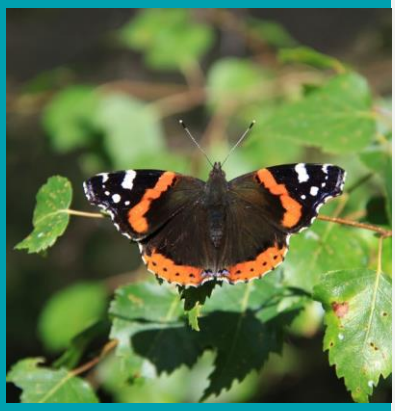
Rutland County Council

Local Plan Issues and Options Consultation

Habitats Regulations Assessment – Review of Baseline and Key Issues



Wood Group UK Limited – May 2022

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Executive summary

Rutland County Council (RCC) is currently developing a new Local Plan to cover the planning period to 2041, and to combine the three existing DPDs into a single Local Plan. The plan will provide for any additional new housing, employment or other development that may be needed over the extended plan period. RCC is completing the plan preparation process on the following broad timeline:

- Issues and Options (Reg. 18) Consultation – May 2022;
- Preferred Options Local Plan (Reg. 18) Consultation – summer 2023;
- Pre-submission Local Plan (Reg. 19) Consultation – spring 2024

Regulation 105 of the *Conservation of Habitats and Species Regulations 2017* (as amended) states that if a land-use plan is "*(a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects); and (b) is not directly connected with or necessary to the management of the site*" then the plan-making authority must "*…make an appropriate assessment of the implications for the site in view of that site's conservation objectives*" before the plan is given effect. The process by which Regulation 105 is met is known as Habitats Regulations Assessment (HRA). RCC has a statutory duty to prepare the Local Plan and is therefore the Competent Authority for an HRA.

Regulation 105 essentially provides a test that the final plan must pass; there is no statutory requirement for HRA to be undertaken on draft plans or similar developmental stages (e.g. issues and options; preferred options). However, it is accepted best-practice for the HRA of strategic planning documents to be run as an iterative process alongside plan development.

This 'Issues and Options HRA Report' accompanies the Issues and Options (I&O) Regulation 18 consultation documentation and provides guidance on the HRA-related issues that will be relevant to both the plan development and the HRA. It includes:

- an outline of the proposed approach and scope of the Local Plan HRA;
- a summary of the environmental and European site baseline, as currently understood, and any known data gaps or environmental aspects subject to future studies;
- informal guidance for RCC on any HRA-related issues or risks that may be relevant to the Options selection process, and/or which may need to be considered when developing the Local Plan.

As the Local Plan is at an early stage in its development this report **is not** an 'HRA screening', 'draft HRA' or similar. It provides an initial baseline and exploration of local HRA-related issues only; it does not provide any formal or guideline HRA conclusions and all observations within the report are necessarily preliminary and subject to further assessment as the plan evolves and the baseline data are updated. However, it is evident that none of the I&O objectives or options will create fundamental systematic effects that cannot be avoided or mitigated irrespective of how the objectives and options are defined though allocation and policy. The data within the report will be reviewed and updated as the Local Plan evolves.

Contents

1. Introduction

1.1 The Rutland County Council (RCC) Local Plan

1.1.1 The Rutland County Council (RCC) Local Plan sets out the planning policies for Rutland to 2026. It comprises three documents, the Core Strategy Development Plan Document 2011 (DPD), the Site Allocations and Policies Development Plan Document 2014 (DPD), and the Minerals Core Strategy and Development Control Policies Development Plan Document 2010 (DPD).

1.1.2 RCC is currently developing a new Local Plan to cover the planning period to 2041, and to combine the three existing DPDs into a single Local Plan. The plan will provide for any additional new housing, employment or other development that may be needed over the extended plan period.

1.1.3 RCC is completing the plan preparation process on the following broad timeline:

- Issues and Options (Reg. 18) Consultation – May 2022;
- Preferred Options Local Plan (Reg. 18) Consultation – summer 2023;
- Pre-submission Local Plan (Reg. 19) Consultation – spring 2024.

1.2 Habitats Regulations Assessment

1.2.1 Regulations 105 and 107 of *The Conservation of Habitats and Species Regulations 2017* (as amended) (the 'Habitats Regulations')[1] transpose the provisions of Articles 6(3) and 6(4) of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the 'Habitats Directive') as they relate to land-use plans in England and Wales. Regulation 105 states that if a land-use plan is *"(a) is likely to have a significant effect on a*

[1] The 2017 Regulations have been amended by the *Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019* to reflect the UK's exit from the EU, although these largely carried forward the provisions and terminology of the 2017 Regulations and do not fundamentally alter their interpretation. This report therefore primarily refers to the 2017 Regulations and (where appropriate for clarity) the relevant provisions of the Habitats Directive.

European site[2] *or a European offshore marine site*[3] *(either alone or in combination with other plans or projects); and (b) is not directly connected with or necessary to the management of the site*" then the plan-making authority must "*…make an appropriate assessment of the implications for the site in view of that site's conservation objectives*" before the plan is given effect.

1.2.2 The plan can only be given effect if it can be concluded (following an 'appropriate assessment') that the plan "*…will not adversely affect the integrity*" of a site, unless the provisions of Regulation 107 are met.

1.2.3 The process by which Regulation 105 is met is known as Habitats Regulations Assessment (HRA)[4]. An HRA determines whether there will be any 'likely significant effects' (LSE) on any European site as a result of a plan's implementation (either on its own or 'in combination' with other plans or projects)[5] and, if so, whether there will be any 'adverse effects on site integrity'[6]. The Council has a statutory duty to prepare the Local Plan and is therefore the Competent Authority for an HRA.

1.3 This Report

1.3.1 Regulation 105 essentially provides a test that the final plan must pass; there is no statutory requirement for HRA to be undertaken on draft plans or similar developmental stages (e.g. issues and options; preferred options). However, it is accepted best-practice for the HRA of strategic planning documents to be run as an iterative process alongside plan development, with the emerging policies or options reviewed during development to ensure that potentially adverse effects on European sites can be identified at an early stage, and avoided or mitigated through the plan development process. This is undertaken in consultation with Natural England (NE) and other appropriate consultees.

[2] As noted, the 2019 amendment to the Habitats Regulations largely carried forward the provisions and terminology of the 2017 Regulations, and so the term 'European site' is currently retained and for all practical purposes the definition is essentially unchanged. European sites are therefore: any Special Area of Conservation (SAC) from the point at which the European Commission and the UK Government agreed the site as a 'Site of Community Importance' (SCI) (if this was before 31 Jan 2020); any classified Special Protection Area (SPA); and any candidate SAC (cSAC). However, the term is also commonly used when referring to potential SPAs (pSPAs), to which the provisions of Article 4(4) of Directive 2009/147/EC (the 'new wild birds directive') are applied; and to possible SACs (pSACs) and listed Ramsar Sites, to which the provisions of the Habitats Regulations are applied a matter of Government policy (NPPF para. 181) when considering development proposals that may affect them. "European site" is therefore used in this document in its broadest sense, as an umbrella term for all of the above designated sites. Note, it is likely that this term will be supplanted at some point in the future although an appropriate UK-wide alternative has not yet been agreed (e.g. the NPPF in England has adopted the term 'Habitats sites' to refer collectively to those sites defined by Regulation 8, whereas the *Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019* uses the term 'National Site Network').

[3] 'European offshore marine sites' are defined by Regulation 18 of The Conservation of Offshore Marine Habitats and Species Regulations 2017; these regulations cover waters (and hence sites) over 12 nautical miles from the coast.

[4] The term 'Appropriate Assessment' has been historically used to describe the process of assessment; however, the process is more accurately termed 'Habitats Regulations Assessment' (HRA), with the term 'Appropriate Assessment' limited to the specific stage within the process.

[5] Also referred to as the 'test of significance'.

[6] Also referred to as the 'integrity test'.

1.3.2 Wood Environment and Infrastructure UK Ltd (Wood) is supporting RCC with its HRA of the Local Plan. This 'Issues and Options HRA Report' is intended to accompany the Issues and Options Regulation 18 consultation documentation and provide guidance on the HRA-related issues that will be relevant to both the plan development and the HRA. It includes:

- an outline of the proposed approach and scope of the Local Plan HRA;
- a summary of the environmental and European site baseline, as currently understood, and any known data gaps or environmental aspects subject to future studies;
- informal guidance for RCC on any HRA-related issues or risks that may be relevant to the Options selection process, and/or which may need to be considered when developing the Local Plan[7].

1.3.3 As the Local Plan is at an early stage in its development this report **is not** intended to be, or replicate, a formal 'HRA screening'; nor is it a 'draft HRA' or similar. It will ultimately (with additional data and assessment) form part of the 'draft HRA' that is submitted alongside the Regulation 19 version of the Local Plan but is primarily intended to assist RCC as it develops its plan and provide an opportunity for consultees to comment on HRA-related issues.

1.3.4 The Issues and Options documentation will be published for consultation between XXXX and YYYY 2022. Comments on the Issues and Options HRA Report (this report) should be sent to RCC via localplan@rutland.gov.uk. All comments will be reviewed by RCC and Wood, and will be used to influence the Local Plan development and the HRA approach.

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[7] Recognising that the effects of the broad options within the Issues and Options documentation cannot be meaningfully assessed at this point, as these will depend substantially on how the option is realised through policy and allocations; however, options that would seem likely to introduce fundamentally unavoidable significant adverse effects would be identified.

2. Approach to HRA of the Local Plan

2.1 Overview

2.1.1 European Commission guidance[8] and established case-practice suggests a four-stage process for addressing Articles 6(3) and 6(4), and hence Regulations 105 and 107 (see **Box 1**), although not all stages will necessarily be required:

Box 1 – Stages of HRA

Stage 1 – Screening or 'Test of significance'

This stage identifies the likely effects of a project or plan on a European site, either alone or 'in combination' with other projects or plans, and considers whether these effects are likely to be significant. The 'screening' test or 'test of significance' is a low bar, intended as a trigger rather than a threshold test: a plan should be considered 'likely' to have an effect if the competent authority is unable (on the basis of objective information) to exclude the possibility that the plan or project could have significant effects on any European site, either alone or in combination with other plans or projects; an effect will be 'significant' simply if it could undermine the site's conservation objectives. Note that mitigation measures should not be considered at the 'screening' stage, in accordance with the **People over Wind** (Court of Justice of the European Union (ECJ) Case C-323/17); this reinforces the idea of screening as a 'low bar' and makes 'appropriate assessments' more common.

