water resources available and the environmental controls that will employed when issuing or reviewing abstraction licences in the catchment. The River Wye SAC is identified in the CAMS as site which affords very high protection and one for which Natural Resources Wales and the Environment Agency, as the relevant licensing authorities, have a duty to maintain and improve the site in accordance with the Habitats Directive. Furthermore, as part of the Habitats Directive Review of Consents, the licensing authorities also considered the levels of existing protection for the River Wye SAC and used the findings to inform the principles of the 2015 CAMS. The CAMS states that:

"*Under the Habitats Regulations we have assessed the effects of all existing licensed abstraction in the Wye CAMS area to make sure they do not have a likely significant effect on the River Wye SAC, the Wye SAC estuary and the River Severn Estuary SAC. A small number of licences were found to pose a risk, in-combination, on River Wye SAC site integrity. These licences require modifications to remove this risk. Some licences have already been modified in agreement with the licence holders. We are working with the remaining licence holders to amend their licences*."

In view of these abstraction licence reviews and controls issued by Natural Resources Wales and the Environment Agency, it is unlikely that there will be any future water abstractions that will be permitted that would result in adverse effects on the River Wye SAC.

Water supply in the Solihull Metropolitan Borough is provided by Severn Trent Water whose Water Resource Management Area includes linkages with the Elan Valley Reservoirs and the River Wye SAC. However, as a result of the Habitats Directive Review of Consents, water supply availability for the plan area has been reduced by 75 Ml/d to address the issue of unsustainable abstractions. This reduction in capacity is included in the Severn Trent Habitat Resources Management Plan 2014, which will ensure that the loss of deployable output will accommodated by 2020 (JBA Consulting, 2017).

The future increase in water supply demand facilitated by the policies and proposals of the Solihull Local Plan Review will be the subject of Severn Trent Water's Water Resource Management Plan 2019 which is current

in draft form. It is understood that future housing projects proposed by the Solihull Local Plan Review have fed into this process. The draft Habitat Resources Management Plan has been subject to a draft Habitat Regulations Assessment which assessed the potential effect on European Sites brought about by the proposed actions required to meet future water supply over the next 25 years. The draft HRA did not identify any adverse effects on the River Wye SAC with regards to abstraction over the plan period either alone or in combination (Ricardo Energy and Environment, 2017). It is therefore considered that the increased demand in water supply to facilitate the policies and proposals of the Solihull Local Plan Review will have no effect on the River Wye SAC with regards to water abstraction either alone or combination with other plans.

6.4.9 Public Access/Disturbance

There are no identified linkages between the specific recreational activities that have been identified as potential sources of disturbance for the River Wye SAC and Solihull Metropolitan Borough. The plans and policies of the Solihull Local Plan Review will therefore have no disturbance effects on the River Wye SAC or on any associated remedial measures proposed.

6.4.10 Air Pollution

The Site Improvement Plan for the River Wye SAC identifies that the site exceeds its critical load with regards to nitrogen deposition and outlines that a Site Nitrogen Action Plan should be produced to control, reduce and ameliorate atmospheric nitrogen impacts. As detailed for Cannock Extension Canal and Cannock Chase SAC in Section 6.2.4 and 6.2.5, the potential for the Local Plan Review to contribute to an increase in nitrogen deposition from local sources is considered to be negligible due to:

- the large spatial distance between the SAC and the Solihull Metropolitan Borough boundary;
- the influence of the Solihull Local Plan Review on industry in the Metropolitan Borough only;
- the absence of identified links between the local road network surrounding the River Wye SAC and the potential increase in traffic associated within increases in housing, minerals and business developments that are promoted by the Solihull Local Plan Review.

6.4.11 Inappropriate Scrub Control

There are no identified linkages between the inappropriate scrub control issues identified in the River Wye SAC Site Improvement Plan and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effect on current issues associated with inappropriate scrub control or the remedial actions proposed for the SAC.

6.4.12 Undergrazing

There are no identified linkages between the undergrazing issues identified in the River Wye SAC Site Improvement Plan and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effect on current issues associated with undergrazing or the remedial actions proposed for the SAC.

6.4.13 Transport and Service Corridors

The Site Improvement Plan identified that the key issues associated with transport corridors is the need for the SAC features to be taken into account when undertaking works on Network Rails assets. There are, subsequently no identified linkages between transport and service corridor issues identified in the River Wye SAC Site Improvement Plan and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effect on current issues associated with transport and service corridors or the remedial actions proposed for the SAC.

6.5 ELAN VALLEY WOODLANDS SAC

Section 4.5 highlights that the favourable conservation status of the SAC is vulnerable to the following key issues:

- Invasive Species;
- Forestry Management;
- Inappropriate scrub control; and,
- Overgrazing;

6.5.1 Invasive Species

There are no identified linkages between the invasive species issues identified in the Core Management Plan for Elan Valley Woodlands SAC and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effect on current issues associated with invasive species or the remedial actions proposed for the SAC.

6.5.2 Forestry Management

There are no identified linkages between the forestry management issues identified in the Core Management Plan for Elan Valley Woodlands SAC and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effect on current issues associated with invasive species or the remedial actions proposed for the SAC.

