

Habitats Regulations Assessment of the Nuneaton and Bedworth Local Plan Review

Nuneaton and Bedworth Borough Council

60673395

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Quality information

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1. Introduction

Scope of Project

- 1.1 Under the Conservation of Habitats and Species Regulations 2017 (as amended), an Appropriate Assessment is required, where a plan or project is likely to have a significant effect upon a European Site, either individually or 'in combination' with other projects.
- 1.2 AECOM was appointed by Nuneaton and Bedworth Borough Council to undertake a Habitats Regulations Assessment of its Borough Plan Review 2024-2039. The objective of this assessment was to identify any aspects of the Borough Plan Review that would cause an adverse effect on the integrity of European sites (Special Areas of Conservation (SACs), Special Protection Areas (SPAs), candidate Special Areas of Conservation (cSACs), potential Special Protection Areas (pSPAs) and, as a matter of Government policy, Ramsar sites), either alone or in combination with other plans and projects, and to advise on appropriate policy mechanisms for delivering mitigation where such effects were identified.

Legislation

- 1.3 The UK left the EU on 31 January 2020 under the terms set out in the European Union (Withdrawal Agreement) Act 2020 ("the Withdrawal Act"). This established a transition period, which ended on 31 December 2020. The Withdrawal Act retains the body of existing EU-derived law within our domestic law, meaning that legislation relating to nature conservation continues to apply to and in the UK post-Brexit.
- 1.4 The need for Appropriate Assessment (Figure 1) is set out by the Conservation of Habitats and Species Regulations 2017 (as amended) and is retained in the EU Exit Regulations 2019. The Regulations apply the precautionary principle¹ to assessments of European Sites, which form part of the newly coined National Site Network. Consent should only be granted for plans and projects once the relevant competent authority has ascertained that there will either be no likelihood of significant effects, or that a mechanism is in place to ensure that no adverse effect on the integrity of the European Site(s) in question arises. Where an Appropriate Assessment has been carried out and results in a negative assessment, or if uncertainty remains over the significant effect, consent can only be granted if there are no alternative solutions and there are Imperative Reasons of Over-Riding Public Interest (IROPI) for the development and compensatory measures have been secured.
- 1.5 To ascertain whether site integrity will be affected, an Appropriate Assessment should be undertaken of the plan or project in question.

¹ The Precautionary Principle, which is referenced in Article 191 of the Treaty on the Functioning of the European Union, has been defined by the United Nations Educational, Scientific and Cultural Organisation (UNESCO, 2005) as: "When human activities may lead to morally unacceptable harm [to the environment] that is scientifically plausible but uncertain, actions shall be taken to avoid or diminish that harm. The judgement of plausibility should be grounded in scientific analysis".

1.6 Figure 1 provides the legislative basis for an Appropriate Assessment.

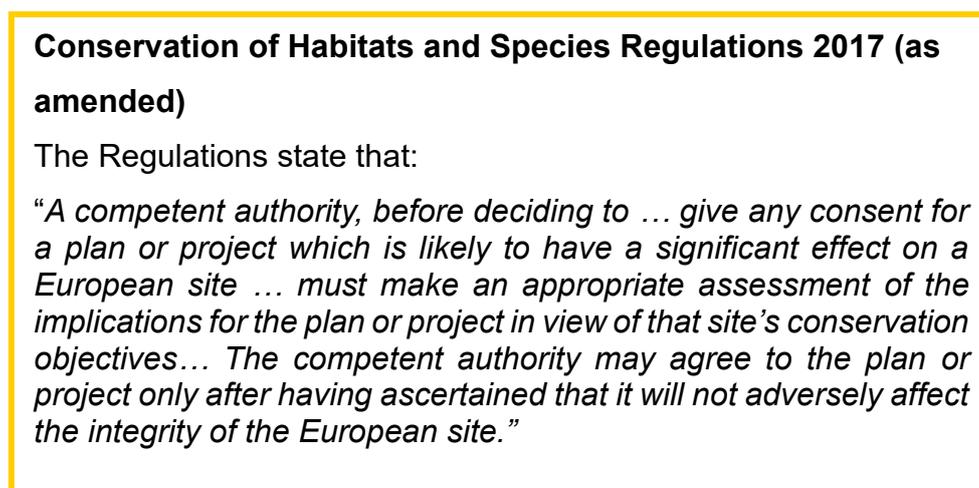


Figure 1. The legislative basis for the HRA process.

1.7 Over the years, the term ‘Habitats Regulations Assessment’ (HRA) has come into wide currency to describe the overall process set out in the Habitats Regulations, from screening through to identification of IROPI. This has arisen in order to distinguish the overall process from the individual stage of “Appropriate Assessment”. Throughout this report, the term HRA is used for the overall process and restricts the use of Appropriate Assessment to the specific stage of that name.

2. Methodology

Introduction

- 2.1 This section sets out the methodology for undertaking the HRA. HRA itself operates independently from the Planning Policy system, being a legal requirement of a discrete Statutory Instrument. Therefore, there is no direct relationship to the 'Test of Soundness'.
- 2.2 The HRA is being carried out in the absence of formal Government guidance. The Department for Communities and Local Government (now the Department for Levelling Up, Housing and Communities (DLUHC)) released a consultation paper on Appropriate Assessment (AA) of Plans in 2006². As yet, no further formal guidance has emerged although Government published general guidance on appropriate assessment in 2019³. However, Court Judgements can be used to shape the approaches used.
- 2.3 The draft DLUHC guidance⁴ makes it clear that when implementing HRA of land-use plans, the AA should be undertaken at a level of detail that is appropriate and proportional to the level of detail provided within the plan itself: *"The comprehensiveness of the [Appropriate] assessment work undertaken should be proportionate to the geographical scope of the option and the nature and extent of any effects identified. An AA need not be done in any more detail, or using more resources, than is useful for its purpose. It would be inappropriate and impracticable to assess the effects [of a strategic land use plan] in the degree of detail that would normally be required for the Environmental Impact Assessment (EIA) of a project."* More recently, the Court of Appeal⁵ ruled that providing the Council (competent authority) was duly satisfied that proposed mitigation could be 'achieved in practice' to avoid an adverse effect, then this would suffice. This ruling has since been applied to a planning permission (rather than a Core Strategy)⁶. In this case the High Court ruled that for *'a multistage process, so long as there is sufficient information at any particular stage to enable the authority to be satisfied that the proposed mitigation can be achieved in practice it is not necessary for all matters concerning mitigation to be fully resolved before a decision maker is able to conclude that a development will satisfy the requirements of reg. 61 of the Habitats Regulations'*.
- 2.4 In other words, there is a tacit acceptance that HRA can be tiered and that all impacts are not necessarily appropriate for consideration to the same degree of detail at all tiers.
- 2.5 Figure 2 below outlines the stages of HRA according to current draft DLUHC guidance. The stages are essentially iterative, being revisited as necessary in response to more detailed information, recommendations, and any relevant changes to the plan until no significant adverse effects remain.

² DLUHC (was CLG) (2006) Planning for the Protection of European Sites, Consultation Paper

³ <https://www.gov.uk/guidance/appropriate-assessment>

⁴ Ibid

⁵ No Aadastral New Town Ltd (NANT) v Suffolk Coastal District Council Court of Appeal, 17th February 2015

⁶ High Court case of R (Devon Wildlife Trust) v Teignbridge District Council, 28 July 2015

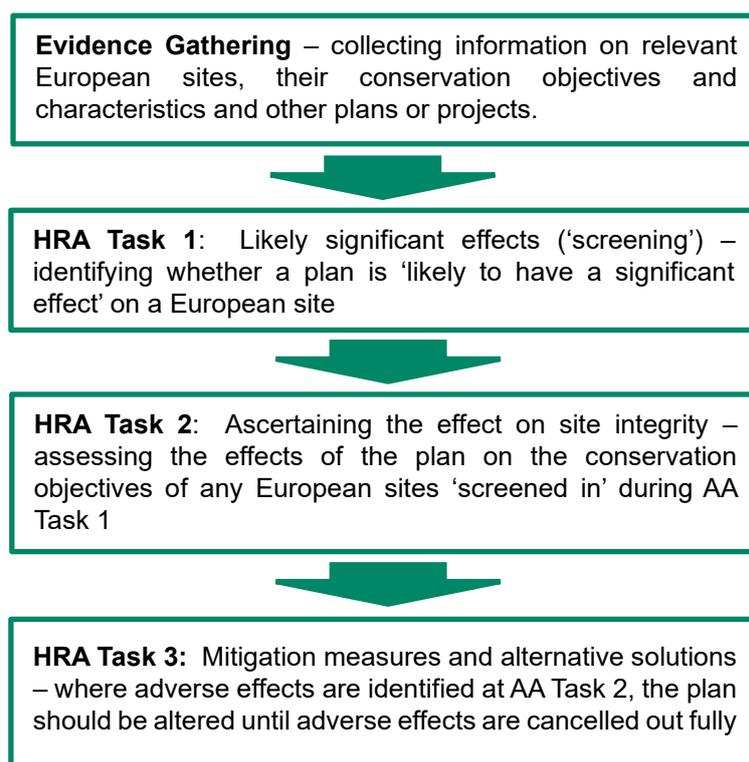


Figure 2. Four-Stage Approach to Habitats Regulations Assessment (Source: DLUHC, 2006).