Stage 2 – Appropriate Assessment (including the 'Integrity test')

An 'appropriate assessment' (if required) involves a closer examination of the plan or project where the effects on relevant European sites are significant or uncertain, to determine whether any sites will be subject to 'adverse effects on integrity' if the plan or project is given effect. The scope of any 'appropriate assessment' stage is not set, and the assessments will not be extremely detailed in every case (particularly if mitigation is clearly available, achievable, and likely to be effective). The assessments must be 'appropriate' to the effects and proposal being considered, and sufficient to ensure that there is no reasonable doubt that adverse effects on site integrity will not occur (or sufficient for those effects to be appropriately quantified should Stages 3 and 4 be required).

Stage 3 – Assessment of Alternative Solutions

Where adverse effects remain after the inclusion of mitigation, Stage 3 examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of European sites. A plan or project that has adverse effects on the integrity of a European site cannot be permitted if alternative solutions are available, except for imperative reasons of overriding public interest (IROPI; see Stage 4).

Stage 4 – Assessment Where No Alternative Solutions Exist and Where Adverse Impacts Remain

This stage assesses compensatory measures where it is deemed that there are no alternatives that have no or lesser adverse effects on European sites, and the project or plan should proceed for imperative reasons of overriding public interest (IROPI). The EC guidance does not deal with the assessment of IROPI, although the IROPI need to be sufficient to override the adverse effects on European site integrity, taking into account the compensatory measures that can be secured (which must ensure the overall coherence of the 'national site network'.

[8] *Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (EC 2002).

2.1.2 HRAs of local planning documents rarely proceed beyond Stage 2, as alternatives to policies or allocations that adversely affect the integrity of a European site[9] are almost always available.

2.1.3 As noted, it is important to recognise that these stages principally reflect the legislative tests applied to the final, submitted project or plan; there is no statutory requirement for HRA (or these specific stages) to be completed for draft plans or similar developmental stages. Attempting to rigidly apply these steps to the emerging or interim stages of strategic plans is not always appropriate, and often reduces the clarity and usefulness of the HRA as a plan-shaping process for both plan-makers and consultees.

2.1.4 In practice, therefore, there is flexibility for the HRA process to be run in a manner that provides maximum benefit for plan-development and sound decision-making, whilst still ultimately meeting the legislative tests.

2.1.5 The HRA of the RCC plan therefore employs an iterative and consultative approach to HRA, with outputs tailored to each stage of the plan development and consultation process, and the requirements of the key stakeholders, rather than trying to force the guideline HRA stages on to the emerging plan. The HRA therefore contributes to the plan evidence-base, so assisting with the development of sustainable policies from the beginning of the plan-making process rather than being a purely retrospective 'test' applied towards the end.

2.1.6 **Figure 2.1** below provides an overview of our preferred approach to the HRA of Local Plans, identifying the relationships between the HRA process / key outputs and the plan development / consultation points (Reg. 18 etc.). Note, this is indicative and additional outputs may be appropriate to support RCC as the plan evolves.

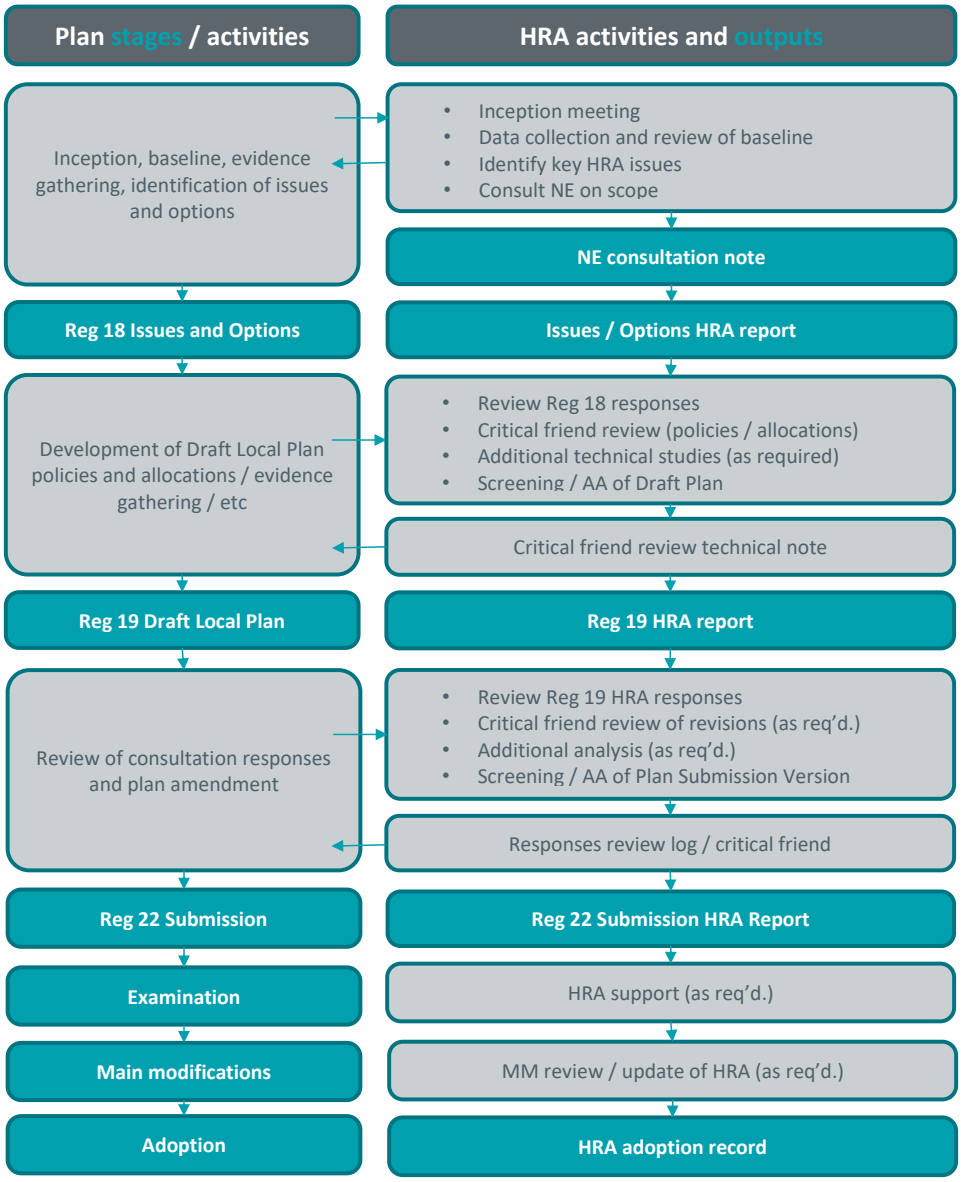
2.1.7 In summary, the early stages of the process will be relatively iterative and will not look like a 'formal' HRA – so, for example, the Issues and Options HRA report (this report) does not attempt to 'screen' the Issues and Options (partly as these will be too broad for any such assessment to be meaningful, although guidance would be provided to RCC if any options would clearly risk unavoidable adverse effects if pursued), but rather set out the current local baseline and intended scope, discuss potential data gaps, and identify the key HRA-related issues for the Local Plan to address in its development.

2.1.8 The HRA reporting will align more closely with the guideline stages as the Local Plan develops, with the Preferred Options being accompanied by a comprehensive 'Draft Local Plan HRA' report that will comprise a detailed 'screening' and (probably) 'appropriate assessment' of the Preferred Options Draft Plan, setting out the HRA-related evidence and the anticipated conclusion (if the plan were to be adopted as drafted, recognising that the HRA can only be completed for the final, adopted plan). This report would then be

[9] Note, the UK European sites are no longer legally part of the 'Natura 2000' network of protected sites, with this being replaced in the UK by the 'national site network' which comprises all existing SACs and SPAs and any new SACs and SPAs designated under the 2019 Regulations (Ramsar sites do not form part of the network). This also has relevance if compensation measures are required for an adverse effect, as the relevant metric is the overall coherence of the 'national site network'. The 2019 Regulations establish management objectives for the 'national site network' which contribute to the conservation of UK habitats and species that are also of pan-European importance, and to the achievement of their favourable conservation status within the UK.

updated for subsequent consultation stages to reflect consultation responses and plan amendments.

Figure 2.1 Indicative HRA process for Local Plans



2.2 Guidance

2.2.1 The following guidance has been used during the review and assessment of the Publication Local Plan:

- UK Government (2019). *Appropriate assessment: Guidance on the use of Habitats Regulations Assessment* [online]. Available at: https://www.gov.uk/guidance/appropriate-assessment [Accessed March 2022].
- Tyldesley, D. & Chapman, C. (2022). *The Habitats Regulations Assessment Handbook* [online]. DTA Publications Limited. Available at: https://www.dtapublications.co.uk/handbook/. [Accessed March 2022].
- EC (2018). *Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC*. Commission Notice C(2018) 7621 final, Brussels, 21.11.2018.
- Natural England (2020). *Guidance on how to use Natural England's Conservation Advice Packages in Environmental Assessments*. Natural England, Peterborough.
- European Commission (2018). *Managing Natura 2000 sites - The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC*. European Union, 1-86.
- Defra (2012). *The Habitats and Wild Birds Directives in England and its seas: Core guidance for developers, regulators & land/marine managers* [online]. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/82706/habitats-simplify-guide-draft-20121211.pdf. [Accessed March 2022].
- PINS Note 05/2018: Consideration of avoidance and reduction measures in Habitats Regulations Assessment: People over Wind, Peter Sweetman v Coillte Teoranta. [withdrawn].
- SNH (2019). SNH Guidance Note: *The handling of mitigation in Habitats Regulations Appraisal – the People Over Wind CJEU judgement* [online]. Scottish Natural Heritage. Available at: https://www.nature.scot/sites/default/files/2019-08/Guidance%20Note%20-%20The%20handling%20of%20mitigation%20in%20Habitats%20Regulations%20Appraisal%20-%20the%20People%20Over%20Wind%20CJEU%20judgement.pdf. [Accessed March 2022].

2.2.2 Additional topic-specific guidance (for example, in relation to the assessment of air quality effects) is identified within the relevant assessment sections.