6.5.3 Inappropriate Scrub Control

There are no identified linkages between the inappropriate scrub control issues identified in the Core Management Plan for Elan Valley Woodlands SAC and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effect on current issues associated with inappropriate scrub management or the remedial actions proposed for the SAC.

6.5.4 Overgrazing

There are no identified linkages between the overgrazing issues identified in the Core Management Plan for Elan Valley Woodlands SAC and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effect on current issues associated with overgrazing or the remedial actions proposed for the SAC.

6.6 ELENYDD-MALLAEN SPA

Section 4.6 highlights that the favourable conservation status of the SAC is vulnerable to the following key issues:

- Habitat extent;
- Availability of carrion;
- Disturbance; and,
- Roosting sites.

6.6.1 Habitat Extent

With an intervening distance of 111 km, there are no identified linkages between the habitat extent for qualifying bird species in Elenydd-Mallaen SPA and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effect on habitat extent in the SPA or any remedial actions that may be proposed for the SPA.

6.6.2 Availability of Carrion

With an intervening distance of 111 km, there are no identified linkages between the availability of carrion for qualifying bird species in Elenydd-Mallaen SPA and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effect on the availability of carrion in the SPA or any remedial actions that may be proposed for the SPA.

6.6.3 Disturbance

With an intervening distance of 111 km, there are no identified linkages between disturbance effects on qualifying bird species in Elenydd-Mallaen SPA and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effect on habitat extent in the SPA or any remedial actions that may be proposed for the SPA.

6.6.4 Roosting Sites

With an intervening distance of 111 km, there are no identified linkages between the availability of roosting sites for qualifying bird species in Elenydd-Mallaen SPA and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effect on roosting in the SPA or any remedial actions that may be proposed for the SPA.

6.7 ELENYDD SAC

Section 4.7 highlights that the favourable conservation status of the SAC is vulnerable to the following key issues:

- Water clarity;
- Water quality;
- Hydrology;
- Air quality;
- Disturbance;
- Grazing pressure;
- Burning;
- Erosion;
- Peat erosion; and,
- Drainage.

6.7.1 Water Clarity

There are no identified linkages between water clarity issues within Elenydd SAC and the Solihull Metropolitan Borough area. The policies and proposals of the Solihull Local Plan Review will therefore have no effect on Elenydd SAC with regards to water clarity or on any associated remedial measures proposed.

6.7.2 Water Quality

There are no identified linkages between water quality issues within Elenydd SAC and the Solihull Metropolitan Borough area. Current water quality issues are identified in the Core Management Plan (Natural Resources Wales, 2008b) as being from diffuse sources and nutrients in the catchment which is not connected to the Tame, Anker and Mease and the Avon Catchments where Solihull Metropolitan Borough is located. The policies and proposals of the Solihull Local Plan Review will therefore have no effect on Elenydd SAC with regards to water clarity or on any associated remedial measures proposed.

6.7.3 Hydrology

The Core Management Plan for Elenydd SAC identifies that the supply from Dolmynach Reservoir is used to support public supply abstraction at Foel but it is constantly topped up by compensation water from Claerwen Reservoir so that water levels are not optimal. The plan further states that no changes to the abstraction/ compensation release regime that are likely to have negative impacts on Dolymynach Reservoir should be permitted.

Water Abstractions in this catchment are managed through the River Wye Catchment Abstraction Management Strategy (CAMS) (Natural Resources Wales and the Environment Agency, 2015), which provides information about the water resources available and the environmental controls that will employed when issuing or reviewing abstraction licences in the catchment. Natural Resources Wales and the Environment Agency, as the relevant licensing authorities, have a duty to maintain and improve Elenydd SAC in accordance with the Habitats Directive. Therefore, in view of these abstraction licence controls issued by Natural Resources Wales and the Environment Agency, it is unlikely that there will be any future water abstractions that will be permitted that would result in adverse effects on the Elenydd SAC.

As detailed for the River Wye SAC in Section 6.4.8, water supply in Solihull Metropolitan Borough is provided by Severn Trent Water whose Water Resource Management Area includes linkages with the Elan Valley Reservoirs. However, as a result of the Habitats Directive Review of Consents, water supply availability for the plan area has been reduced by 75 Ml/d to address the issue of unsustainable abstractions. This reduction in capacity is included in the Severn Trent Habitat Resources Management Plan 2014, which will ensure that the loss of deployable output will accommodated by 2020 (JBA Consulting, 2017).

The future increase in water supply demand facilitated by the policies and proposals of the Solihull Local Plan Review will be the subject of Severn Trent Water's Water Resource Management Plan 2019 which is current in draft form. It is understood that future housing projects proposed by the Solihull Local Plan Review have fed into this process. The draft Habitat Resources Management Plan has been subject to a draft Habitat Regulations Assessment which assessed the potential effect on European Sites brought about by the proposed actions required to meet future water supply over the next 25 years. The draft HRA did not identify any adverse effects on the Elenydd SAC with regards to abstraction over the plan period either alone or in

combination (Ricardo Energy and Environment, 2017). It is therefore considered that the increased demand in water supply to facilitate the policies and proposals of the Solihull Local Plan Review will have no effect on the River Wye SAC with regards to water abstraction either alone or combination with other plans.