HRA Task 1 – Likely Significant Effects (LSE)

- 2.6 The first stage of any Habitats Regulations Assessment (HRA Task 1) is a Likely Significant Effect (LSE) test - essentially a risk assessment to decide whether the full subsequent stage known as Appropriate Assessment is required. The essential question is:
- 2.7 *“Is the Plan, either alone or in combination with other relevant projects and plans, likely to result in a significant effect upon European sites?”*
- 2.8 The objective is to ‘screen out’ those plans and projects that can, without any detailed appraisal, be said to be unlikely to result in significant adverse effects upon European sites, usually because there is no mechanism for an adverse interaction with European sites.
- 2.9 The level of detail in land use plans concerning developments that will be permitted under the plans is rarely sufficient to allow the fullest quantification of potential adverse effects. It is therefore necessary to be cognisant of the fact that HRAs for plans can be tiered, with assessments being undertaken with increasing specificity at lower tiers. This is in line with DLUHC guidance and court rulings that the level of detail of the assessment, whilst meeting the relevant requirements of the Habitats Regulations, should be ‘appropriate’ to the level of plan or project that it addresses. This ‘tiering’ of assessment is summarised in Figure 3.

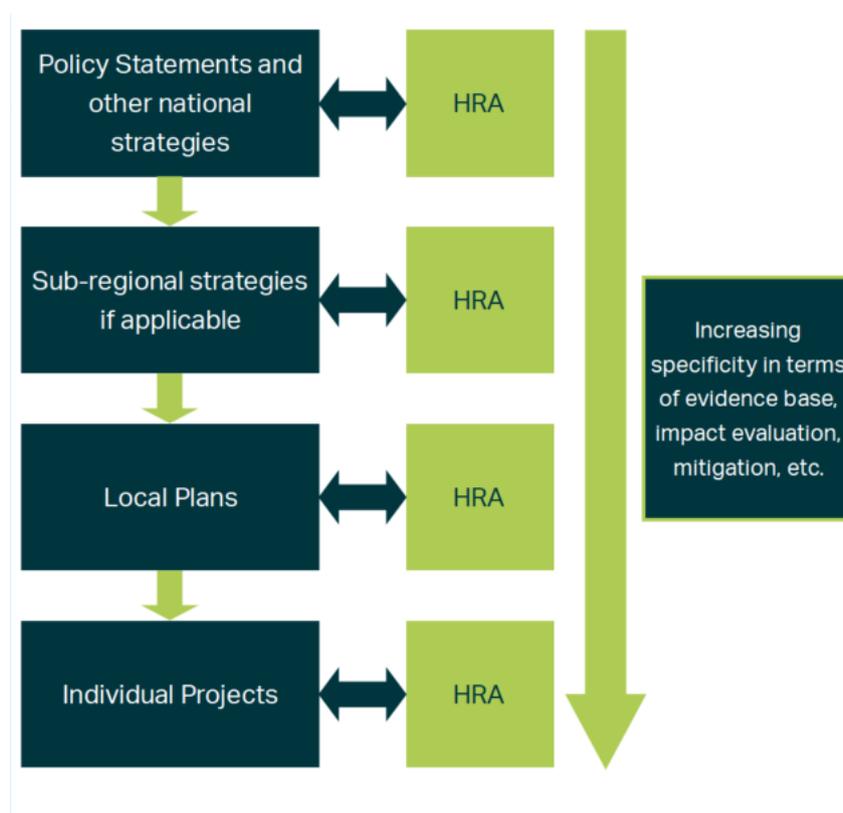


Figure 3. Tiering in HRA of land use plans.

2.10 On these occasions the advice of Advocate-General Kokott⁷ to the European Court of Justice is worth considering. She commented that: *“It would ...hardly be proper to require a greater level of detail in preceding plans [rather than planning applications] or the abolition of multi-stage planning and approval procedures so that the assessment of implications can be concentrated on one point in the procedure. Rather, adverse effects on areas of conservation must be assessed at every relevant stage of the procedure to the extent possible on the basis of the precision of the plan. This assessment is to be updated with increasing specificity in subsequent stages of the procedure”* [emphasis added].

HRA Task 2 – Appropriate Assessment

2.11 Where it is determined that a conclusion of ‘no likely significant effect’ cannot be drawn, the analysis has proceeded to the next stage of HRA known as Appropriate Assessment. Case law has clarified that ‘appropriate assessment’ is not a technical term. In other words, there are no particular technical analyses, or level of technical analysis, that are classified by law as belonging to appropriate assessment.

2.12 By virtue of the fact that it follows Screening, there is a clear implication that the analysis will be more detailed than undertaken at the Screening stage and one of the key considerations during appropriate assessment is whether there is available mitigation that would entirely address the potential effect. In practice, the appropriate assessment would take any policies or allocations that could not be dismissed following the high-level Screening analysis and analyse the

⁷ Opinion of Advocate-General Kokott, 9th June 2005, Case C-6/04. Commission of the European Communities v United Kingdom of Great Britain and Northern Ireland, paragraph 49.
<http://curia.europa.eu/juris/document/document.jsf?docid=58359&doclang=EN>

potential for an effect in more detail, with a view to concluding whether there would actually be an adverse effect on integrity (in other words, disruption of the coherent structure and function of the European site(s)).

- 2.13 A 2018 decision by the European Court of Justice⁸ (ECJ), which appears to conclude that measures intended to avoid or reduce the harmful effects of a proposed project on a European site, but which are not an integral part of the project or plan, may no longer be taken into account by competent authorities at the Likely Significant Effects or 'screening' stage of HRA. The implications of the ECJ ruling are structural, essentially meaning that the role of avoidance and measures should be discussed in the subsequent 'appropriate assessment' stage instead, with a more in-depth, reasoned scientific basis.
- 2.14 A more recent 2018 case⁹ also confirmed that an appropriate assessment must consider the interest features of European sites even where those features may be found outside the strict boundaries of those sites and must also consider other habitat types or species, which are present on the site, but for which that site has not been listed but which are necessary to the conservation of the habitat types and species listed for the protected area.

HRA Task 3 – Avoidance and Mitigation

- 2.15 Where necessary, measures are recommended for incorporation into the Plan in order to avoid or mitigate adverse effects on European sites. There is considerable precedent concerning the level of detail that a Local Plan document needs to contain regarding mitigation for recreational impacts on European sites. The implication of this precedent is that it is not necessary for all measures that will be deployed to be fully developed prior to adoption of the Plan, but the Plan must provide an adequate policy framework within which these measures can be delivered.
- 2.16 In evaluating significance, AECOM has relied on professional judgement as well as the results of previous stakeholder consultation regarding development impacts on the European sites considered within this assessment.
- 2.17 When discussing 'mitigation' for the proposed development sites, one is concerned primarily with the policy framework to enable the delivery of such mitigation rather than the detail of the mitigation measures themselves since the Local Plan document is a high-level policy document.

⁸ People Over Wind and Sweetman v Coillte Teoranta (C-323/17)

⁹ Holohan et al vs. An Bord Pleanála (C-461/17)

3. Internationally Designated Sites Within and Around the Nuneaton and Bedworth Borough

3.1 There are two internationally designated site within the immediate potential zone of influence of the DPD. These are:

- Ensor’s Pool SAC
- River Mease SAC

Table 1. Physical Scope of the HRA.

European Site	Location
Ensor’s Pool SAC	Located within the Borough of Nuneaton and Bedworth, adjacent to the south-western extent of the town of Nuneaton
River Mease SAC	Located 15.4km north of the Borough within North-West Leicestershire District

3.2 In 2015, a Shadow Habitats Regulations Assessment of the Local Plan was undertaken by Mott MacDonald. This assessment screened out any potential linking impact pathways between the River Mease SAC and the Local Plan due to a lack of hydrological connectivity between the Borough and the SAC (Nuneaton and Bedworth Borough does not lie within the catchment of the River Mease). As such the River Mease SAC is not discussed further within this document.