2.3 Consultation and Plan Evolution

2.3.1 The HRA process is completed alongside the development of the Plan, and the HRA reports issued at each stage of the plan development reflect the assessment and process at that point in time.

2.3.2 The consultations to date are as follows:

- initial consultation on the intended approach to HRA, undertaken alongside the SEA Scoping Report consultation (21 March – 25 April 2022); and
- the 'Issues and Options' Reg. 18 consultation HRA document (this report).

2.3.3 Appropriate HRA reports will be produced to accompany the future plan consultation stages; additional consultations on specific technical aspects are undertaken and documented as required.

2.4 Study Area

2.4.1 The zone of influence of a Local Plan varies according to the aspect being considered (for example, noise effects would rarely extend more than a few hundred metres from the source), and so it is not usually appropriate to employ 'arbitrary' spatial buffers to determine those European sites that should be considered within an HRA.

2.4.2 However, as distance is a strong determinant of the scale and likelihood of most effects, the considered use of a suitably precautionary search area as a starting point for the assessment (based on an understanding of both the likely plan outcomes and European site interest features) has some important advantages. Using buffers allows the systematic identification of European sites using GIS, so minimising the risk of sites or features being overlooked, and ensures that sites for which there are no reasonable impact pathways can be quickly and transparently excluded from any further screening or assessment. It also has the significant advantage of providing a consistent point of reference for consultees following the assessment process, allowing the screening to focus on the potential effects, rather than on explaining why certain sites may or may not have been considered in relation to a particular aspect of the plan.

2.4.3 Most Local Plan HRAs adopt a 15km buffer for the identification of European sites that may be exposed to significant effects, with sites beyond this distance considered as required. The HRA of the RCC plan therefore considers:

- all European sites within 15km of the Council's administrative area (see **Table 3.2**);
- any additional sites that may be hydrologically linked to the Local Plan's zone of influence; and
- any additional sites identified by Natural England following the SA Scoping Consultation (particularly in relation to air or water quality, see below).

2.4.4 This is considered to be a suitably precautionary starting point for the assessment of the Local Plan. **Note, at the screening stage the assessment essentially assumes that there will be 'no effect' (and hence no possibility of 'in combination' effects) on European sites not included within the scope**.

2.5 Data Collection

2.5.1 The screening and appropriate assessment stages take account of the baseline condition of the European sites and their interest features[10], including (where reported) data on

- the site boundaries and the boundaries of the component SSSIs;
- the conservation objectives;
- information on the attributes of the European sites that contribute to and define their integrity;
- the condition, vulnerabilities and sensitivities of the sites and their interest features, including known pressures and threats;
- the approximate locations of the interest features within each site (if reported); and
- designated or non-designated 'functional habitats' (if identified).

2.5.2 These data are derived from:

- the most recent JNCC-hosted GIS datasets;
- the Standard Data forms for SACs and SPAs and Information Sheets for Ramsar sites;
- Article 12 and 17 reporting;
- the published site Conservation Objectives;
- Supplementary Advice to the conservation objectives (SACO) where available[11];
- Site Improvement Plans (SIPs);
- Core Management Plans (Wales); and
- the supporting Site of Special Scientific Interest's favourable condition tables where relevant and where no SACOs applicable to the features are available.

2.5.3 Note:

- For SPAs, the qualifying features are taken as those identified on the most recent JNCC datasets and citations where these post-date the 2nd SPA Review (i.e. it will be assumed that any amendments suggested by the SPA review have been made) unless otherwise identified to us by NE; any site-specific issues relating to the SPA Review can be addressed in the screening and appropriate assessment of the preferred options (see below).

[10] The interest features are taken to be the qualifying features; and other site features that may be relevant to site integrity, particularly 'typical species' (for SACs) and within-site supporting habitats for SPAs.

[11] NE has published '*Supplementary advice on conserving and restoring site features*' for most European sites in England which describe in more detail the range of ecological attributes which are most likely to contribute to a site's overall integrity, and the targets each qualifying feature needs to achieve in order for the site's conservation objectives to be met.

- The conservation objectives for Ramsar sites are taken to be the same as for the corresponding SACs / SPAs (where sites overlap); SSSI Definition of Favourable Condition (FCTs) are used for those features not covered by SAC/SPA designations.

2.5.4 Where possible the site data is used to identify other features that may be relevant to site integrity, particularly '**typical species**' (for SACs), within-site **supporting habitats**, and designated or non-designated '**functional habitats**'.

2.5.5 A '**typical species**' is broadly described by EC guidance as being any species (or community of species) which is particularly *chara*cteristic of, confined to, and/or dependent upon the qualifying Annex I habitat feature at a particular site. This may include those species which:

- are critical to the composition or structure of an Annex I habitat (e.g. constant species identified by the National Vegetation Classification (NVC) community classification);
- exert a critical positive influence on the Annex I habitat's structure or function (e.g. a bioturbator (mixer of soil/sediment), grazer, surface borer or predator);
- are consistently associated with, and dependent upon, the Annex I habitat feature for specific ecological needs (e.g. feeding, sheltering), completion of life-cycle stages (e.g. egg-laying) and/or during certain seasons/times; or
- are particularly distinctive or representative of the Annex I habitat feature at a particular site.

2.5.6 Within-site **supporting habitats** are those which support the population(s) of the qualifying species and which are therefore critical to the integrity of the feature.

2.5.7 '**Functional habitats**' are generally taken to be habitats or features outside a European site boundary that are important or critical to the functional integrity of the site habitats and / or its interest features. These might include, for example:

- 'buffer' areas around a site (e.g. dense scrub areas preventing public access; areas of land that reduce the effects of agricultural run-off; etc.);
- specific features or habitats relied on by mobile species during their lifecycle (e.g. high-tide roosts for waders; significant maternity colonies for bats known to hibernate within an SAC; areas that are critical for foraging or migration; etc).

2.6 Reviewing the emerging plan

2.6.1 The principles[12] of 'screening' are applied to the emerging plan and its components (i.e. the policies and allocations) as part of an iterative review process, to ensure that:

- any necessary technical assessments focus on those plan aspects that are likely to result in significant effects on European sites; and

[12] i.e. exploring whether significant effects on European sites are possible; note, from a strict procedural perspective the tests in Regulation 105 (including the 'test of significance') can only be formally applied to the plan intended for adoption and not to its various phases or iterations; therefore the term 'screening' is used advisedly when applied to assessments completed at earlier stages of the plan development.

- that the policies of the adopted plan are drafted to provide appropriate overarching safeguards that help (alongside any subsequently identified mitigation) to ensure that the adopted plan will have no significant effects or no significant adverse effects.

2.6.2 The outcomes of the HRA reviews are reported as appropriate at each consultation stage; this reporting may outline anticipated conclusions in relation to specific plan aspects. The outcomes of these reviews are re-visited throughout plan evolution to ensure that they remain robust, and that the overall performance of the plan in relation to the safeguarding of European sites meets expectations.

2.6.3 The reviews are intended to be a coarse filter for identifying potential effect pathways that cannot be self-evidently discounted, and hence those aspects where further investigation ('appropriate assessment') is required to determine the scale or nature of any effects and / or any bespoke mitigation that is necessary, rather than detailed assessments in their own right.

2.7 Screening / Assessment of the Draft Plan

2.7.1 The Preferred Options Draft Plan consultation will be accompanied by a comprehensive HRA document that will comprise a detailed 'screening' and (probably) 'appropriate assessment' of the Preferred Options Draft Plan, setting out the HRA-related evidence and the anticipated conclusion (if the plan were to be adopted as drafted, recognising that the HRA can only be completed for the final, adopted plan).

2.7.2 The HRA would include a '**screening**' of the European sites (excluding those sites and features that are not vulnerable (i.e. both exposed and sensitive) to the outcomes of the plan) as well as reviews of the policies and allocations to identify those that cannot have significant effects, alone or in combination, or which cannot be assessed at the plan level (e.g. policies that support development or other changes but which are too general to allow any specific assessments of effects (i.e. the locations, scale, quantum etc. are not specified below the geographical level of the plan, assuming that the type of development proposed is not such that signficant effects would be unavoidable regardless of these aspects). The screening does not take into account 'mitigation', in accordance with 'People over Wind' (see below).

2.7.3 An '**appropriate assessment**' determines whether any aspect of the plan will have 'adverse effects on integrity' for any European sites, taking into account the sites' conservation objectives and conservation status. Site integrity (in HRA terms) is "*the coherent sum of the site's ecological structure, function and ecological processes, across its whole area, which enables it to sustain the habitats, complex of habitats and/or populations of species for which the site is designated*" (EC Guidance 'Managing Natura 2000' (2018)).

2.7.4 Where a site or interest feature has a 'favourable' conservation status then a 'no adverse effects on integrity' conclusion can be reached provided that this status will not be undermined by the plan or project at hand; if the conservation status is 'unfavourable' then the plan or project must not reduce the conservation status further or create conditions that would make it more difficult for the site or feature to reach 'favourable' conservation status. It should be noted that this is not simply a test of whether there are negative effects; an effect may be negative but not undermine the site's conservation objectives. The integrity test incorporates the precautionary principle, whereby plans or

projects should not be approved unless there is no reasonable scientific doubt that adverse effects on site integrity will not occur[13].

2.7.5 Appropriate assessments are therefore used to provide a more detailed examination of those plan aspects where significant effects are likely, or (commonly) where there is a residual uncertainty which the assessment is intended to resolve or a mitigation measure requires examination. The 'appropriate assessment' stage may therefore conclude that the proposals are likely to have an adverse effect on the integrity of a site (in which case they should be abandoned or modified); or that the effects will be 'significant' but not adverse (i.e. an effect pathway exists, but those effects will not undermine site integrity, perhaps due to mitigation proposed for inclusion within the plan); or that the effects would, if screening were re-visited, be 'not significant' (i.e. the anticipated effect is subsequently shown to be nugatory or *de minimis*[14]).

2.7.6 The approaches used for appropriate assessments vary according to the sites affected and the effect-pathways.

2.7.7 Consideration of '**in combination**' effects is not a separate assessment but is integral to both the screening and appropriate assessment stages (although it should be noted that effects that are nil or nugatory and indistinguishable from background variations cannot operate 'in combination' and so can be excluded at the screening stage).