6.7.4 Air Quality

The Core Management Plan for Elenydd SAC identifies that the site exceeds its critical load with regards to nitrogen deposition. As detailed for Cannock Extension Canal and Cannock Chase SAC in Section 6.2.4 and 6.2.5, the potential for the Local Plan Review to contribute to an increase in nitrogen deposition from local sources is considered to be negligible due to:

- the large spatial distance between the SAC and the Solihull Metropolitan Borough boundary;
- the limited influence of the Solihull Local Plan Review on industry in the Metropolitan Borough only;
- the absence of identified links between the local road network surrounding the Elenydd SAC and the potential increase in traffic associated within increases in housing, minerals and business developments that are promoted by the Solihull Local Plan Review.

6.7.5 Disturbance

There are no identified linkages between the current sources of on-site habitat disturbance within Elenydd SAC and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no disturbance effects on habitats and species within the SAC or on any associated remedial actions that may be proposed for these features.

6.7.6 Grazing Pressure

There are no identified linkages between the current grazing pressures within Elenydd SAC and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the SAC with regards to grazing or on any associated remedial actions that may be proposed.

6.7.7 Burning

There are no identified linkages between the current burning activities within Elenydd SAC and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the SAC with regards to burning or on any associated remedial actions that may be proposed.

6.7.8 Erosion

There are no identified linkages between the current issues with erosion within Elenydd SAC and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the SAC with regards to erosion or on any associated remedial actions that may be proposed.

6.7.9 Peat Erosion

There are no identified linkages between the current issues with peat erosion within Elenydd SAC and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the SAC with regards to peat erosion or on any associated remedial actions that may be proposed.

6.7.10 Drainage

There are no identified linkages between the potential for new drains associated with bog habitats within Elenydd SAC and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the SAC with regards to bog drainage or on any associated remedial actions that may be proposed.

6.8 HUMBER ESTUARY SAC

Section 4.8 highlights that the favourable conservation status of the SAC is vulnerable to the following key issues:

- Water pollution;
- Coastal Squeeze;
- Changes in species distribution;
- Undergrazing;
- Invasive species;
- Natural changes to site conditions;
- Public access/disturbance;
- Fisheries: commercial, marine and estuarine;
- Direct land take from development;
- Air pollution; and,
- Direct impact from third party.

6.8.1 Water Pollution

The Site Improvement Plan for Humber Estuary SAC (Natural England, 2015b) identifies existing issues associated with water pollution in the Humber Estuary. These include a sag in annual dissolved oxygen in the tidal Ouse, which may be causing barrier to sea lamprey migration in the summer months, although the causes of this issue are not yet known. There is additional concerns about pollutants and leaching from a former aluminium smelting plant at the Capper Pass and the high levels of Phosphorus in several of the Barton and Barrow clay pits on the southern bank of the Estuary. There are currently no identified linkages between water pollution in the Estuary and Solihull Metropolitan Borough via the Tame, Anker and Mease Catchment detailed in the Site Improvement Plan.

The policies and proposals of the Solihull Local Plan Review is likely to result in an increase in demand for waste water management. Solihull Metropolitan Borough is currently served by five waste water treatment works (WwTW) each of which are located in the borough and discharge into the River Blythe which is connected to the Humber Estuary via the Rivers Tame and Trent. The capacity of the WwTW to accommodate the proposed growth in demand outlined in the Solihull Local Plan Review was assessed by JBA associates (2017) in the Solihull Water Cycle Study. The study concluded the following:

- WwTW at Balsall Common, Barston, Meriden and Norton Green are all operating above the Phosphorous Permit Conditions;
- The proposed growth is not predicted to lead to any class deteriorations, or deteriorations of water quality greater than 10% for any determinand; and
- Environmental capacity is not considered to be a constraint to growth at any of the WwTW plants assessed. However, it would be anticipated that Balsall Common, Barston, Meriden and Norton Green WwTW will need to be brought into compliance with their phosphorous permits before any significant growth is connected to these treatment works.

The findings of the assessment suggest that the potential for future growth proposed by the policies and proposals of the Solihull Local Plan Review is not constrained by environmental capacity and that the growth will not lead to any class deteriorations in water quality of the receiving water course. Therefore, it is considered that there will be no subsequent downstream effects on water quality associated within the Humber Estuary SAC.

The need to ensure that Balsall Common, Barston, Meriden and Norton Green WwTW are compliant with their phosphorous permits is an immediate constraint to future development in these locations. However, any extra pollution loading from new development will require a new Environmental Permit from the Environment Agency which will ensure that this will not lead to a deterioration in the water quality of the receiving watercourse. The Environment Agency have a duty under the Water Framework Directive to ensure that all waterbodies achieve Good Ecological Status and are also required under the Habitats Directive to have regard to the protection and restoration of European Sites. Therefore, new development proposals that may result in a deterioration in the status of the river will be subject to controls and measures through the Environmental Permit process which will restrict downstream effects on the SAC. Furthermore, additional safeguards to minimise the risk of water quality deterioration are included in Policy P11 of the draft Solihull Local Plan review which requires developers to provide appropriate modelling to ensure sufficient receiving

capacity existing and that the Environment Agency are consulted if a main river is concerned. Opportunities to minimise waste water are also promoted in the policy.