3.3 In their response to the consultation on the Local Plan Review and its HRA, Natural England observed that the Plan area is located upstream of the Severn Estuary Special Area of Conservation (SAC) and Ramsar Site (approximately 96km to the south-west) and is hydrologically linked to the designated sites through the River Sowe tributary of the Warwickshire River Avon. The Plan area is also located upstream of the Humber SAC/Ramsar site (125km to the north-east) and is hydrologically linked to the designated site through the River Anker which flows into the River Trent tributary of the River Humber.

3.4 The Severn Estuary migratory fish species (Atlantic salmon, Sea trout, Allis Shad, Twaite Shad, Sea lamprey, River lamprey, European eel) travel upstream through the River Severn and its tributaries, spending part of their life cycle in the wider Severn hydrological catchment. Currently the tidal weir at Tewkesbury is believed to present an obstacle to most of the migratory fish species, with the exception of the European eel, which has been recorded within the Warwickshire Avon. The Humber Estuary migratory fish species are the Sea lamprey and River lamprey. The River lamprey has been recorded as far upstream as the R. Dove (Staffordshire/Derbyshire). There is therefore the possibility of these species being present during the Plan period within the River Anker and River Sowe (and possibly tributaries) which would render these rivers functionally-linked habitat for the Humber Estuary SAC/Ramsar site and Severn Estuary SAC/Ramsar site.

Ecological Context and Interest Features of Designated Sites

Ensor's Pool SAC

Introduction

- 3.5 Ensor's Pool was notified as an SAC in 2001 when it supported a large and healthy population of white-clawed crayfish, *Austropotamobius pallipes* (approximately 50,000 individuals), and it is the population of this species that is the interest feature of the site.
- 3.6 Ensor's Pool is located immediately south-west of Nuneaton between Heath End Road to the north and Harefield Lane to the south. It is an abandoned clay pit measuring 3.5 hectares in size with a perimeter of approximately 770 metres and an average depth of 8 metres. A dye tracing exercise of the pool by the Environment Agency has confirmed Ensor's Pool is groundwater fed and is not hydraulically linked to nearby ordinary watercourses.
- 3.7 The pool has some marginal vegetation of hard rush *Juncus inflexus*, common spike-rush *Eleocharis palustris*, water horsetail *Equisetum fluviatile* and lesser bulrush *Typha angustifolia*. Water plants include spiked water-milfoil spicatum and broad leaved pondweed *Potamogeton natans*. The pool is surrounded by areas of scrub and grassland.

Qualifying Features¹⁰

- 3.8 Annex II species:
- White-clawed (or Atlantic stream) crayfish *Austropotamobius pallipes*.

Conservation Objectives¹¹

- 3.9 *"With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change;*
- 3.10 *Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;*
- *The extent and distribution of qualifying natural habitats of qualifying species*
 - *The structure and function of qualifying species*
 - *The structure and function of the habitats of qualifying species*
 - *The supporting processes on which the habitats of qualifying species rely*
 - *The populations of qualifying species, and,*

¹⁰ Available at: <http://publications.naturalengland.org.uk/file/5414346679123968> [accessed 15/12/2021]

¹¹ Available at: <http://publications.naturalengland.org.uk/file/5267179054563328> [accessed 15/12/2021]

- *The distribution of qualifying species within the site.”*

3.11 For Ensor’s Pool SAC the ‘restore’ element of the objective is crucial as a series of surveys have indicated that the white-clawed crayfish population of the site died out at least seven years ago. The surveyor’s report, published by Natural England in October 2015 states that the *‘once abundant population of white-clawed crayfish appears to have disappeared. The pool still appears to provide suitable habitat for crayfish and there is no indication that any other animal or plant species has been affected.’* The report goes on to suggest that crayfish plague seems likely to be the cause of mortality. Further surveys in 2015 confirmed that the population of white-clawed crayfish is no longer present at Ensor’s Pool. However, the fact that white-clawed crayfish are not currently present in the SAC does not mean that the site is no longer protected. Instead conservation efforts are focussed on restoring the white-clawed crayfish population and the Local Plan must ensure it does not compromise those efforts.

Threats / Pressures to Site Integrity

3.12 The following threats/ pressures to the site integrity of Ensor’s Pool SAC are listed in Natural England’s Site Improvement Plan¹² with further details provided within the Supplementary Advice on Conserving and Restoring Site Features¹³:

- Changes in species distribution
 - This former marl pit has held a very large population estimated at 50,000 individuals. The results of a 2015 survey show that the once abundant population of white-clawed crayfish has now disappeared from the SAC. The pool still provides a suitable habitat for crayfish with abundant emergent and submerged vegetation, under-cut banks providing potential refuges and shelter from predator and there appears to be good crayfish habitat around all of the pool.

3.13 Consultation with Natural England for the adopted Borough Local Plan¹⁴ also identified additional potential linking impact pathways:

- Recreational pressure: *“the risk of recreational activities arising from an increase in population stemming from net new dwellings, adversely affecting the designated native crayfish population and their habitat”*; and
- Changes to ground water flows.

Humber Estuary SAC and Ramsar site

Introduction

3.14 The Humber is the second-largest coastal plain estuary in the UK, and the largest coastal plain estuary on the east coast of Britain. It is a muddy, macro-tidal estuary, fed by the Rivers Ouse, Trent and Hull, Ancholme and Graveney. Suspended sediment concentrations are high, and are derived from a variety of sources, including marine sediments and eroding boulder clay along the Holderness coast. This is the northernmost of the English east coast estuaries

¹² Available at: <http://publications.naturalengland.org.uk/publication/5364843502632960> [accessed 15/12/2021]

¹³ Available at: <http://publications.naturalengland.org.uk/file/4949612890947584> [accessed 15/12/2021]

¹⁴ Natural England letter dated 22 February 2016. Reference 169179

whose structure and function is intimately linked with soft eroding shorelines. Habitats within the Humber Estuary include 1330 Atlantic salt meadows and a range of sand dune types in the outer estuary, together with subtidal sandbanks (H1110 Sandbanks which are slightly covered by sea water all the time), extensive intertidal mudflats (H1140 Mudflats and sandflats not covered by seawater at low tide), glasswort beds (H1310 *Salicornia* and other annuals colonising mud and sand), and 1150 coastal lagoons.

3.15 As salinity declines upstream, reedbeds and brackish saltmarsh communities fringe the estuary. These are best-represented at the confluence of the Rivers Ouse and Trent at Blacktoft Sands. Upstream from the Humber Bridge, the navigation channel undergoes major shifts from north to south banks, for reasons that have yet to be fully explained. This section of the estuary is also noteworthy for extensive mud and sand bars, which in places form semi-permanent islands. Significant fish species include river lamprey *Lampetra fluviatilis* and sea lamprey *Petromyzon marinus* which breed in the River Derwent, a tributary of the River Ouse.

Qualifying features

3.16 The SAC and Ramsar site have numerous qualifying features but as per Natural England advice the features of relevance to this assessment are:

- 1095 Sea lamprey *Petromyzon marinus*; and
- 1099 River lamprey *Lampetra fluviatilis*

3.17 These are both anadromous species (spending part of their life cycle in the sea and part upstream in freshwater) and, provided there are no significant blockages, can migrate a considerable distance upstream from the SAC boundary in order to breed and spawn.

Conservation objectives

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

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

Threats/pressures to site integrity

3.19 The following threats/ pressures to the site integrity of the Humber Estuary SAC are listed in Natural England's Site Improvement Plan¹⁵ with further details provided within the Supplementary Advice on Conserving and Restoring Site Features¹⁶:

- Water pollution
- Coastal squeeze
- Undergrazing
- Invasive species
- Public access/disturbance
- Fisheries management
- Direct landtake
- Air pollution
- Shooting/scaring
- Inappropriate scrub control

3.20 For the purposes of this HRA the key threat is blockage to migratory fish passage throughout the catchment of the watercourses that feed the River Humber (and thus the SAC) either through physical blockage, changes to water levels or changes to water chemistry.

3.21 The Supplementary Advice on the Conservation Objectives has a specific attribute 'Structure and function: biological connectivity' for both migratory fish species, with the associated target '*Restore connectivity of estuarine features to surrounding rivers, freshwater, marine and coastal habitats, to ensure larval dispersal and recruitment, maintain nursery grounds for mobile species, and to allow movement of migratory fish*'. The fact that the target is to restore connectivity (rather than simply preserving existing connectivity) is relevant to the assessment as it means consideration must be given to anything which would interfere with endeavours to restore connectivity.