2.7.8 There is limited guidance available on the scope of the 'in combination' element, particularly with regard to which plans should be considered. However, the assessment should not be limited to plans at the same level in the planning hierarchy and there is consequently a wide range of plans that could have potential 'in combination' effects with the Local Plan.

2.7.9 The plans identified by the SA will provide the basis for the assessment of 'in combination' effects; these plans are reviewed to identify any potential effects and then considered (as necessary) within the screening and appropriate assessment stages. The assessment does not generally included national strategies, national policy or legislation since the Local Plan must be compliant with these. It is considered that 'in combination' effects are most likely in respect of other regional and sub-regional development plans and strategies.

2.8 Notes on Mitigation and Avoidance

2.8.1 The development of avoidance or mitigation measures is important to the HRA and plan development process. 'Avoidance measures' are those that are implemented during the iterative plan development process (for example, abandoning a policy or allocation that is

[13] It should be noted that 'no reasonable scientific doubt' does not mean 'absolute certainty' (which is rarely achievable in any case, particularly at the plan level where detail on specific future developments is often unavailable); sufficient certainty may be achieved through the use of suitably conservative assumptions (e.g. in modelling) or evidence from best-practice elsewhere, taking into account any advice from the relevant statutory bodies. The plan-making authority can then put in place a legally enforceable framework that provides certainty by ensuring that the potential adverse effects identified using the best-available information will not be realised.

[14] In the absence of avoidance or mitigation measures, as per 'People over Wind'.

likely to have unavoidable adverse effects if implemented)[15]; mitigation measures are used where significant effects are identified in order to prevent adverse effects on a site's integrity[16].

2.8.2 Avoidance or mitigation measures should aim to reduce the probability or magnitude of impacts on a European site until 'no likely significant effects' or 'no adverse effects on integrity' are anticipated, and they will generally involve the development and adoption of (for example) wording changes to policies, or additional safeguarding policies. Measures must be specific and targeted, and likely to work; it is not appropriate to re-state existing legislation or policy, for example by adding "*and must have no significant effect on any European site*" (or similar) to every policy. The avoidance or mitigation measures should also reflect the limited influence that the Council can exert on non-planning issues, and should not generally exceed requirements set by national planning policy or guidance.

2.8.3 The 'People Over Wind' judgment creates some issues for the application of avoidance and mitigation measures in the HRA process, stating that "*…it is not appropriate, at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects [mitigation] of the plan or project on that site*"; as noted, this contrasts with established practice in this area (based on the 'Dilly Lane' judgment)

2.8.4 There is currently little information on the practical implementation of the 'People over Wind' judgment[17], particularly for plan-level HRAs where the assessment process is usually concurrent with plan development and where measures are invariably incorporated into the plan before the formal 'screening' of the final version takes place. Indeed, many 'recommendations' derived from an iterative policy review process might be interpreted as 'avoidance' or 'mitigation' measures if viewed solely in terms of their implications for European sites, making it difficult to distinguish between basic good policy practice and 'mitigation'.

2.8.5 For example, generic policies promoting the use of Sustainable Drainage Systems (SuDS); or safeguarding designated sites (including European sites); or requiring that developers ensure utility provision in advance of occupation, are fairly standard inclusions in virtually all land-use plans, but will all act to moderate potential environmental changes that could affect European sites. However, it would clearly be illogical to attempt to screen a hypothetical version of the plan that did not include such policies, particularly if these are included independently of the HRA results.

2.8.6 The broader context of the 'People over Wind' case suggests that the judgment is principally focusing on those instances where specific measures are included or relied on to avoid or mitigate a specific effect that has been identified, and which would otherwise

[15] Note, the term 'avoidance measures' in this context is not synonymous with the representation of 'mitigation' used in the People over Wind judgment; see also para. 2.3.21.

[16] Although it should be noted that not all 'likely significant effects' will require mitigation measures: the effect may be considered to be likely to be significant (i.e. has the potential to undermine the conservation objectives) but may be shown on further examination to be too limited to have any risk of adversely affecting site integrity.

[17] The Planning Inspectorate has issued a guidance note (PINS Note 05/2018: *Consideration of avoidance and reduction measures in Habitats Regulations Assessment: People over Wind, Peter Sweetman v Coillte Teoranta*) although this does not provide substantive practical information for LPAs or clear guidance on what might constitute an 'avoidance measure'.

be significant; the judgment argues that the effectiveness of any such measures should be examined through an appropriate assessment stage. It is therefore arguable that an exhaustive examination of a plan's genesis to see if any aspects might count as 'mitigation' for screening purposes is not necessary, or (arguably) consistent with the intent of the Habitats Directive or the 'People over Wind' judgment.

2.8.7 Therefore, the screening does not take account of specific measures that are included in response to a specific identified effect on a European site, and which are intended to avoid or reduce that effect. However, generic policy safeguards that would be included regardless of the presence of European sites are essentially just 'the plan' and are not considered to be 'mitigation' unless there is a specific effect or pathway that they are intended or relied on to obviate. Aspects requiring specific investigations to understand the problem (and hence the mitigation requirements), or which rely on established mitigation to avoid an effect, are subject to AA.

2.9 Uncertainty and 'Down the Line' Assessment

2.9.1 For most policies, even at the strategic level, it will be clear if adverse effects are likely at an early stage, and in these instances the policy should not be included within the plan since plans should not include proposals which would be likely to fail the Habitats Regulations tests at the project application stage. For other options, however, the effects may be uncertain and it is therefore important that this uncertainty is addressed either through additional investigation or (if this is not possible) appropriate mitigation measures that provide certainty that the predicted effect will not occur or will not adversely affect site integrity.

2.9.2 It is usually possible to incorporate caveats or measures within policy text that are sufficient to ensure that adverse effects will not occur. However, for other policies this may not be possible because there is insufficient available information about the nature of the development that is being proposed through the policy to enable a robust conclusion to be reached. In these instances, it may be appropriate and acceptable for assessment to be undertaken 'down-the-line' at a lower tier in the planning hierarchy. For this to be acceptable, the following conditions must be met:

- the higher tier plan appraisal cannot reasonably predict the effects on a European site in a meaningful way; whereas;
- the lower tier plan, which will identify more precisely the nature, scale or location of development, and thus its potential effects, retains enough flexibility within the terms of the higher tier plan over the exact location, scale or nature of the proposal to enable an adverse effect on site integrity to be avoided; and
- HRA of the plan at the lower tier is required as a matter of law or Government policy.

2.9.3 This approach is applied as appropriate to the screening and appropriate assessment stages.

3. Baseline Summary and Impact Pathways

3.1 Effect Pathways and Key Regional Pressures

3.1.1 The provisions of the Habitats Regulations ensure that 'direct' (encroachment) effects on European sites as a result of land use change (i.e. the partial or complete destruction of a European site) are extremely unlikely under normal circumstances, and this will not occur as a result of the Local Plan. Indeed, local plans will generally assist the safeguarding of European sites through their protective policies. However, there will be a number of areas where the direction, controls or influence provided by a plan can result in outcomes that can affect European site interest features.

3.1.2 Most potential effect pathways are associated with broad 'quantum of development' or population growth aspects, and whilst a local plan is not necessarily the main driver of these effects, they do have a key role in managing them locally through the site allocation process. In this context, the main aspects through which the Local Plan could affect European sites in the study area are:

- through individual allocations or supported developments that are 'directed' to a specific location or area; or
- through 'in combination' effects resulting from the cumulative impacts of development associated with the Local Plan and with the plans and programmes of external authorities (such as neighbouring LPAs).

3.1.3 The framework for the plan will be determined by the Issues and Options consultation, and so the scope and content of the plan is not currently know; in broad terms, however, the Local Plan is likely to include:

- provision for XXXX homes over the plan period (the quantum of growth);
- ~~a commitment for an additional 1215 homes at the St. George's Barracks site beyond the plan period (i.e. post-2036)[18,19];~~
- policies providing geographical direction for development (typically specific housing and minerals site allocations, but also implicit location preferences for certain activities or sectors prescribed through (for example) areas of search);

Commented [FM2]: Can this be stated at the moment? Is there likely to be inherent growth beyond the plan period as per SGB last time?

Commented [FM3]: To be deleted, but retained for comment / info at the moment

[18] HRAs do not normally consider potential growth beyond the plan period (since identifying the scale and location is usually speculative and, in any case, is managed through subsequent local plans that are themselves subject to HRA). In this instance, however, the commitment to the continued growth of the St. George's Barracks site beyond the plan period provides a degree of certainty in relation to the scale and location of housing growth, and the precautionary approach is therefore to consider the potential effects of the additional housing and associated developments also when considering the potential effects the St. George's Barracks allocation as the assumption inherent within the plan is that this will be delivered.

[19] It should be noted that the August 2018 consultation indicated that the total housing provision at St. George' Barracks would be between 1500 and 3000 homes, and the consultation responses (including from NE) were made on this basis.

- policies broadly supporting development or other changes, but which do not specify a quantum or location;
- various development control policies that set out RCC's tests or expectations when considering proposals, such as safeguarding policies, environmental protection policies or policies relating to design or other qualitative criteria.

3.1.4 These aspects could affect European sites on their own, through typical development-related mechanisms operating at the local scale in relation to specific allocations (e.g. noise, lighting, etc.; see **Table 3.1**); or collectively by exacerbating regional pressures (e.g. pressures on water supply).

Table 3.1 Typical effect pathways and environmental changes associated with terrestrial development

Pressure / Threat	Common environmental changes
Hydrological changes	Temperature changes Salinity changes Water flow changes Flood regime changes
Pollution and other chemical changes	Non-synthetic and synthetic compound contamination Radionuclide contamination Introduction of other substances (solid, liquid or gas) De-oxygenation Nutrient enrichment Organic enrichment
Physical loss	Physical loss of habitat Physical change to another habitat
Physical damage	Habitat structure changes Changes in suspended solids Siltation rate changes
Other physical pressures	Litter Electromagnetic changes Noise changes Introduction of light Barrier to species movement Death or injury by collision
Biological pressures	Visual disturbance Genetic modification and translocation of indigenous species Introduction or spread of non-indigenous species Introduction of microbial pathogens Exploitation / harvesting of species Removal of non-target species during exploitation / harvesting

3.1.5 Significant effects or significant adverse effects as a result of individual allocations 'alone' are typically unlikely to avoidable as most environmental changes have a limited 'zone of influence' (for example, noise effects on species will rarely be significant over 500m from the source based on natural rates of attenuation alone). However, the Local Plan HRA

must also consider the potential for development supported by the plan to operate 'in combination' both internally (e.g. between allocations) or with external plans and programmes (e.g. cumulative housing growth regionally). 'In combination' changes are often of an inherently larger scale or operate over larger areas.