6.8.2 Coastal Squeeze

There are no identified linkages between the causes of coastal squeeze within the Humber Estuary SAC and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the SAC with regards to coastal squeeze or on any associated remedial actions that may be proposed.

6.8.3 Changes in Species Distribution

There are currently no identified linkages between the current changes in species distribution within the Humber Estuary SAC and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the SAC with regards to changes in species distribution or on any associated remedial actions that may be proposed.

6.8.4 Undergrazing

There are no identified linkages between the issues of undergrazing within the Humber Estuary SAC and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the SAC with regards to undergrazing or on any associated remedial actions that may be proposed.

6.8.5 Invasive Species

The Humber Estuary Site Improvement Plan (Natural England, 2015b) identifies that the presence of Himalayan Balsam is a catchment wide issue, which is includes the Tame, Anker and Mease catchment where the majority of Solihull Metropolitan Borough is located. The policies and proposals within the Solihull Local Plan support development which could increase the potential mechanisms for spread of Himalayan balsam to watercourses throughout the Borough. However, as such mechanisms are a legal consideration under Section 9 of the Wildlife and Countryside Act 1981 (as amended), controls and measures will be applied through planning conditions to ensure that there are no further opportunities for the spread of invasive species. It is therefore considered that there will be no effect on invasive species within the Humber Estuary SAC, or on any associated remedial measures as a result of the policies and proposals of the Solihull Local Plan Review.

There are no further identified linkages between the cause or spread of invasive species within the Humber Estuary SAC and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the SAC with regards to the spread of invasive species or on any associated remedial actions that may be proposed.

6.8.6 Natural Changes to Site Conditions

There are no identified linkages between the natural change of site conditions within the Humber Estuary SAC and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the SAC with regards to natural changes in site conditions or on any associated remedial actions that may be proposed.

6.8.7 Public Access/Disturbance

There are no identified linkages between the public access and disturbance within the Humber Estuary SAC and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no public access/disturbance effects on the SAC or on any associated remedial actions that may be proposed.

6.8.8 Fisheries: Commercial, Marine, Estuarine

There are no identified linkages between fisheries management within the Humber Estuary SAC and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the SAC with regards to fisheries management or on any associated remedial actions that may be proposed.

6.8.9 Direct land Take from Development

Located at an intervening distance of 137 km south the of the Humber Estuary, there are no identified linkages between the direct land take in the SAC and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the SAC with regards to direct land take s or on any associated remedial actions that may be proposed.

6.8.10 Air Pollution

The Site Improvement Plan for the Humber Estaury SAC identifies that the site exceeds its critical load with regards to nitrogen deposition. As detailed for Cannock Extension Canal and Cannock Chase SAC in Section 6.2.4 and 6.2.5, the potential for the Local Plan Review to contribute to an increase in nitrogen deposition from local sources is considered to be negligible due to:

- the large spatial distance between the SAC and the Solihull Metropolitan Borough boundary;
- the limited influence of the Solihull Local Plan Review on industry in the Metropolitan Borough only; and,
- the absence of identified links between the local road network surrounding the Elenydd SAC and the potential increase in traffic associated within increases in housing, minerals and business developments that are promoted by the Solihull Local Plan Review.

6.8.11 Direct Impact from Third Party

There are no identified linkages between potential third party impacts within the Humber Estuary SAC and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the SAC with regards to third party impacts or on any associated remedial actions that may be proposed.

6.9 HUMBER ESTUARY SPA

Section 4.9 highlights that the favourable conservation status of the SPA is vulnerable to the following key issues:

- Water pollution;
- Coastal Squeeze;
- Changes in species distribution;
- Undergrazing;
- Invasive species;
- Natural changes to site conditions;
- Public access/disturbance;
- Fisheries: Fish stocking;
- Fisheries: commercial, marine and estuarine;
- Direct land take from development;
- Air pollution;
- Shooting/scaring;
- Direct impact from third party; and,
- Inappropriate scrub control.

6.9.1 Water Pollution

The Site Improvement Plan for Humber Estuary SAC (Natural England, 2015b) identifies the same issues with regards to water pollution in the Humber Estuary SPA and SAC. Subsequently, the conclusions of the preliminary assessment for the Humber Estuary SAC in Section 6.8.1 are as detailed for the Humber Estuary SPA. This concludes that there will be no effect on the Humber Estuary with regards to water pollution as a result of the policies and proposals of the Solihull Local Plan Review. Furthermore, controls provided by the Environment Agency's Environmental Permits and Policy P11 of the Solihull Local Plan Review will provide adequate safeguards to prevent water quality degradation of a receiving watercourse should new development be proposed before existing water qualities issues at the four identified WwTW are resolved.