Severn Estuary SAC and Ramsar site

Introduction

3.22 The Severn Estuary lies on the south-west coast of Britain at the mouth of four major rivers (the Severn, Wye, Usk, and Avon). The immense tidal range (the second highest in the world) and classic funnel shape make the Severn Estuary unique in Britain and very rare worldwide. This tidal range creates strong tidal streams and high turbidity, producing communities characteristic of the extreme physical conditions of liquid mud and tide-swept sand and rocks. The Estuary includes a wide diversity of habitats including Sandbanks which are slightly covered by sea water all the time, Mudflats and sandflats not covered by sea

¹⁵ <http://publications.naturalengland.org.uk/publication/5427891407945728>

¹⁶ <https://designatedsites.naturalengland.org.uk/Marine/SupAdvice.aspx?SiteCode=UK0030170&SiteName=humber%20estuary&SiteNameDisplay=Humber+Estuary+SAC&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&NumMarineSeasonality=8>

water at low tide, Atlantic salt meadows, and Reefs, which are identified as Annex I habitat types in their own right.

3.23 The estuarine fauna includes: invertebrate populations of importance (especially as a food resource for a wide range of bird and fish species), internationally important populations of waterfowl; and large populations of migratory fish, including sea lamprey *Petromyzon marinus*, river lamprey *Lampetra fluviatilis* (both of which spawn in freshwater but complete part of their life cycle in the sea), and twaite shad *Alosa fallax*.

Qualifying features

3.24 The SAC and Ramsar site have numerous qualifying features but as per Natural England advice the features of relevance to this assessment are:

- 1095 Sea lamprey *Petromyzon marinus*;
- 1099 River lamprey *Lampetra fluviatilis*; and
- S1103 Twaite shad *Alosa fallax*

3.25 These are all anadromous species (spending part of their life cycle in the sea and part upstream in freshwater) and, provided there are no significant blockages, can migrate a considerable distance upstream from the SAC boundary in order to breed and spawn.

Conservation objectives

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

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

Threats/pressures to site integrity

3.27 The following threats/ pressures to the site integrity of the Severn Estuary SAC are listed in Natural England’s Site Improvement Plan¹⁷ with further details provided within the Supplementary Advice on Conserving and Restoring Site Features:

- Public access/disturbance
- Physical modification

¹⁷ <http://publications.naturalengland.org.uk/publication/4590676519944192>

- Impacts of development
- Coastal squeeze
- Changes in land management
- Changes in species distributions
- Water pollution
- Air pollution
- Recreational and commercial fishing
- Invasive species
- Marine litter
- Marine pollution

3.28 For the purposes of this HRA the key threat is blockage to migratory fish passage throughout the catchment of the watercourses that feed the River Severn (and thus the SAC) either through physical blockage, changes to water levels or changes to water chemistry.

3.29 The Supplementary Advice on the Conservation Objectives has a specific attribute 'Structure and function: biological connectivity' for both migratory fish species, with the associated target '*Restore connectivity of estuarine features to surrounding rivers, freshwater, marine and coastal habitats, to ensure larval dispersal and recruitment, maintain nursery grounds for mobile species, and to allow movement of migratory fish*'. The fact that the target is to restore connectivity (rather than simply preserving existing connectivity) is relevant to the assessment as it means consideration must be given to anything which would interfere with endeavours to restore connectivity.

4. Likely Significant Effects

- 4.1 Based upon Natural England's Site Improvement Plans, Supplementary Advice on Conserving and Restoring Site Features and Natural England consultation with regards to the Local Plan, there are two impact pathways that require consideration with regards to Ensor's Pool SAC and the DPD.
- 4.2 The following potential linking impact pathways have been identified that could link Ensor's Pool SAC to the DPD. These are:
- Direct effects on white-clawed crayfish abundance and distribution;
 - Indirect effects through changes in groundwater input to the SAC, or water quality in the SAC; and
 - Indirect effects through recreational pressure. For example, recreational angling can introduce crayfish plague to sites if correct guidance is not followed.
- 4.3 Linking impact pathways to the Humber Estuary SAC/Ramsar and Severn Estuary SAC/Ramsar consist of anything that would block passage of migratory fish up and downstream or interfere with conservation measures to improve fish passage. This includes not only physical blockages in the river (weirs or other obstructions) but reductions in flow volume/rate or water quality.
- 4.4 The consideration of the Nuneaton and Bedworth Borough Plan Review and its potential effects on Ensor's Pool SAC, Humber Estuary SAC/Ramsar or Severn Estuary SPA/Ramsar is documented in Table 2.
- 4.5 Of greatest relevance to Ensor's Pool is Strategic Allocation SHA-2 (Arbury) as this large site lies immediately adjacent to the SAC. Given the proximity of this site in particular, likely significant effects (i.e. the mere potential for an effect) on the SAC cannot be dismissed. With regard to the Severn Estuary SAC/Ramsar and Humber Estuary SPA/Ramsar, part of site SHA3 (Judkins) in Nuneaton lies adjacent to the River Anker and is therefore indirectly connected to the Humber Estuary. Non-Strategic Allocations NSHA-5, NSHA-9, NSHA-14 and NSHA-17 also lie close to the River Anker in Nuneaton town centre. Non-Strategic Housing Allocation NSHA-2 and strategic allocation SEA6 (Bowling Green Lane) are both close to the River Sowe, although none are adjacent. These therefore are indirectly connected to the Severn Estuary SAC/Ramsar site.
- 4.6 The second stage of HRA known as Appropriate Assessment is therefore required.
- 4.7 The Conservation of Habitats and Species Regulations (2017 as amended) require that plans are not considered purely in isolation but 'in combination' with other projects and plans. Those most relevant in relation to the Nuneaton and Bedworth Borough Council's Borough Plan Review include:
- Hinckley and Bosworth Borough Council Local Plan (2006 to 2026)
 - Rugby Borough Council Local Plan 2011 - 2031
 - Coventry City Council I Local Plan 2011 - 2031
 - North Warwickshire Borough Council 2021

- Warwick District Local Plan 2011 - 2029
- 4.8 In addition to other plans and projects relevant to the immediate area around Nuneaton & Bedworth, consideration of habitat connectivity for the Severn Estuary and Humber Estuary SACs and Ramsar sites (see below) involves watercourses connecting to the Severn and Humber that cover a very large geographic area. The areas are too large for specific Local Plans to be listed here but any interference with riverine habitat connectivity in Nuneaton & Bedworth would operate in combination with any similar issues arising throughout the upstream catchments of both European sites.
- 4.9 The potential for policies and allocations to have likely significant effects in combination as well as in isolation has been taken into account in the screening table overleaf. For example, given the distance of Nuneaton & Bedworth from the Severn Estuary and Humber Estuary no specific allocation would be likely to significantly affect either SAC/Ramsar site except when considered alongside all other similar allocations in proximity to tributaries of those European sites. Similarly, only one allocation (SHA-2) has the potential to significantly affect Ensor's Pool alone; all the other identified allocations only have the potential to do so in combination.

Table 2 Likely Significant Effects Test

Policy	Summary	Likely Significant Effects Test (LSE)
DS1 – Sustainable Development	Sets out that the Council will secure sustainable development by requiring all new development to contribute towards the national need to achieve net zero carbon emissions. Development must be adaptable / resilient to climate change, of a high quality, address the prudent use / safeguarding of natural resources and be fully supported by infrastructure provision. Sets out a range of key sustainable development issues that applications must address.	<p>No Likely Significant Effect</p> <p>By definition sustainable development must mean development that will not adversely affect European sites.</p>
DS2 – Settlement Hierarchy and Roles	Sets out the settlement hierarchy for the Borough. States that most development will be directed to Nuneaton as the primary town. Other development will be directed to, or adjacent to, other settlements, at a scale that reflects the role and function of the settlement and its order in the hierarchy, as well as the settlement's ability to accommodate change.	<p>No Likely Significant Effect</p> <p>Defining a settlement hierarchy poses no risk to European sites.</p>
DS3 – Overall Development Needs	Sets out the overall quantum of housing and employment development to be delivered in the Borough, as well as the allocation of cemetery space and gypsy and traveller pitches (the latter already subject to a separate HRA).	<p>Likely Significant Effects</p> <p>The location and amount of development are fundamental to the potential for effects on European sites and numerous allocated sites lie within 3km of Ensor's Pool SAC with one large site immediately adjacent to it.</p>
DS4 – Residential Allocations	Sets out the allocated sites for residential development and the quantum of housing expected on each.	<p>Likely Significant Effects</p> <p>The location and amount of development are fundamental to the potential for effects on European sites and numerous allocated sites lie within 3km of Ensor's Pool SAC with one large site immediately adjacent to it. Similarly, non-strategic housing allocations NSHA-5, NSHA-9, NSHA-14, and NSHA-17 lie adjacent</p>