3.1.6 There is obviously a wide range of potential mechanisms and pathways for 'in combination' effects depending on the European sites and features. However, there are a few key mechanisms by which local plans (etc.) can operate cumulatively to affect European sites; these are noted below, and provide the broad framework for assessing potential 'in combination' effects associated with the Local Plan:

- **Recreational pressure**: Many European sites will be vulnerable to some degree of impact as a result of recreational pressure, although the effects of recreational pressure are complex and very much dependent on the specific conditions and interest features at each site. Local plans can influence recreational pressure through their allocations and associated controls.
- **Urbanisation**: Urbanisation is generally used as a collective term covering a suite of often disparate risks and impacts that occur due to increases in human populations near protected sites. This would include varied aspects such as fly-tipping or vandalism, predation by cats, or the dispersal of invasive species, although the effects of these aspects depend on proximity, accessibility and the interest features of the sites. This is generally only realised where allocations are close to a designated site.
- **Atmospheric pollution**: The most relevant air pollutants to habitats and species (particularly plant species) are the primary pollutants sulphur dioxide (SO2, typically from combustion of coal and heavy fuel oils), nitrogen oxides (NOx, mainly from vehicles) and ammonia (NH3, typically from agriculture). These pollutants affect habitats and species mainly through acidification and eutrophication. Local Plans will generally have few specific point-sources for air emissions and such emissions would typically be controlled through project-level permissions; the main issue for local plans is the assessment of 'in combination' effects due to air quality changes that might be associated with the quantum of development growth proposed / supported by a Local Plan, particularly in relation to traffic and N-deposition.
- **Water resources and flow regulation**: The exploitation and management of water resources is connected to a range of activities, most of which are not directly controlled or influenced by local plans; for example, agriculture, flood defence, recreation, power generation, fisheries and nature conservation. Much of the water supply to water-resource sensitive European sites is therefore managed through specific consenting regimes that are independent of local plans. Increased housing growth (which is likely to be supported by a local plan) increases demand on public water supply abstractions, some of which are associated with European sites; however, the consenting regimes are subject to HRA and, importantly, water companies are required to produce 25-year Water Resource Management Plans (WRMPs) that take into account predicted population growth and protected sites when considering future water resource provision. It is therefore very unlikely that development within one local planning authority area could have direct and consequential effects on a European site if growth is in line with water company predictions, particularly as most

water companies operate conjunctive-use systems that do not rely on single-source provision. This aspect is most typically managed through policy.

- **Water quality**: Most waterbodies and watercourses are affected to some extent by point or diffuse sources of pollutants, notably nitrates and phosphates. Point sources are usually discrete discharge points, such as wastewater treatment works (WTW) outfalls, which are generally managed through specific consenting regimes that are independent of local plans. In contrast, diffuse pollution is derived from a range of sources (e.g. agricultural run-off; road run-off) that cannot always be easily traced or quantified. Development promoted or supported by local plans is likely to increase demand on wastewater treatment works, and potentially increase run-off which could indirectly affect downstream European sites – although there will inevitably be attenuation as distance from the source increases.

3.1.7 In addition, many European interest features (particularly more mobile animal species) may use or be reliant on non-designated habitats outside of a European site during their life-cycle. Developments some distance from a European site can therefore have an effect on the site if its population of interest features is reliant on habitats being affected by a development. All of the above aspects (recreation, water resources, etc.) can therefore also affect European site integrity indirectly through effects on 'functional habitats' outside of the designated site boundary

3.2 European Site Summaries

3.2.1 As noted, the HRA of the Local Plan will consider potential effects on:

- all European sites within 15km of the Council's administrative area (see **Table 3.2**);
- any additional sites that may be hydrologically linked to the Local Plan's zone of influence; and
- any additional sites identified by Natural England following following the SA Scoping Consultation.

3.2.2 This is considered to be a suitably precautionary starting point for the assessment of the Local Plan. This area includes the following European sites. **Note, at the screening stage the assessment would essentially assume that there will be 'no effect' (and hence no possibility of 'in combination' effects) on European sites not included within the scope**.

Table 3.2 European sites within 15km of RCC boundary

Site	Location relative to the RCC Administrative Area
Rutland Water SPA	Site central within the RCC area.
Rutland Water Ramsar	Site central within the RCC area.
Barnack Hills & Holes SAC	Former quarry located to the south-east of Stamford, ~5.5km from the RCC boundary.
Grimsthorpe SAC	Disused quarry located ~6km outside the north-west boundary of the RCC area.
Baston Fen SAC	Flooded borrowpit near Thurlby, approximately 7.2km east of the RCC boundary.

3.2.3 Initial consultations with Natural England have not identified any additional sites that are likely to require assessment.

3.2.4 With regard to downstream receptors, most of Rutland lies within the catchment of the River Welland (which drains to the Wash, approximately 50km downstream, and hence The Wash SPA; The Wash Ramsar; and The Wash and North Norfolk Coast SAC), although parts of the far north and north-western areas of the county are within the catchments of the River Wreake (and hence the Soar and ultimately the Humber Estuary SPA and and Humber Estuary Ramsar) and the River Witham (also the Wash). These designated sites are all a substantial distance downstream, such that the only plausible mechanism for effects on the sites themselves would be via cumulative effects on water quality; however, these European sites have not been identified as sites that are in unfavourable condition due to excessive nutrients (such that 'nutrient neutrality'[20] is being deployed or considered as mitigation) in recent NE advice to LPAs[21], and all other potential water quality effects can be managed through the development of appropriate policies.

3.2.5 The following sections provide a summary of the European sites within 15km of the RCC area, including a contextual overview of each site; their interest features; their condition; and the current pressures and threats identified for each site[22]. These are based on the citations, the Site Improvement Plans (SIPs), information on the condition of the underlying SSSIs, and any supplementary advice provided by Natural England[23]. A summary of the conservation objectives is subsequently provided.

[20] Poor water quality due to nutrient enrichment from elevated nitrogen and phosphorus levels is one of the primary reasons for European sites being in unfavourable condition, and substantial reductions are needed to achieve favourable conservation status. 'Nutrient neutrality' is a mitigation approach that potentially allows new developments to be approved provided that there is no net increase in nutrient loading within the catchments of the affected European site.

[21] Letter from NE to LPA Chief Executives and Heads of Planning, 16 March 2022; Re. Advice for development proposals with the potential to affect water quality resulting in adverse nutrient impacts on habitats sites.

[22] The Natural England Site Improvement Plans identify 'pressures', which are factors that are known to be currently affecting a site, and 'threats' which are factors that may not be exerting a pressure at the moment but which have the potential to do so based on local site knowledge.

[23] NE has published '*Supplementary advice on conserving and restoring site features*' for Baston Fen SAC, Rutland Water SPA/Ramsar, Grimsthorpe SAC, and Barnack Hills and Holes SAC, which describe in more detail the range of ecological attributes which are most likely to contribute to a site's overall integrity, and the targets each qualifying feature needs to achieve in order for the site's conservation objectives to be met.

3.2.6 The extent of each site in favourable or unfavourable condition has been estimated using the Natural England condition assessments for the corresponding SSSI units, although it must be noted that the boundaries of the component SSSI units (to which the condition assessments relate) do not always match the European site boundaries exactly (i.e. the SSSIs are often larger) and it is not always possible to split SSSI units to determine the precise area of the European site (or interest feature) that is in each condition category.

3.2.7 The potential mechanisms by which the Local Plan could affect these sites are discussed in **Section 3.1**. There are many factors currently affecting the European sites over which the Local Plan will have no or little influence; analysis of the available European site data and the SSSI condition assessments indicates that the most common reasons for an 'unfavourable' condition assessment of the component SSSI units are due to inappropriate management of some form (e.g. over- or under-grazing, scrub control, water-level management etc.).

Rutland Water SPA / Rutland Water Ramsar

Overview

3.2.8 Rutland Water is located centrally within the county of Rutland and was created in 1975 by damming the River Gwash to create the second largest lake by surface area in England. Following completion it rapidly became an important site for wintering waterbirds, particularly waterfowl using the lake during the moulting period, and it was submitted for designation as an SPA and Ramsar site in 1991.

3.2.9 The reservoir is fed primarily by abstractions from the River Nene upstream of Peterborough, and from the River Welland; catchment inflow is relatively small. It is operated by Anglian Water Services (AWS) to provide potable water to the west of its region, with Peterborough being a major recipient of the stored water.

3.2.10 The site is also a significant and well-used regional visitor attraction, with the dominant activities being water sports (principally sailing, canoeing and windsurfing); birdwatching; fishing; and walking and cycling along several maintained trails including a 23-mile perimeter path.

3.2.11 The western end of the site is a nature reserve managed by Leicestershire and Rutland Wildlife Trust and Anglian Water; this covers approximately 45% of the site and comprises the shallower sections of the reservoir at the top of the Gwash valley and a mosaic of wetlands, meadows, woodlands and lagoons where other recreational activity (principally sailing and fishing) is restricted and public is access closely managed.

3.2.12 The reservoir and its margins are covered by two designations: **Rutland Water Ramsar**, and **Rutland Water SPA**. The Ramsar designation covers most of the nature reserve and the areas of open water outside of this; the SPA is larger, and includes some additional areas of woodland and grassland around the site margins. Rutland Water SPA and Rutland Water Ramsar are principally designated for the reservoir's non-breeding waterbird assemblage.

3.2.13 In addition, recent consented changes to the water abstraction regime at Rutland Water required the provision of compensatory wetland habitats for water birds, some of which

are currently outside the SPA boundary at the eastern end of the site; it is Government policy (NPPF para. 181) that areas identified, or required, as compensatory measures for adverse effects on European sites be given the same protection and so these areas are treated as part of the SPA for assessment purposes.