6.9.2 Coastal Squeeze

There are no identified linkages between the causes of coastal squeeze within the Humber Estuary SPA and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the SPA with regards to coastal squeeze or on any associated remedial actions that may be proposed.

6.9.3 Changes in Species Distribution

There are currently no identified linkages between the change in species distribution within the Humber Estuary SPA and the Solihull Metropolitan Borough area. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the SAC with regards to changes in species distribution or on any associated remedial actions that may be proposed.

6.9.4 Undergrazing

There are no identified linkages between the issues of undergrazing within the Humber Estuary SPA and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the SPA with regards to undergrazing or on any associated remedial actions that may be proposed.

6.9.5 Invasive Species

The Humber Estuary Site Improvement Plan (Natural England, 2015b) identifies that the presence of Himalayan Balsam is a catchment wide issue, which is includes the Tame, Anker and Mease catchment where the majority of Solihull Metropolitan Borough is located. The policies and proposals within the Solihull Local Plan support development which could increase the potential mechanisms for spread of Himalayan balsam to watercourses throughout the Borough. However, as such mechanisms are a legal consideration under Section 9 of the Wildlife and Countryside Act 1981 (as amended), controls and measures will be applied through planning conditions to ensure that there are no further opportunities for the spread of invasive species. It is therefore considered that there will be no effect on invasive species within the Humber Estuary

SPA, or on any associated remedial measures as a result of the policies and proposals of the Solihull Local Plan Review.

There are no further identified linkages between the cause or spread of invasive species within the Humber Estuary SPA and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the SPA with regards to the spread of invasive species or on any associated remedial actions that may be proposed.

6.9.6 Natural Changes to Site Conditions

There are no identified linkages between the natural change of site conditions within the Humber Estuary SPA and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the SPA with regards to natural changes in site conditions or on any associated remedial actions that may be proposed.

6.9.7 Public Access/Disturbance

There are no identified linkages between the public access and disturbance within the Humber Estuary SPA and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no public access/disturbance effects on the SPA or on any associated remedial actions that may be proposed.

6.9.8 Fisheries: Fish Stocking

There are no identified linkages between fish stocking activities within the Humber Estuary SPA and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the SPA with regards to fish stocking activities or on any associated remedial actions that may be proposed.

6.9.9 Fisheries: Commercial, Marine, Estuarine

There are no identified linkages between fisheries management within the Humber Estuary SPA and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the SPA with regards to fisheries management or on any associated remedial actions that may be proposed.

6.9.10 Direct land Take from Development

Located at a distance of 143 km north of Solihull Metropolitan Borough, there will be no direct land take in within the Humber Estuary SPA as a result of the policies and proposals of the Solihull Local Plan Review.

6.9.11 Air Pollution

The Site Improvement Plan for the Humber Estuary SPA identifies that the site exceeds its critical load with regards to nitrogen deposition. As detailed for Cannock Extension Canal and Cannock Chase SAC in Section 6.2.4 and 6.2.5, the potential for the Local Plan Review to contribute to an increase in nitrogen deposition from local sources is considered to be negligible due to:

- the large spatial distance between the SPA and the Solihull Metropolitan Borough boundary;
- the limited influence of the Solihull Local Plan Review on industry in the Metropolitan Borough only;
- the absence of identified links between the local road network surrounding the Humber Estuary SPA and the potential increase in traffic associated within increases in housing, minerals and business developments that are promoted by the Solihull Local Plan Review.

6.9.12 Shooting/Scaring

There are no identified linkages between the issues of shooting or bird scaring within the Humber Estuary SPA and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the SPA with regards to shooting or bird scaring or on any associated remedial actions that may be proposed.

6.9.13 Direct Impact from Third Party

There are no identified linkages between potential third party impacts within the Humber Estuary SPA and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore

have no effects on the SPA with regards to third party impacts or on any associated remedial actions that may be proposed.

6.9.14 Inappropriate Scrub Control

There are no identified linkages between the issues of inappropriate scrub control within the Humber Estuary SPA and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the SPA with regards to inappropriate scrub control or on any associated remedial actions that may be proposed.

6.10 HUMBER ESTUARY RAMSAR

Section 4.10 highlights that the favourable conservation status of the Ramsar is vulnerable to the following key issues:

- Disturbance to vegetation through cutting/clearing
- Vegetation/succession
- Water diversion for irrigation/domestic/industrial use
- Overfishing
- Pollution – domestic sewerage
- Pollution – agricultural fertilisers
- Recreational/tourism disturbance
- Other factor.

6.10.1 Disturbance to vegetation

There are no identified linkages between the vegetation management activities within the Humber Estuary Ramsar and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the Ramsar with regards to vegetation management activities or on any associated remedial actions that may be proposed.

6.10.2 Vegetation/Succession

There are no identified linkages between the lack of vegetation management activities within the Humber Estuary Ramsar and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the Ramsar with regards to the lack of vegetation management activities or on any associated remedial actions that may be proposed.