Policy	Summary	Likely Significant Effects Test (LSE)
		to the River Anker and are therefore adjacent to potential functionally linked habitat for the Humber Estuary SAC and Ramsar site. Non-strategic housing allocation NSHA-2 lies close to the River Sowe and is therefore close to functionally-linked habitat for the Severn Estuary SAC and Ramsar site.
DS5 – Employment Allocations	Sets out the allocated sites for employment development and the quantum of floorspace expected on each.	<p>Likely Significant Effects</p> <p>The location and amount of development are fundamental to the potential for effects on European sites and numerous allocated employment sites lie within 3km of Ensor’s Pool SAC.</p>
DS6 – Green Belt	Sets out the protection and treatment of Green Belt land in the Borough	<p>No Likely Significant Effect</p> <p>The status of Green Belt is not related to the potential for impacts on European sites</p>
DS7 – Monitoring of Housing Delivery	Sets out the Council approach to monitoring housing delivery and what would be done to address any shortfall	<p>No Likely Significant Effect</p> <p>Monitoring of housing delivery will not affect European sites</p>
DS8 - Review	Sets out the circumstances under which Plan review will occur	<p>No Likely Significant Effect</p> <p>No mechanism to affect European sites</p>
SA1 – Development Principles on Strategic Sites	Sets out the broad requirements that must be met by all strategic development sites allocated in the Borough Plan Review	<p>No Likely Significant Effect</p> <p>Setting out general development principles will not affect European sites</p>
SHA1 – Land at Top Farm, North of Nuneaton	Among other requirements this policy sets out the necessity for provision of at least 1,700 dwellings in a mix of dwelling types and sizes, potential on-site GP surgery or financial contribution to new GP practice to serve the north Nuneaton area, provision of a district	<p>No Likely Significant Effect</p> <p>Although allocating housing development this allocation is more than 3km from Ensor’s Pool SAC and therefore beyond the groundwater catchment of the site as advised by the Environment Agency.</p>

Policy	Summary	Likely Significant Effects Test (LSE)
	centre including community facilities and provision of 2 form entry primary school (approximately 210 pupils)	
SHA2 – Arbury	Among other requirements this policy sets out the necessity for provision of at least 1,525 dwellings in a mix of dwelling types and sizes, financial contribution to local NHS Clinical Commissioning Group, provision of a local centre, including community facilities and provision of a Community Park.	<p>Likely Significant Effects</p> <p>This allocation lies adjacent to Ensor's Pool SAC.</p>
SHA3 – Land at Tuttle Hill (Judkins Quarry)	Among other requirements this policy sets out the necessity for provision of at least 400 dwellings in a mix of dwelling types and sizes.	<p>No Likely Significant Effect</p> <p>Allocation is within the 3km groundwater catchment of the site as advised by the Environment Agency for Ensor's Pool SAC. It also lies adjacent to the River Anker and is therefore adjacent to potential functionally linked habitat for the Humber Estuary SAC and Ramsar site</p>
SHA4 – Hospital Lane	Among other requirements this policy sets out the necessity for provision of at least 398 dwellings in a mix of dwelling types and sizes and potential on-site GP surgery or financial contribution to new GP or expanded surgery.	<p>No Likely Significant Effect</p> <p>Although allocating housing development, this allocation is more than 3km from Ensor's Pool SAC and therefore beyond the groundwater catchment of the site as advised by the Environment Agency.</p>
SHA5 – West of Bulkington	Among other requirements this policy sets out the necessity for provision of at least 348 dwellings in a mix of dwelling types and sizes	<p>No Likely Significant Effect</p> <p>Although allocating housing development this allocation is more than 3km from Ensor's Pool SAC and therefore beyond the groundwater catchment of the site as advised by the Environment Agency.</p>
SHA6 – Land at Former Hawkesbury Golf Course	Among other requirements this policy sets out the necessity for provision of 176 dwellings in a mix of dwelling types and sizes, and provision of a community building.	<p>No Likely Significant Effect</p> <p>Although allocating housing development this allocation is more than 3km from Ensor's Pool SAC and therefore</p>

Policy	Summary	Likely Significant Effects Test (LSE)
		beyond the groundwater catchment of the site as advised by the Environment Agency.
SEA1 – Wilson’s Lane	Among other requirements this policy sets out that strategic employment site SEA-1 will be developed for employment, comprising use classes E(g) (prior to 1 Sept 2020 use class B1), B2 and B8, as well as residential uses and will involve the provision of approximately 18 ha of employment land and approximately 73 dwellings in a mix of dwelling types and sizes.	<p>No Likely Significant Effect</p> <p>Although allocating employment, this allocation is more than 3km from Ensor’s Pool SAC and therefore beyond the groundwater catchment of the site as advised by the Environment Agency.</p>
SEA2 – Prologis Extension	Among other requirements this policy sets out the necessity for provision of approximately 5.3 ha of employment land for E(g) (prior to 1 Sept 2020 use class B1), B2 and B8 uses.	<p>No Likely Significant Effect</p> <p>Although allocating employment, this allocation is more than 3km from Ensor’s Pool SAC and therefore beyond the groundwater catchment of the site as advised by the Environment Agency.</p>
SEA3 – Coventry Road	Among other requirements this policy sets out that strategic employment site SEA-3 will be developed for employment uses comprising use classes E(g) (prior to 1 Sept 2020 use class B1, B2 and B8, and provision of approximately 9 ha of employment land.	<p>No Likely Significant Effect</p> <p>Allocation is within the 3km groundwater catchment of the site as advised by the Environment Agency for Ensor’s Pool SAC.</p>
SEA4 – Bowling Green Lane	Among other requirements this policy sets out that strategic employment site SEA-4 will be developed for employment uses comprising use classes E(g) (prior to 1 Sept 2020 use class B1), B2 and B8 and residential uses, including provision of approximately 19 ha of employment land and approximately 150 dwellings.	<p>No Likely Significant Effect</p> <p>Although allocating employment, this allocation is more than 3km from Ensor’s Pool SAC and therefore beyond the groundwater catchment of the site as advised by the Environment Agency. However, it lies close to the River Sowe and is therefore adjacent to potential functionally linked habitat for the Severn Estuary SAC and Ramsar site</p>
CEM1 – Land North of Marston Lane Bedworth	Allocation CEM-1 will be safeguarded for use as cemetery burial grounds to serve the Borough’s long term burial needs. Alternative green-belt compatible uses that preserve the	<p>No Likely Significant Effect</p>

Policy	Summary	Likely Significant Effects Test (LSE)
	openness of the Green Belt such as playing pitch provision will be considered acceptable where they will facilitate the development of the wider land allocation for burial space.	Allocation is within the 3km groundwater catchment of the site as advised by the Environment Agency for Ensor's Pool SAC.
H1 – Range and Mix of Housing	Generally sets out the expected range of housing types and mix of housing required in the Borough	<p>No Likely Significant Effect</p> <p>Type of housing is not relevant to potential for effects on European sites.</p>
H2 – Affordable Housing	Sets out the details regarding the extent of affordable housing provision required in the Borough	<p>No Likely Significant Effect</p> <p>Type of housing is not relevant to potential for effects on European sites.</p>
H3 – Gypsies, Travellers and Showpersons	Sets out the general requirements for gypsy and traveller provision, including reference to the Gypsy & Traveller DPD which has been subject to its own HRA.	<p>No Likely Significant Effect</p> <p>The HRA of the Gypsy & Traveller DPD concluded there would be no likely significant effect on Ensor's Pool SAC from allocated sites and Natural England accepted that conclusion.</p>
E1 – Nature of Employment Growth	Sets out the broad acceptability of different types of employment growth and among other requirements states that 'Applications for economic uses, focusing particularly on use classes E(g(ii)) (prior to 1 Sept 2020 use class B1(b)), B2 and B8 on the strategic employment sites and the portfolio of existing employment sites will be approved subject to them satisfactorily meeting the policies in the plan.	<p>No Likely Significant Effect</p> <p>Particular employment allocations pose likely significant effects and these are considered separately. However, the broad policy requiring employment growth does not specify a quantum or location of development.</p>
E2 – Existing Employment Estates	Among other requirements it states that the redevelopment, and/or expansion of existing employment sites listed in Table 11 (as shown on the policies map) for use class E(g)(ii) and B use classes employment purposes will be approved.	<p>No Likely Significant Effect</p> <p>This broad policy does not specify a quantum or location of development, other than that it would relate to existing employment estates. Moreover, since these are existing employment sites redevelopment of the sites to continue</p>