Interest Features

3.2.14 The SPA has the following qualifying features:

- Qualifying individual species not listed in Annex I of the Wild Birds Directive (Article 4.2):
  - Gadwall *Anas strepera* (non-breeding);
  - Northern shoveler *Anas clypeata* (non-breeding).
- Qualifying assemblage of waterbird species (Article 4.2), including:
  - Great crested grebe *Podiceps cristatus* (non-breeding);
  - Mute swan *Cygnus olor* (non-breeding);
  - Eurasian wigeon *Anas Penelope* (non-breeding);
  - Eurasian teal *Anas crecca* (non-breeding);
  - Tufted duck *Aythya fuligula* (non-breeding);
  - Common goldeneye *Bucephala clangula* (non-breeding);
  - Goosander *Mergus merganser* (non-breeding); and
  - Common coot *Fulica atra* (non-breeding).

3.2.15 Note, the above assemblage species are noted in the citation, although the composition of the assemblage will vary over time.

3.2.16 The site meets the following Ramsar criteria:

- Criterion 5 (Assemblages of international importance):
  - Species with peak counts in winter: 19274 waterfowl (5-year peak mean 1998/99-2002/2003).
- Criterion 6 (Species/populations occurring at levels of international importance):
  - Gadwall *Anas strepera* (spring/autumn);
  - Northern shoveler *Anas clypeata* (spring/autumn).

3.2.17 The site's diversity of habitats is important in supporting these species. Four broad supporting habitats at the site are considered important for the SPA waterbird assemblage and its component species; these are:

- Open standing water associated with the main reservoir and other adjacent waterbodies;

- Neutral grassland;
- Fen, marsh and swamp associated with the open water;
- Broadleaved, mixed and yew woodland, including wet woodland.

3.2.18 No specific areas of known 'functional land' are identified away from the SPA or Ramsar; the compensatory lagoons that are currently outside the SPA boundary at the eastern end of the site arguably comprise 'functional land' (i.e. not designated and important for site integrity) but these are treated as per the SPA for HRA purposes, in line with the NPPF. The qualifying features of the sites may make use of other habitats outside the site boundary, although most of the features are strongly associated with the wetland and open water habitats of the SPA / Ramsar rather than exclusively terrestrial habitats, and are primarily attracted to the site for this reason.

3.2.19 The SPA is most important during the passage and winter periods although the supplementary advice notes that the waterbird assemblage is present within the SPA throughout the year.

Condition, Pressures and Threats

3.2.20 The SSSI underpinning the SPA and Ramsar sites is currently in 'favourable' condition (based on NE's 2021 assessment), and the SIP does not identify any pressures currently affecting site integrity. The SIP identifies several threats, principally:

- water abstraction (related to the operational requirements of the reservoir);
- water level management (principally relating to the compensatory lagoons, but linked to the operation of the reservoir for water abstraction);
- direct impacts from 3rd parties (relates to unregulated activities occurring near the sites such as private firework displays or hot-air balloon flights);
- invasive species (Rutland Water has been colonised by several invasive non-native species including zebra mussel);
- water pollution (primarily from diffuse sources (agriculture), plus regulated and unregulated sewage discharges (e.g. wastewater treatment works and septic tanks respectively);
- planning permission (principally relates to cumulative effects of windfarms and developments locally);
- public access / disturbance (principally relates to the need to audit existing recreational activities prior to considering future proposals for recreational use of the reservoir, and ensuring management is compliant with the Habitats Regulations);
- fishing (relates to the need for a fisheries management strategy).

3.2.21 The SSSI condition assessment notes that the populations of two species (pochard and goosander) are failing the site-specific targets, with population declines of a third (mallard) noted as a concern. These species will contribute to the waterbird assemblage feature (goosander is specifically noted in the citation). The reasons for this are not clear,

although the NE condition assessment for the SSSI concludes that "*It is evident from the WeBS data that the declines in the peak annual counts of non-breeding mallard, pochard and goosander at Rutland Water are likely to be linked with extrinsic factors associated with broad-scale shifts in species distribution rather than local pressures at a site-specific level*" and hence the site is categorised as being in favourable condition.

Barnack Hills & Holes SAC

Overview

3.2.22 Barnack Hills & Holes SAC is a small (23.5 ha.) former limestone quarry that has been subject to quarrying since the Roman period. The soil is very alkaline and has a rich plant community which is characteristic of eastern England and which is now scarce in Britain, including an upright brome *Bromopsis erecta*-tor-grass *Brachypodium pinnatum* type (NVC community CG5), along with a number of nationally scarce species of flora. The site is particularly notable for its orchids particularly the population of man orchid *Aceras anthropophorum* which is considered to be the largest population in the UK. It also supports a rich assemblage of other orchid species and many other species typical of limestone grassland. The underlying SSSI is also of interest for its invertebrate fauna.

3.2.23 The site is primarily managed through sheep grazing, which takes place annually. The SAC is classified as 'access land' under the *Countryside and Rights of Way Act 2000*, although access rights have recently been restricted under Section 26(3)(a) of the Act to address the principal access concern (dogs affecting site integrity by worrying livestock (so affecting grazing) and through other incidental effects).

3.2.24 This site is located approximately 5.5km from the RCC boundary in the village of Barnack.

Interest Features

3.2.25 The SAC has the following qualifying features:

- Annex I habitats:
  - Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites)

3.2.26 Note, "orchid rich sites" is a priority habitat. The supplementary advice provides some guidance on the 'typical species' considered to be associated with the site; these include:

- the components of the CG5 Upright brome *Bromopsis erecta* -Tor-grass *Brachypodium pinnatum* grassland;
- the typical orchid species including fragrant orchid *Gymnadenia conopsea*, pyramidal orchid *Anacamptis pyramidalis*, bee orchid *Ophrys apifera*; man orchid *Orchis morio*; early purple orchid *Orchis purpurea*; common spotted orchid *Dactylorhiza fuchsia*; and frog orchid *Coeloglossum viride*; and
- nationally scarce plant species including Man Orchid *Aceras anthropophorum*, Pasque flower *Pulsatilla vulgaris*, fine-leaved sandwort *Minuartia hybrida*, rarespring sedge *Carex ericetorum* and the mosses *Tortella inflexa* and *Weissia controversa*;

- endangered or vulnerable plant species including purple milk vetch *Astragalus danicus*, mountain everlasting *Antennaria dioica*, common dodder *Cuscuta epithymum*, night-flowering campion *Silene noctiflora*; and
- nationally rare invertebrates including chalkhill blue *Lysandra coridon*; brown argus *Aricia agestis* and marbled white *Melanargia galathea* and glow-worms *Lampyris noctiluca*.
- No non-designated areas of land outside the site boundary are identified as being functionally important to the maintenance of site integrity.

Condition, Pressures and Threats

3.2.27 The SSSI underpinning the SAC is currently in 'favourable' condition; as noted, access rights have been restricted to address the principal access concern (dogs affecting site integrity by worrying livestock (so affecting grazing) and other incidental effects). The SIP identifies the following pressures and threats for the site:

- Pressures:
  - Public access / disturbance.
- Threats:
  - Changes in species distributions.
  - Air pollution: impact of atmospheric nitrogen deposition.

Grimsthorpe SAC

Site overview

3.2.28 Grimsthorpe SAC is a small (0.35 ha.) part of a disused stone quarry (known as 'Elsea Pit'), which is notable for its rich limestone grasslands and population of the rare Early gentian *Gentianella anglica*; there is no public access.

3.2.29 Other notable species include purple milk-vetch *Astragalus danicus*), clustered bellflower *Campanula glomerate*, wild marjoram *Origanum vulgare*, quaking-grass *Briza media*, autumn gentian *Gentianella amarella* and wild thyme *Thymus polytrichus*.

3.2.30 Grimsthorpe SAC is located approximately 6km from the RCC boundary, east of the village of Creeton.

Interest Features

3.2.31 The SAC has the following qualifying features:

- Annex I habitats:
  - Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*);
- Annex II species:

- Early gentian Gentianella anglica.

3.2.32 The supplementary advice provides guidance on the 'typical species' considered to be associated with the site; these include Tor grass *Brachypodium pinnatum*, Erect brome *Bromopsis erecta*, clustered bellflower *Campanula glomerata*, common rock-rose *Helianthemum nummularium*, horseshoe vetch *Hippocrepis comosa*, rough *hawkbit* Leontodon *hispidus/L. saxatilis* and salad burnet *Sanguisorba minor*.

3.2.33 No areas of 'functional land' are identified in relation to this site, and the site does not support interest features (including mobile species) that will be functionally dependent on habitats outside the site boundary.

Condition, Pressures and Threats

3.2.34 The SIP does not identify any current pressures on the site, which is in 'favourable' condition; air pollution (N-deposition) is the only identified threat, although it should be noted that the site is over 200m from the nearest roads and so this is principally in relation to broader diffuse pollution.

Baston Fen SAC

Site overview

3.2.35 Baston Fen SAC is located approximately 7.2km from the RCC boundary, east of the village of Thurlby. The site is part of the Counter Drain, a narrow slow-flowing drainage channel approximately 2.3km long by 10m wide located adjacent to Baston Fen. The interest feature of the SAC is the Spined loach, and the drain also supports a diverse community of aquatic and emergent plants.

3.2.36 The SAC has an indirect hydrological relationship with the adjacent River Glen: water from the river is allowed to flood Baston Fen annually, with the water subsequently draining to the SAC. There is not thought to be substantive direct hydraulic connectivity between the SAC and the river (such that river levels directly affect water levels in the drain), and the primary water resource feed to the Counter Drain is surface water flow derived from the local catchment rather than baseflows from groundwater aquifers (Entec 2003). Water levels across Baston Fen and in the SAC are managed by the Welland and Deeping Internal Drainage Board (IDB) and the Lincolnshire Wildlife Trust (LWT).

3.2.37 The relationship between the SAC population of Spined loach and the River Glen is not certain. The species is present within the River Glen and the wider River Welland catchment (including in other drains on Baston Fen and the non-designated sections of the Counter Drain), and fish may be transferred between the River Glen and the SAC during the annual flood releases (although this has not been established). It is therefore possible that Spined loach populations within the SAC are dependent to some extent on the integrity of sections of river channel and riparian areas that lie outside of the site boundary, including headwater areas and tributaries that may be used for spawning and juvenile development. A tributary of the River Glen (the West Glen River) runs for approximately 3km through the RCC area near Essendine.