6.10.3 Water Diversion of irrigation/domestic/industrial use

All water abstractions carried out in the Metropolitan Borough are carried out in compliance with the Tame, Anker and Mease Catchment Area Management Plan and the Avon Catchment Management, both of which are overseen by the Environment Agency as a licencing authority. The Environment Agency has a duty under the Habitats Directive to ensure that any new licence applications for abstraction do not adversely affect any European Sites. Therefore, with these licences and controls it is highly unlikely that abstraction within the Tame, Anker or Mease Catchment will result in water diversion effects in the Humber Estuary.

Water supply in the Solihull Metropolitan Borough is provided by Severn Trent Water whose Water Resource Management Area includes strategic water assets in the Humber Basin. Management of water supply within the Severn Trent area is set out in the Water Resources Management Plan, the latest 2019 draft of which will set out a strategy for water supply in the plan area over a 25 year period. The draft plan is accompanied by a Draft Habitat Regulations Assessment which identifies the potential effects on European Sites that might occur alone or in combination as a result of the operations and upgrades that will be required in order to deliver the objectives of the plan. The draft HRA did not identify any adverse effects on the Humber Estuary Ramsar with regards to abstraction over the plan period. It is therefore considered that the increased demand in water supply to facilitate the policies and proposals of the Solihull Local Plan Review will have no effect on the Humber Estuary Ramsar with regards to water diversion either alone or combination with other plans.

6.10.4 Overfishing

There are no identified linkages between overfishing within the Humber Estuary Ramsar and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the Ramsar with regards to overfishing or on any associated remedial actions that may be proposed.

6.10.5 Pollution – Domestic Sewerage

The Site Improvement Plan for Humber Estuary SAC (Natural England, 2015b) identifies the issues with regards to water pollution that are also likely to be relevant to the Humber Estuary Ramsar. Subsequently, the conclusions of the preliminary assessment for the Humber Estuary SAC in Section 6.8.1 are as detailed for the Humber Estuary Ramsar. This concludes that there will be no effect on the Humber Estuary with regards to water pollution as a result of the policies and proposals of the Solihull Local Plan Review. Furthermore,

controls provided by the Environment Agency's Environmental Permits and Policy P11 of the Solihull Local Plan Review will provide adequate safeguards to prevent water quality degradation of a receiving watercourse should new development be proposed before existing water qualities issues at the four identified WwTW are resolved.

6.10.6 Pollution – Agricultural Fertilisers

There are no identified linkages between the use of agricultural fertilisers and the policies and proposals of the Solihull Local Plan Review and therefore the plan will have no effect on agricultural pollution within the Humber Estuary Ramsar.

6.10.7 Recreation/Tourism Disturbance

There are no identified linkages between the disturbance from recreation and tourism within the Humber Estuary Ramsar and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no disturbance effects on the Ramsar with regards to recreation and tourism or on any associated remedial actions that may be proposed.

6.10.8 Other – Coastal Squeeze

There are no identified linkages between coastal sqeeze within the Humber Estuary Ramsar and Solihull Metropolitan Borough. The policies and proposals of the Solihull Local Plan Review will therefore have no effects on the Ramsar with regards to coastal squeeze or on any associated remedial actions that may be proposed.

6.11 Summary of Preliminary Examination

Table 6.1 below summarises the findings of the preliminary examination to determine if any of the policies and proposals of the Solihull Local Plan Review will result in a likely significant effect on a European site alone.

Site	Solihull Local Plan Review – Potential Environmental Impacts			
	Air quality	Water quantity	Water quality	Recreational pressure
Ensor's Pool SAC	No effect	No effect	No effect	No effect
Cannock Extension Canal SAC	No effect	No effect	No effect	No effect
Cannock Chase SAC	No effect	No effect	No effect	No effect
River Wye SAC	No effect	No effect	No effect	No effect
Elan Valley Woodlands SAC	No effect	No effect	No effect	No effect
Elenydd-Mallaen SPA	No effect	No effect	No effect	No effect
Elenydd SAC	No effect	No effect	No effect	No effect
Humber Estuary SAC	No effect	No effect	No effect	No effect
Humber Estuary SPA	No effect	No effect	No effect	No effect
Humber Estuary Ramsar	No effect	No effect	No effect	No effect

Table 6.1 – Summary of the preliminary examination of likely significant effects alone for the potential environmental impacts from the Solihull Local Plan Review

The Preliminary Examination did not identify any potential effects on European Sites arising from the policies and proposals of the Solihull Local Plan Review. In accordance with the Habitat Regulations Assessment Handbook, plans that do not have any adverse effect at all on a European Site, cannot reasonably contribute to an adverse effect in combination with other plans and projects and therefore are screened out of any further assessment as part of the Habitat Regulations Assessment process. Subsequently, no in-combination assessment of likely significant effects has been carried out to inform as part of the screening assessment.

7. CONCLUSIONS AND RECOMMENDATIONS

In accordance with best practice guidance, a Habitat Regulations Assessment Screening exercise has been undertaken to assess whether the implementation of the Solihull Local Plan Review is likely to result in significant effects on the following Natura 2000 sites:

- Ensor's Pool SAC;
- Cannock Extension Canal SAC;
- Cannock Chase SAC;
- River Wye SAC;
- Elan Valley Woodlands SAC;
- Elenydd-Mallaen SPA;
- Elenydd SAC;
- Humber Estuary SAC;
- Humber Estuary SPA; and,
- Humber Estuary Ramsar.