Policy	Summary	Likely Significant Effects Test (LSE)
		to provide employment is unlikely to pose impact pathways to the SAC.
TC1 – Town Centre Requirements	Among other requirements states that development within the town centres will need to support the aspirations of the Transforming Nuneaton and Transforming Bedworth initiatives.	<p>No Likely Significant Effect</p> <p>Setting requirements for town centre development without a specific mention to quantum of development will not affect European sites.</p>
TC2 – Nature of Town Centre Growth	Among other requirements states that development within Nuneaton and Bedworth town centres will be expected to create a more accessible, well-connected and well-designed centre, with particular emphasis on linkages by walking, cycling and public transport.	<p>No Likely Significant Effect</p> <p>Setting requirements for town centre development without a specific mention to quantum of development will not affect European sites.</p>
TC3 – Hierarchy of Centres	Among other requirements sets out the hierarchy that should be used to undertake any sequential assessments for town centre uses.	<p>No Likely Significant Effect</p> <p>Setting hierarchy for town centre uses will not affect European sites.</p>
HS1 – Ensuring the Delivery of Infrastructure	General policy relating to infrastructure delivery. Among other requirements states that development will be required to provide infrastructure appropriate to the scale and context of the site in order to mitigate any impacts of the development, and address the needs associated with the development.	<p>No Likely Significant Effect</p> <p>A general policy regarding appropriate and timely delivery of infrastructure supporting development will not affect European sites.</p>
HS2 – Strategic Accessibility and Sustainable Transport	Policy does not make any allocations but among other requirements states that transport proposals in line with those identified in the Coventry and Warwickshire Local Enterprise Partnership Strategic Economic Plan, Warwickshire County Council Local Transport Plan 2011 - 2026 (or subsequent updates) and Warwickshire County Council Cycle Network Development Plan/Local Cycling and Walking Infrastructure Plan (LCWIP) will be approved.	<p>No Likely Significant Effect</p> <p>Requiring accessibility and transport proposals to be in line with existing adopted plans and strategies will not affect European sites.</p>

Policy	Summary	Likely Significant Effects Test (LSE)
HS3 – Telecommunications and Broadband Connectivity	Among other requirements states that development must facilitate the provision of superfast broadband infrastructure including fibre to premises (in line with the latest Government target) in order to enable the delivery of broadband services across the borough.	<p>No Likely Significant Effect</p> <p>Provision of broadband connectivity will not affect European sites.</p>
HS4 – Retaining Community Facilities	Sets out the limited circumstances in which development which would lead to the loss of community facilities will be permitted	<p>No Likely Significant Effect</p> <p>Setting out criteria for loss of community facilities will not affect European sites.</p>
HS5 – Health	Requires all major development proposals will be required to demonstrate that they would have an acceptable impact on health and wellbeing.	<p>No Likely Significant Effect</p> <p>Requirements for health and wellbeing will not affect European sites.</p>
HS6 – Sport and Exercise	Among other requirements, states that proposals which assist in creating a healthy environment across the borough using sports, leisure, and recreation facilities and/or opportunities to exercise will be approved.	<p>No Likely Significant Effect</p> <p>Requirements for health and wellbeing will not affect European sites.</p>
HS7 – Creating a Healthier Food Environment	Among other things, limits new hot food takeaways to town centres.	<p>No Likely Significant Effect</p> <p>Requirements for health and wellbeing will not affect European sites.</p>
NE1 – Green & Blue Infrastructure	The borough’s green and blue infrastructure assets will be protected, managed, enhanced or created to provide nature recovery networks. New development proposals will enhance, sustain and restore existing and create green (including wildbelts) and blue infrastructure (including canals); whilst at the same time protecting and enhancing rights of way. The policy also specifically requires an undeveloped green buffer to Ensor’s Pool.	<p>No Likely Significant Effect</p> <p>A policy promoting a more connected approach to green infrastructure and buffering of important wildlife sites such as Ensor’s Pool and ancient woodland will not negatively affect European sites</p>

Policy	Summary	Likely Significant Effects Test (LSE)
NE2 – Open Space and Playing Fields	Sets out a range of requirements by which new development will create an improved green network of publicly accessible and linked open spaces to support growth	<p>No Likely Significant Effect</p> <p>A policy promoting an improved green network will not negatively affect European sites</p>
NE3 – Biodiversity and Geodiversity	Sets out requirements to protect and enhance both biodiversity and geodiversity. This includes the statement that ' <i>Development that would adversely affect Special Areas of Conservation or cause significant harm to Sites of Special Scientific Interest will not normally be granted planning permission</i> '.	<p>No Likely Significant Effect</p> <p>A policy protecting and enhancing biodiversity and geodiversity will not negatively affect European sites</p>
NE4 – Managing Flood Risk and Water Quality	Among other requirements, identifies that new development should be prioritised to areas of lowest flood risk and must not increase flood risk elsewhere. This should consider the risk from all sources including fluvial, surface water and groundwater flood risk, making use of the Strategic Flood Risk Assessments (both Level 1 and Level 2) available public mapping such as the Flood Map for Planning and the Flood Risk from Surface Water map and historic flood information (which is available from the LLFA & other partners).	<p>No Likely Significant Effect</p> <p>A policy managing flood risk and protecting water quality will not negatively affect European sites</p>
NE5 – Landscape Character	Among other requirements, states that major development proposals must demonstrate how they will conserve, enhance, restore or create a sense of place, as well as respond positively to the landscape setting in which the development proposal is located. Developers must take account of the Land Use Designations Study and landscape guidelines when preparing their landscape strategy.	<p>No Likely Significant Effect</p> <p>A policy protecting landscape character will not negatively affect European sites</p>
BE1 – Contamination and Land Instability	Sets out the requirements that development proposals located on or adjacent to land which	<p>No Likely Significant Effect</p>

Policy	Summary	Likely Significant Effects Test (LSE)
	may have been subject to contamination and/or land instability will need to demonstrate.	A policy setting out circumstances for development on contaminated land will not negatively affect European sites
BE2 – Renewable and Low Carbon Energy	Among other requirements, notes that the council is committed to supporting low carbon developments. In addition, schemes providing renewable and low carbon technologies will be approved unless material considerations indicate otherwise. These include schemes that promote biomass energy, ground and air source heat pumps, solar thermal and solar photovoltaic.	<p>No Likely Significant Effect</p> <p>A policy on renewable energy will not negatively affect Ensor’s Pool SAC given its qualifying interest features.</p>
BE3 – Sustainable Design and Construction	Sets out the Council’s requirements for sustainable development	<p>No Likely Significant Effect</p> <p>Ensuring sustainable design and construction will not negatively affect European sites</p>
BE4 – Valuing and Conserving Our Historic Environment	Sets out the Council’s requirements for conservating and enhancing historic assets	<p>No Likely Significant Effect</p> <p>Protecting the historic environment will not negatively affect European sites</p>

5. Appropriate Assessment

Ensor's Pool SAC

- 5.1 Appropriate Assessment is not a technical term, it literally means whatever assessment is required to draw a conclusion regarding adverse effects on the integrity of the SAC. In other words, it considers whether the ability of the SAC to achieve its conservation objectives will be impaired by the Local Plan either alone or in combination with other plans and projects.

Direct Effects on Abundance and Distribution

- 5.2 There is no mechanism for the delivery of housing and employment through the Local Plan to directly affect the abundance and distribution of white-clawed crayfish or interfere with attempts to reintroduce the species. Although SHA-2 (Arbury) is adjacent to the SAC, the associated policy requires a minimum 100m setback between the SAC boundary and any built development. This requirement was included in the adopted Borough Plan and was devised in agreement with Natural England. It ensures that there will be no direct interference with the SAC from the development (such as through encroachment or direct lighting, white-clawed crayfish are not sensitive to atmospheric noise) and also ensures the SAC is not isolated from the surrounding countryside.
- 5.3 There is therefore no potential for adverse effects on integrity. This is identical to the conclusion drawn in 2021 for the Gypsy & Traveller DPD HRA.