Interest Features

3.2.38 The SAC has the following qualifying features:

- Annex II species:
  - Spined loach (*Cobitis taenia*).

3.2.39 The supporting habitat for the qualifying features is 'standing open water' associated with large drainage channels, and the invertebrate community and component vegetation of these habitats can be considered as 'typical species' important to site integrity, although the supplementary advice is not specific in this regard.

3.2.40 Non-designated habitats outside the site boundary may be functionally important to the maintenance of site integrity, principally sections of the River Glen, Counter Drain and Gravel Drain including headwater areas and tributaries that may be used for spawning and juvenile development and which may be important for sustaining populations within the site. The population of spined loach in the non-designated sections of the Counter Drain is currently greater than within the SAC, possibly due to drain management.

Condition, Pressures and Threats

3.2.41 The SIP does not identify any current pressures on the site, which is in 'unfavourable recovering' condition, although 'siltation' and 'changes in species distribution' are identified as threats.

3.2.42 The siltation issue is currently being addressed through a ditch management plan, which involves some de-silting and vegetation clearance; 'species distribution' is identified as a threat due to concerns over apparent declines in the numbers of spined loach since 1998 and the absence of a regular monitoring programme.

3.2.43 No other threats (e.g. water quality changes) are identified by the SIP although there is a theoretical risk of changes in water quality within the River Glen affecting the SAC due to the water-level management regime. This may be an issue if allocations or other developments are proposed or promoted by the RCC plan within the catchment of the West Glen River (principally, the area immediately around Essendine).

Conservation Objectives

3.2.44 The Conservation Objectives and Supplementary advice documents for the SACs and SPAs benchmark Favourable Conservation Status (FCS) for each feature. Guidance[24] from the UK Statutory Nature Conservation Bodies (SNCBs) provides a broad characterisation of FCS, stating that it "*relates to the long-term distribution and abundance of the populations of species in their natural range, and for habitats to the long-term natural distribution, structure and functions as well as the long-term survival of its typical species in their natural range. It describes a situation in which individual habitats and species are maintaining*

[24] JNCC (2018). *Favourable Conservation Status: UK Statutory Nature Conservation Bodies Common Statement* [online]. Available at: https://data.jncc.gov.uk/data/b9c7f55f-ed9d-4d3c-b484-c21758cec4fe/FCS18-InterAgency-Statement.pdf. [Accessed March 2022].

themselves at all relevant geographical scales and with good prospects to continue to do so in the future".

3.2.45 The conservation objectives for the sites noted above have been revised by Natural England in recent years to improve the consistency of assessment and reporting. As a result, the high-level conservation objectives for all sites are effectively the same:

3.2.46 For SACs:

- *With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features'...), and subject to natural change; 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* [as applicable to each site];
  - *The extent and distribution of the qualifying natural habitats;*
  - *The extent and distribution of the habitats of qualifying species;*
  - *The structure and function (including typical species) of the qualifying natural habitats;*
  - *The structure and function of the habitats of qualifying species;*
  - *The supporting processes on which the qualifying natural habitats rely;*
  - *The supporting processes on which the habitats of qualifying species rely;*
  - *The populations of qualifying species; and,*
  - *The distribution of qualifying species within the site.*

3.2.47 For SPAs:

- *With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features'...), and subject to natural change; ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:*
  - *The extent and distribution of the habitats of the qualifying features;*
  - *The structure and function of the habitats of the qualifying features;*
  - *The supporting processes on which the habitats of the qualifying features rely;*
  - *The population of each of the qualifying features; and*
  - *The distribution of the qualifying features within the site.*

3.2.48 The conservation objectives for Ramsar sites are taken to be the same as for the corresponding SACs / SPAs (where sites overlap). The conservation objectives are considered when assessing the potential effects of plans and policies on the sites; information on the sensitivities of the interest features also informs the assessment.

3.2.49 As noted, NE has published '*Supplementary advice on conserving and restoring site features*' for Baston Fen SAC, Rutland Water SPA/Ramsar, Grimsthorpe SAC, and Barnack Hills and Holes SAC, which describe in more detail the range of ecological attributes which are most likely to contribute to a site's overall integrity, and the minimum targets each qualifying feature needs to achieve in order to meet the site's conservation objectives. These are considered at the screening and appropriate assessment stages, as necessary.

3.3 Exposure of European Sites to Common Local Plan Pressures

3.3.1 The following sections outline the baseline (as currently understood) for the key regional pressures identified above, and provide an indication of the likely exposure and/or sensitivity of the European site interest features to these pressures. This is not a 'screening' as there is insufficient information available on the plan contents at the I&O stage to complete a meaningful and robust assessment, and some baseline studies are being updated by RCC (see below); however, it does indicate those aspects that may require specific consideration when designing policy and selecting preferred options, and those that would appear to have a low probability of affecting European sites or features.

3.3.2 It should be noted that RCC is completing various reports and studies to update the environmental baseline for the Local Plan, some of which will be relevant to the HRA baseline including:

- Landscape sensitivity study (the existing Rutland Landscape Sensitivity and Capacity Study (2010) is considered out of date; the updated study may include consideration of on-shore wind development);
- Open Space (existing study (2015) considered out of date);
- Biodiversity;
- Strategic Flood Risk Assessment (existing SFRA (2009) considered out of date);
- Water Cycle Study (update of existing WCS);

3.3.3 Additional studies will be undertaken or co-opted as required depending on the impact pathways that are identified during the plan development process; these might include new or ongoing regional investigations, or studies relating to specific allocation sites.

Recreational Pressure

3.3.4 Many European sites will be vulnerable to some degree of impact as a result of recreational pressure, although the effects of recreational pressure are complex and very much dependent on the specific conditions and interest features at each site. For example: some bird species are more sensitive to disturbance associated with walkers or dogs than others; some habitats will be more sensitive to trampling or mechanical disturbance than others; some sites will be more accessible than others.

3.3.5 The most typical mechanisms for recreational effects are through direct damage of habitats, or disturbance of certain species. Damage will most often be accidental or incidental, but many sites are particularly sensitive to soil or habitat erosion caused by recreational activities and require careful management to minimise any effects (for

example, through provision and maintenance of 'hard paths' (boardwalks, stone slabs etc.) and signage to minimise soil erosion along path margins).

3.3.6 Disturbance of species due to recreational activities can also be a significant problem at some sites, although the relationship (again) is highly variable and depends on a range of factors including the species, the time of year and the scale, type and predictability of disturbance. Most studies have focused on the effects on birds, either when breeding or foraging. For example, a long-term monitoring project by Natural England on the Thanet Coast has found that turnstones (a shoreline-feeding waterbird) are particularly vulnerable to disturbance from dogs, which interrupts their feeding behaviour and can prevent them from gaining sufficient body fat for overwintering or migration. Finney *et al*. (2005), meanwhile, noted that re-surfacing the Pennine Way significantly reduced the impact of recreational disturbance on the distribution of breeding Golden plover, by encouraging walkers to remain on the footpath.

3.3.7 In contrast, some species are largely unaffected by human disturbance (or even benefit from it) which can result in local or regional changes in the composition of the fauna. The scale, type and predictability of disturbance is also important; species can become habituated to some disturbance (e.g. noise), particularly if it is regular or continuous. Unpredictable disturbance is most problematic.

3.3.8 Most recreational activities with the potential to affect European sites are 'casual' and pursued opportunistically (e.g. walking, walking dogs, riding) rather than structured (e.g. organised group activities or trips to specific discrete attractions), which means that it can be difficult to quantify or predict either the uptake or the impacts of these activities on European sites and (ultimately) harder to control or manage effects. It also means that it is difficult to explore in detail all of the potential aspects of visitor pressure at the strategy level. However, it is possible for plans and strategies to influence recreational use of European sites through the planning process, for example by increasing the amount of green space required within or near developments if potentially vulnerable European sites are located nearby.

Table 3.3 Summary of European site issues in relation to visitor pressure

Site	Notes
Rutland Water SPA / Ramsar	The site is within the LPA area and potentially vulnerable to visitor pressure, although public access / disturbance is identified as a threat rather than a pressure in the SIP (i.e. public access is not currently having adverse effects on site integrity), and the threat principally relates to uncertainties regarding the capacity of the site for additional recreational facilities and activities. Visitor numbers and patterns of behaviour are generally considered to be well-understood (due to the nature of the reservoir). The nature of the reservoir (i.e. both a highly-managed regional attraction for a range of 'access controlled' activities (e.g. water-sports, birdwatching) and a local destination for 'informal' recreation (dog-walking, etc.)) ensures that the effects of public access do not have a simple relationship with visitor numbers or the local population. However there is nothing in the SIP to suggest that unmanaged 'informal' use of the reservoir margins by local residents (e.g. for dog walking) is currently considered to be a potentially significant threat, and public access to the most importance areas of the site for the interest features is already closely managed and controlled.

Site	Notes
	There is nothing in the site data to suggest local residential growth is a potentially significant threat although all allocations in Rutland are likely to contribute regular visitors to the site and this is likely to require consideration in the development of policies and selection of housing allocations.
Barnack Hills and Holes SAC	The SAC is approximately 5.4km from the Council's administrative boundary. The SIP indicates that the main pressure on the site is public access / disturbance; this is partly because the area of the SAC is classified as 'open access land' under the Countryside and Rights of Way Act 2000, although access rights have recently been restricted under Section 26(3)(a) of the Act to address the principal access concern (dogs affecting site integrity by worrying livestock and other incidental effects). It is understood that this restriction is having a positive effect. The distance to the site and its small size (~23.5 ha.) will substantially limit its attractiveness to visitors from Rutland, and it would seem unlikely that housing growth within Rutland would significantly alter recreational usage of this site. It is worth noting that the *Natural England Monitor of Engagement with the Natural Environment* survey notes that "*approximately 79% of dog walkers travel no further than 3km to reach the location at which they walk their dogs*" and this is consistent with most studies.
Grimsthorpe SAC	The SAC is approximately 6km from the Council's administrative boundary. There is no public access to the site, and recreational pressure is not identified as a pressure or a threat in the SIP; therefore, it would seem very unlikely that housing growth within Rutland would significantly alter recreational usage of this site.
Baston Fen SAC	The SAC is approximately 7.2km from the Council's administrative boundary. There is no public access to the vast majority of the site, and recreational pressure is not identified as a pressure or a threat in the SIP. It would seem very unlikely that housing growth within Rutland would significantly alter recreational usage of this site due to the distance and site characteristics.