Based on a review of the available evidence base it is concluded that none of the policies and proposals of the Solihull Local Plan Review will result in a significant effect on the Natura 2000 network, either alone or in combination with other plans and projects. Solihull Metropolitan Borough Council, as the Competent Authority, are therefore advised that it will not be necessary for the Solihull Local Plan Review to be taken forward to a Stage 2 Appropriate Assessment.

In accordance with best practice guidance, the findings of the assessment should be provided to Natural England, as the statutory nature conservation body to provide further opportunity for comment as required. A recommendation to this effect is provided below.

This Habitat Regulations Assessment – Screening exercise has been carried out for the policies and proposals of the draft Solihull Local Plan Review. Any future revisions of the Solihull Local Plan Review should be subject to additional screening to determine if there are any material changes to the policies and proposals that could rise to likely significant effect on a European Site either alone or in-combination. A recommendation to this effect is also provided below.

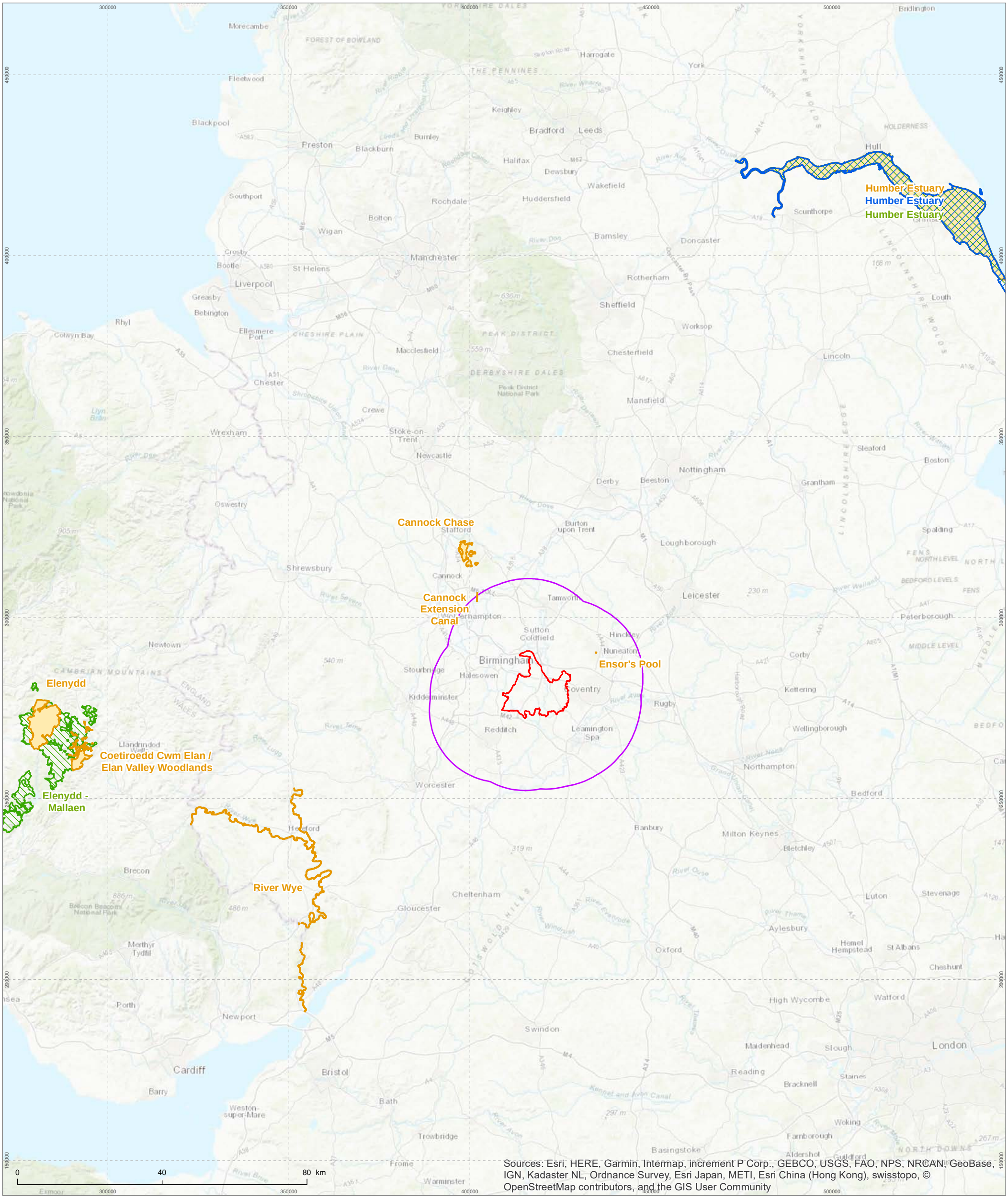
Recommendations

R1 In accordance with best practice guidance, the findings of this Habitat Regulations Assessment – Screening exercise should be provided to Natural England, as the statutory nature conservation body, to allow further comment and consideration as required; and

R2 All future revisions of the Solihull Local Plan Review should be subject to additional screening to determine if there are any material changes to the policies and proposals of the plan that could give rise to a likely significant effect on a European Site whether alone or in-combination with other plans and projects.