Changes to Groundwater Flows

- 5.4 As previously noted, Ensor's Pool SAC is groundwater fed. As such, changes in hydrological conditions as a result of increased development could potentially impact of the groundwater flows depending on issues such as the depth of excavation and the nature of any subsurface construction. To inform the HRA of the Warwickshire Minerals Plan HRA in 2019 the Environment Agency's Groundwater Team highlighted that any minerals development within 2-3km of Ensor's Pool SAC could have a hydrogeological connection to Ensor's Pool, so would require further investigation on potential impacts to the SAC at the project level including water level changes.
- 5.5 Allocations SHA-2, SHA-3, NSHA-1, NSHA-3, NSHA-9, NSHA-13, NSHA-14, NSHA-15, NSHA-17, SEA-3 and CEM-1 all lie within 3km of the SAC. Most of these allocations are in the urban part of Nuneaton and are less likely to affect groundwater flows at the SAC than those on the fringes. Sites SHA-2 (particularly), NSHA-13, and SEA-3 are probably most likely to have a groundwater interaction with the SAC due to their size and/or location close to the SAC, although whether they will do so or not will depend on the details of construction proposed for the allocations which will not be defined until planning applications are being prepared.
- 5.6 Those projects that involve significant sub-surface works like minerals excavation will have a greater effect than those with few to no sub-surface works. Clearly conventional housing and employment development is much less likely to have a significant hydrogeological effects on a site up to 3km distant unless

there were deep foundations below the water table, which for housing generally isn't the case. Any large structures with piling over a large area could be an issue for groundwater flow impediment, so employment development for large office buildings could potentially affect groundwater flows. On balance it is considered that for conventional housing and employment development, and thus piling compared to drawdown from mineral dewatering, a 1km buffer is reasonable for to capture any significant impediment to flow.

- 5.7 When this issue arose during the HRA of the adopted Borough Plan Natural England advised the Borough Council that: *'... the Borough Council, in its role as competent authority, can conclude no adverse effect on the integrity of the SAC at Local Plan level because:*
- 5.8 *(i) A range of viable options to mitigate the effects of the proposed development exist, and therefore the plan can be taken forward with the allocation;*
- 5.9 *(ii) Carrying out the HRA at the lower tier (project) level allows the further groundwater issues to be addressed at the planning application stage when the lower level HRA will still be required as a matter of law'.*
- 5.10 SHA-2 (Arbury) is a large site for 1,525 dwellings adjacent to the SAC and therefore has the greatest potential to affect groundwater or surface water flows to the SAC. However, the policy associated with the SAC specifically states that *'Ensor's Pool should have a minimum buffer zone of 100 m as well as any appropriate mitigation measures in order to ensure that the hydrological pathways to the pool are not compromised'* [emphasis added].
- 5.11 Furthermore, the Local Plan includes a policy that requires flood risk assessment regarding all sources including groundwater and which ensures that if groundwater quality cannot be maintained, there will be an assumption against the development proposal (Policy NE4 – Managing flood risk and water quality). This will apply to all development in the Borough, including that in this DPD.
- 5.12 Given the Environment Agency's advice to Warwickshire County Council in 2019 regarding the Minerals Plan, it was recommended in the HRA of the Preferred Options that a further requirement is explicitly added to Policy NE4 that *'All new housing and employment allocations with piled foundations or basements within 1km of Ensor's Pool SAC should undertake a hydrogeological study to confirm that it will not affect groundwater flows or quality at the SAC'*. This recommendation has now been added in the Water Quality part of Policy NE4.**

Recreational Pressure

- 5.13 Consultation with Natural England regarding the adopted Borough Plan initially identified this potential linking impact pathway stemming from an increase in recreational pressure from the net new dwellings, potentially linking to the population of white-clawed crayfish at Ensor's Pool.
- 5.14 The Natural England consultation noted that the crayfish population has been lost, and that this is likely to be as a result of biosecurity issues (crayfish plague). The movement of live fish is the most important route of spread for crayfish plague, with release of non-native crayfish by the general public ranked second and crayfish migration third. While recreational activity associated with fishing could introduce crayfish plague to a site if biosecurity procedures concerning

equipment are not followed, but the risk is classed as 'extremely low'¹⁸ and there is strong evidence crayfish plague is already present at Ensor's Pool.

- 5.15 The government campaign Check, Clean and Dry code is the guidance that should be followed to stop the spread of crayfish plague and other non-native invasive species. Details can be found on the Non Native Species Secretariat (NNSS) web pages¹⁹. In addition to this protocol, it is important for anglers to understand that it is illegal to use any species of crayfish as bait (either alive or dead). Also if fish are being restocked in areas with white-clawed crayfish, they must not come from areas where signal crayfish are present. Further information regarding this is available on the crayfish hub on the Buglife's website²⁰. If signs advertising these requirements are not already present at Ensor's Pool the Council could liaise with the landowner to ensure such signs are installed.
- 5.16 SHA-2 (Arbury) is adjacent to the SAC and is intended to deliver at least 1,525 dwellings. It therefore has the greatest potential to contribute an increase in recreational visits to the SAC. However, the policy associated with the SAC specifically states that Ensor's Pool should have a minimum buffer zone of 100 m, which will enable a buffer zone of recreational greenspace to be delivered through master-planning between the development and the SAC (and which is therefore most likely to receive casual recreational visits rather than the SAC beyond it). The policy also requires the creation of a significant area of grassland habitat between Ensor's Pool and Bermuda Clay Pits to the south, in order to strengthen a south-north recreational flow around the west of Nuneaton.
- 5.17 As documented in the HRA of the submitted Local Plan Natural England ultimately concluded that, against the background of crayfish plague already being present in the SAC and the white-clawed crayfish population having died out, the housing proposed within the Local Plan would not further exacerbate the biosecurity risks that already exist at the site. That same conclusion can be extended to the new Local Plan, particularly regarding carried forward allocations such as SHA-2.
- 5.18 Nonetheless, during the 2020 COVID-19 pandemic there were media reports of antisocial behaviour and extensive littering at Ensor's Pool. Placing 1,525 net new dwellings close to the SAC increases the risk of such activities even allowing for a 100m separation distance. While this is not necessarily directly threatening to the site's future potential to host a reintroduction of white-clawed crayfish, **it was recommended in the HRA of the Preferred Options that, for the general health of the SAC, the policy for site SHA-2 (Arbury) includes a requirement for the developer to work with landowners and Natural England to provide support (either financial or in kind through the services of an estate management company for the adjacent development) to aid with litter collection and patrolling of the SAC. The Council ultimately decided that it was unnecessary to include this recommendation in policy because the Council's Parks Department already have a long lease on the Pool which enables the Council to maintain the area.**

¹⁸ CEFAS (The Centre for Environment, Fisheries and Aquaculture Service). Oidtmann, B., Thrush, M., Rogers, D., and Peeler, E. 2005. Pathways for transmission of crayfish plague, *Aphanomyces astaci*, in England and Wales.

¹⁹ <https://www.nonnativespecies.org/what-can-i-do/check-clean-dry/>

²⁰ <https://www.buglife.org.uk/resources/species-hub/crayfish-hub/>

In Combination Assessment

5.19 The only potential for in combination effects with Local Plan allocations is likely to arise through either groundwater effects or recreational pressure. Groundwater effects would only arise from other developments within 3km of the SAC. No other local authority lies within 3km of Ensor's Pool SAC and therefore there are no Local Plans for which in combination effects are expected to arise.

Humber Estuary and Severn Estuary

5.20 The removal or modification of existing weirs to facilitate fish passage is identified as a key action in River Basin Management Plans under the Water Framework Directive. In addition to European eel, the Warwickshire Avon and its tributaries are believed to offer scope for species such as River lamprey, Sea lamprey, Atlantic salmon and Sea trout. Similar scope is believed to exist during the plan's lifetime for River lamprey to reach the Warwickshire tributaries of the Humber Estuary.

5.21 Maintaining or achieving a good standard of water quality (Good Ecological Status under the Water Framework Directive is considered an appropriate standard for functionally linked watercourses used by migratory fish species (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/307788/river-basin-planning-standards.pdf) and sufficient flows is a necessary consideration when considering the potential impact of plans on functionally linked watercourses used by migratory fish species and longer term there should be an aspiration to restore connectivity by removing barriers and to improve the quality of our freshwater habitats.

5.22 The Local Plan includes a policy that requires flood risk assessment regarding all sources including groundwater and surface water and which ensures that no increase in flood risk arises either on-site or on surrounding/downstream sites. If water quality cannot be maintained, there will be an assumption against the development proposal (Policy NE4 – Managing flood risk and water quality). This will apply to all development in the Borough, including that in this DPD. These assessments must also account for climate change.

5.23 The policy also states that all new developments should contribute to creating space for water through use of blue and green infrastructure, and where relevant, restoring functional floodplains (flood zone 3b). New developments should also seek opportunities for river restoration and enhancement, e.g., de-culverting, removing structures and reinstating a natural, sinuous river channel. As a minimum all developments are required to provide an 8 m wide undeveloped buffer strip from the watercourse (from top of bank or centreline of culvert) to allow access for routine maintenance and emergency clearance.

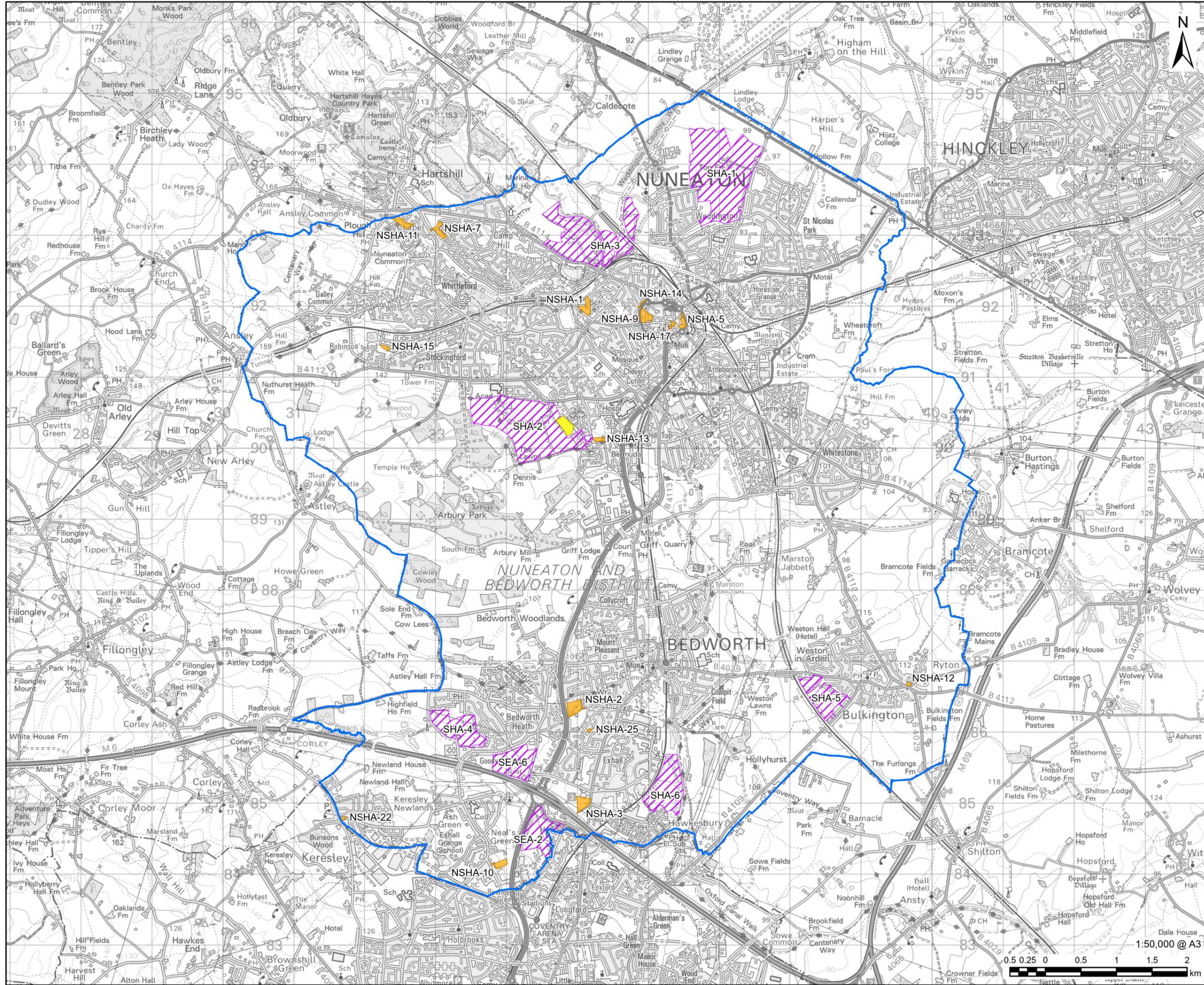
5.24 This will ensure that the water quality and flows of the Rivers Anker and Sowe is not compromised by allocations anywhere in the borough, and particularly not by allocations close to either river (i.e. sites SHA3, SEA4, NSHA-2, NSHA-5, NSHA-9, NSHA-14 and NSHA-17). Indeed, the proximity of these sites to the Rivers Anker and Stowe, particularly site SHA3, which is adjacent to the River Anker, potentially provides opportunities to naturalise the flood plain and reduce obstacles to fish passage in the rivers.

In Combination Assessment

- 5.25 As discussed in the Likely Significant Effects section, the potential for in combination effects with Local Plan allocations exists for all net new development throughout the Anker and Sowe floodplains, particularly where development lies close to or on the rivers. However, the requirements of Policy NE4 would ensure that none of the Nuneaton & Bedworth Local Plan allocations would operate negatively in combination with other plans and projects on the Humber Estuary or Severn Estuary.
- 5.26 Abstraction for the Public Water Supply occurs throughout the Severn Estuary and Humber Estuary surface water and groundwater catchments and could reduce water levels in relevant rivers providing functional linkage for migratory fish. However, all water companies are required to produce Water Resource Management Plans that identify how they intend to meet water need in their supply areas over forthcoming decades (accounting for climate change). These are based on robust population growth estimates. All WRMPs must themselves undergo HRA to either establish that no adverse effect on the integrity of European sites will arise, or to identify and secure compensation for adverse effects on integrity after demonstrating the derogation tests can be met.
- 5.27 The directly relevant WRMP for Nuneaton and Bedworth is that for Severn Trent Water. The water company consulted on their WRMP through to February 2023. The final plan is due to be published in late 2023. It is based on water supply needs and robust population projections to 2085 and thus well beyond the end of the Local Plan period. The WRMP is accompanied by a Habitats Regulations Assessment which The preferred programme includes demand management measures targeted at leakage reduction, water efficiency measures and fitting of enhanced and smart meter technology . For demand-side measures that are likely to require some form of physical intervention or amendment to infrastructure (e.g. pipe repair), some instances of effect pathways might be conceivable but it is not possible to predict or identify specific locations where such measures might be applied. However, the HRA concludes that it is very likely that adverse effects on the integrity of European sites could be avoided at a scheme level following down-the-line scheme specific HRA. Therefore, the Local Plan is not expected to have an adverse effect on integrity in combination with the Severn Trent WRMP.

6. Conclusions

- 6.1 This assessment undertook both a Test of Likely Significant Effects and Appropriate Assessment of the policies and any allocations within the Nuneaton and Bedworth Borough Plan Review. Effects on River Mease SAC were scoped out of assessment as was the case with the adopted Borough Plan. However, likely significant effects on Ensor's Pool SAC could not be dismissed due to the presence of numerous allocated sites within the 3km groundwater catchment of the SAC identified by the Environment Agency and, in particular, the presence of Strategic Allocation SHA-2 (Arbury), a large site that lies immediately adjacent to the SAC. Likely Significant Effects on the Severn Estuary SAC/Ramsar and Humber Estuary SAC/Ramsar also could not be dismissed due to the proximity of several allocations to upstream watercourses in the catchment (the River Anker and River Sowe).
- 6.2 An appropriate assessment was then undertaken both alone and in combination with other relevant plans and projects that made the following recommendations regarding Ensor's Pool SAC:
- Given the Environment Agency's advice to Warwickshire County Council in 2019 regarding the Minerals Plan, it is recommended that a further requirement is explicitly added to Policy NE4 that *'All new housing and employment allocations with piled foundations or basements within 1km of Ensor's Pool SAC should undertake a hydrogeological study to confirm that it will not affect groundwater flows or quality at the SAC'*. The Council has added that recommendation to Policy NE4.
 - While this is not necessarily directly threatening to the site's future potential to host a reintroduction of white-clawed crayfish, it is recommended that for the general health of the SAC the policy for site SHA-2 (Arbury) includes a requirement for the developer to work with landowners and Natural England to provide support (either financial or in kind through the services of an estate management company for the adjacent development) to aid with litter collection and patrolling of the SAC. The Council ultimately decided it was not necessary to add these changes to policy because the Council already has a long lease on the Pool which allows it to maintain the area.
- 6.3 Following this assessment it can be concluded that the Local Plan will not pose adverse effects on the integrity of any sites either alone or in combination with other plans or projects. No changes to the Local Plan were identified as being necessary for Severn Estuary SAC/Ramsar or Humber Estuary SAC/Ramsar.



PROJECT
 Nuneaton & Bedworth
 Borough Plan Review

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- LEGEND**
- Nuneaton and Bedworth Borough Boundary
 - Ensor's Pool Special Area of Conservation
 - Strategic Allocation
 - Non-Strategic Allocation

NOTES

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FIGURE TITLE
 European Sites and Allocations Around
 Nuneaton & Bedworth

FIGURE NUMBER
 Appendix A

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Appendix A Map of European sites