8. DRAWINGS

Drawing 126281-01-01 – Location of European Sites with linkages to Solihull Metropolitan Borough



Legend

- Special Area of Conservation (SAC)
- Special Protection Area (SPA)
- RAMSAR
- Solihull borough boundary
- 20 km radius from Solihull borough boundary

Project: Solihull Metropolitan Borough

Drawing: HRA Screening: Solihull Local Plan Review

Client: Solihull Metropolitan Borough Council

Drawing Number	Revision
C126281-01-01	00
Scale @ A3	Date
1:1,000,000	March 2018
Approved By	Drawn By
RW	RP

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C126281-01-01

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APPENDICES

Appendix 1 – Natural England Correspondence received 7th and 9th March 2018

Date: 06 March 2018
Our ref: 239855 Solihull HRA Screening Scope 060318
Your ref: RT-MME-111062 update

Emailed FAO Richard Wheat at Middlemarch Environmental Ltd via

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BY EMAIL ONLY

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T 0300 060 3900

Dear Richard

Planning consultation: Local Development Framework Core Strategy - Habitat Regulations Appropriate Assessment - Screening Scope
Location: Solihull Metropolitan Borough Council

Thank you for your consultation on the above dated 7 November 2017.

Natural England sends its sincere apologies for our delay in responding and ask that are comments may be considered.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

CONSERVATION OF HABITATS AND SPECIES REGULATIONS 2010 (AS AMENDED)

Thank you for providing Natural England with the March 2012 Habitat Regulations Appropriate Assessment Further Screening Report and the updated wider planning context surrounding the HRA Screening Report.

SUMMARY CONCLUSION - SCREENING SCOPE CONSIDERED APPROPRIATE

Natural England confirms it is generally content with the proposed scope of the HRA screening report as detailed in your email of 7 November 2017.

In considering the European site interest, Natural England advises that you, as a competent authority under the provisions of the Habitats Regulations, should have regard for any potential impacts that a plan or project may have[1]. The Conservation objectives for each European site

[1] Requirements are set out within Regulations 63 and 64 of the Habitats Regulations, where a series of steps and tests are followed for plans or projects that could potentially affect a European site. The steps and tests set out within Regulations 63 and 64 are commonly referred to as the 'Habitats Regulations Assessment' process.
The Government has produced core guidance for competent authorities and developers to assist with the Habitats Regulations Assessment process. This can be found on the Defra website. http://www.defra.gov.uk/habitats-review/implementation/process-guidance/guidance/sites/

explain how the site should be restored and/or maintained and may be helpful in assessing what, if any, potential impacts a plan or project may have.

We would be happy to comment further should the need arise but if in the meantime you have any queries please do not hesitate to contact us.

If you have any queries relating to the advice in this letter please contact me on 07920 594142.

Yours faithfully

Susie Murray
West Midlands Area Team (East) Urban Planning Lead Adviser
Planning for a Better Environment Team
Natural England
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Hours of work: Mon.9.30-3.00; Tues. 9.30-3.00; Wed. 8.00-5.30; Thurs. 9.30-3.00; Fri.9.30-1:00

From: Murray, Susan (NE) [redacted]
Sent: 09 March 2018 13:10
To: Richard Wheat <redacted>
Cc: redacted
Subject: RE: HRA Solihull Local Plan Review

Hi Richard

Good to speak with you yesterday.

I confirm that Natural England has no concerns with the approach discussed and as outlined in your email below.

I reiterate that whilst we generally support an assessment of Natura 2000 sites within a 15-20km radius it is more important to consider the catchment relationship, that is likely impact pathways associated with a development or Plan, and that sites outside of this radial area may, therefore, be required for assessment.

Further to our recent correspondence, and given the location, and connectivity to the River Blythe, I confirm that Natural England would expect the Humber Estuary SAC, SPA and Ramsar site to be considered at screening stage. Natural England would also expect the inclusion of Ensors Pool SAC as part of the assessment, a site which appears to have been excluded from the 2012 assessment for reasons unexplained. As discussed, we are concerned with any adverse impacts upon the site's integrity which includes functional habitat. For information, we have very recently produced and published an updated version of the Conservation Objectives for the SAC which we advise you access as these provide all the details you should need. In summary, the Conservation objectives now ensure that the 'supporting habitats' for the White clawed crayfish are safeguarded as part of any HRA even in the absence of the species

I further confirm that Natural England welcomes the precautionary approach proposed, as required by the Directive, and assessment of the future higher growth scenario.

I hope that this correspondence enables you to progress with your assessment.

I am happy to clarify any details of this correspondence further with you, however, should you require any further assistance I would recommend you to our discretionary advice service.
https://www.gov.uk/guidance/developers-get-environmental-advice-on-your-planning-proposals

Kind regards

Susie Murray
West Midlands Area Team (East) Urban Planning Lead Adviser
Planning for a Better Environment Team
Natural England