Urbanisation

3.3.9 Urbanisation is generally used as a collective term covering a suite of often disparate risks and impacts that occur due to increases in human populations near protected sites. Typically, this would include aspects such as fly-tipping or vandalism, although the effects of these aspects again depend on the interest features of the sites: for example, predation of some species by cats is known to be sizeable (Woods *et al*. 2003) and can be potentially significant for some European sites. Recreational pressure is arguably one type of effect associated with urbanisation, although this is usually considered separately as it is less closely associated with proximity; as a broad guide, urbanisation effects are more likely when developments (etc.) are within a few hundred metres of a designated site, whereas people will typically travel further for recreation.

3.3.10 Where sensitive sites are involved, development buffers of around 400m are typically used to minimise the effects of urbanisation: for example, Natural England has identified a 400m zone around the Chichester and Langstone Harbours SPA within which housing development should not be located due to the potential effects of urbanisation (particularly, the risk of chick predation by cats, which cannot be mitigated). Similarly, LPAs near the Thames Basin Heaths SPA have adopted a 400m zone around the SPA boundary where there is a presumption against new residential development as the impact on the SPA is considered likely to be adverse.

3.3.11 Urbanisation effects as a result of the Local Plan will not occur for the European sites located outside the RCC boundary due to the separation distances. With regard to

Rutland Water SPA / Ramsar, the potential for urbanisation effects will depend on the proximity of the nearest allocations and restrictions on this (through policy or allocation selection) may be appropriate.

Atmospheric Pollution

3.3.12 A number of pollutants have a negative effect on air quality; however, the most significant and relevant to habitats and species (particularly plant species) are the primary pollutants sulphur dioxide (SO_2, typically from combustion of coal and heavy fuel oils although this has declined substantially), nitrogen oxides (NOx, mainly from vehicles) and ammonia (NH_3, principally from agriculture), which (together with secondary aerosol pollutants[25]) are deposited as wet or dry deposits. These pollutants affect habitats and species mainly through acidification and eutrophication.

3.3.13 Acidification increases the acidity of soils, which can directly affect some organisms and which also promotes leaching of some important base chemicals (e.g. calcium), and mobilisation and uptake by plants of toxins (especially metals such as aluminium).

3.3.14 Air pollution contributes to eutrophication within ecosystems by increasing the amounts of available nitrogen (N)[26]. This is a particular problem in low-nutrient habitats, where available nitrogen is frequently the limiting factor on plant growth, and results in slow-growing low-nutrient species being out-competed by faster growing species that can take advantage of the increased amounts of available N.

3.3.15 Overall in the UK, there has been a significant decline in SOx and NOx emissions in recent years and a consequential decrease in acid deposition. In England, SO_x and NO_x have declined by 97% and 72% respectively since 1970 (Defra, 2018) which is the result of a switch from coal to gas, nuclear and renewables for energy generation, and increased efficiency and emissions standards for cars. These emissions are expected to decline further in future years with the transition to electric vehicles. In contrast, emissions of ammonia have remained largely unchanged; they have declined by 10% in England since 1980 (Defra, 2018), but since 2008 have started to increase slightly.

3.3.16 The effect of SO_x and NO_x decreases on ecosystems has been marked, particularly in respect of acidification; the key contributor to acidification is now thought to be deposited nitrogen, for which the major source (ammonia emissions) has not decreased significantly. Indeed, eutrophication from N-deposition (again, primarily from ammonia) is now considered the most significant air quality issue for many habitats.

3.3.17 The UK Air Pollution Information System (APIS) has been interrogated to identify those European sites and features in the study area where critical loads[27] for nutrient-N deposition and acidification are met or exceeded. APIS provides a comprehensive source of information on air pollution and the effects on habitats and species and although there

[25] Secondary pollutants are not emitted, but are formed following further reactions in the atmosphere; for example, SO_2 and NO_x are oxidised to form SO_4^{2-} and NO_2^- compounds; ozone is formed by the reaction of other pollutants (e.g. NOx or volatile organic compounds) with UV light; ammonia reacts with SO_4^{2-} and NO_2^- to form ammonium (NH_4^+).

[26] Nitrogen that is in a form that can be absorbed and used by plants.

[27] 'Critical Loads' are the threshold level for the deposition of a pollutant above which harmful indirect effects can be shown on a habitat or species, according to current knowledge (APIS, 2019).

are limitations to the data (see SNIFFER, 2007), particularly related to the scale at which data can be modelled, this provides the best basis for assessing the impacts of air emissions associated with the Local Plan in the absence of site-by-site monitoring data.

3.3.18 **Table 4.2** summarises the APIS data for SACs and SPAs with features that are directly sensitive to air quality in the study area. It should be noted that critical load values are generally provided for habitats rather than species, and that watercourses are not included as eutrophication of most watercourses due to air emissions is negligible compared to run-off from agricultural land.

Table 3.4 Summary of APIS interrogation

Site	Air quality sensitive features	Over CL?	
		Acid	*N*
Rutland Water SPA / Ramsar	• Open standing water associated with the main reservoir and other adjacent waterbodies*	n/a	n/a
	• Neutral grassland*	-	-
	• Fen, marsh and swamp associated with the open water*	n/a	-
	• Broadleaved, mixed and yew woodland, including wet woodland*	+	++
Barnack Hills and Holes SAC	• Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites)	-	+
Grimsthorpe SAC	• Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*)	-	+
	• Early gentian *Gentianella anglica*	-	+
Baston Fen SAC	• Spined loach *Cobitis taenia.*	n/a	n/a

Table Notes:

CL	Critical load
Acid	Acidification
N	Eutrophication from nitrates (etc.)
n/a	Critical load not set for feature / feature not sensitive
-	below minimum CL for that habitat
+	minimum CL for that habitat is exceeded
++	maximum CL for that habitat is exceeded
*	The SPA interest features are not directly sensitive to air quality (at least at the levels encountered) and so the sensitivity is based on that of the supporting habitats.

3.3.19 In practice, the principal source of air pollution associated with the Local Plan will be related to changing patterns of vehicle use due to the promotion of new development (since the Local Plan is unlikely to provide for any new significant point-sources).

3.3.20 The Department of Transport's *Transport Analysis Guidance*[28] states that "*beyond 200m, the contribution of vehicle emissions from the roadside to local pollution levels is not significant*" and therefore this distance is used to determine the potential exposure of the European sites to any local effects associated with the Local Plan. Environment Agency (EA) guidance (EA, 2007) also states that "*Where the concentration within the emission footprint in any part of the European site(s) is less than 1% of the relevant long-term*

[28] See http://www.dft.gov.uk/webtag/documents/expert/unit3.3.3.php#013; accessed 15/06/14.

benchmark (EAL, Critical Level or Critical Load), the emission is not likely to have a significant effect alone or in combination irrespective of the background levels".

Table 3.5 Summary of European site issues in relation to air quality

Site	Notes
Rutland Water SPA / Ramsar	There are two A- or B-roads within 200m of the SPA / Ramsar (the A6003 and the A606). The qualifying features of the SPA/Ramsar are not considered directly sensitive to air quality changes under normal scenarios; rather, any sensitivity is related to changes that might occur in the supporting habitats, principally in relation to N-deposition. For most wetland habitats (particularly waterbodies) eutrophication via agricultural run-off and flood water is overwhelmingly more significant than air pollution, and available-N is rarely a limiting factor in these ecosystems; however, some of the supporting terrestrial habitats have a degree of sensitivity to N-deposition.
Barnack Hills and Holes SAC	The site is over 200m from the nearest classified numbered road (the B1443 at Barnack); the roads immediately adjacent to the site are minor roads that will self-evidently not see substantial increases in traffic due to the Local Plan, given their location and negligible value as through-routes to or from the Rutland area. It would therefore seem unlikely that the site will be exposed to potentially significant air quality changes associated with traffic originating in Rutland.
Grimsthorpe SAC	The site is over 200m from the nearest public road (the B1176 at Creeton); the site will not therefore be exposed to potentially significant air quality changes associated with road traffic (from Rutland or otherwise).
Baston Fen SAC	The site is over 200m from the nearest classified numbered road (the A15 at Thurlby); there is a minor road (Black Drove) immediately adjacent to the site but this will self-evidently not see substantial increases in traffic due to the RCC Local Plan, given its location and negligible value as through-routes to or from the Rutland area. It would therefore seem unlikely that the site will be exposed to potentially significant air quality changes associated with traffic originating in Rutland.

Water Resources

3.3.21 The exploitation and management of water resources is connected to a range of activities, most of which are not directly controlled or influenced by the Local Plan; for example, agriculture, flood defence, recreation, power generation, fisheries and nature conservation. Much of the water supply to water-resource sensitive European sites is managed through specific consenting regimes that are independent of the Local Plan.

3.3.22 It is clear that development supported or managed by the Local Plan is likely to increase demand for water, which could indirectly affect some European sites in the study area. When assessing the potential effects of increased water demand it is important to understand how the public water supply (PWS) system operates and how it is regulated with other water resource consents.

3.3.23 Potable water in Rutland is supplied by Severn Trent Water (roughly the areas to the west and north-west of Rutland Water) and Anglian Water. The Severn Trent Water supply area in Rutland is covered by its Rutland Water Resource Zone (WRZ), which receives all of its water via bulk supply transfers from Anglian Water.

3.3.24 Anglian Water abstracts from ground- and surface-water sources; the Rutland area is covered by its North Rutherford WRZ and Bourne WRZ, where water supply is mainly from

large pumped storage reservoirs such as Rutland Water or Grafham Water. However, the supply network is complex and there are a number of strategic inter-zone transfers and so direct and specific supply relationships cannot necessarily be made and it is rarely possible or appropriate to identify a particular 'source' for water supply to a specific area. Consequently, direct effects on specific European sites as a result of development within the RCC cannot necessarily be identified or quantified.

3.3.25 More importantly, the water resources planning process helps to ensure that growth in water demand does not affect European sites. The *Water Industry Act 1991*, as amended by the *Water Act 2003* and *Water Act 2014*, requires that all water companies must publish a Water Resources Management Plan (WRMP) that sets out their strategy for managing water resources across their supply areas over the next 25 years and beyond. WRMPs use calculations of Deployable Output (DO) to establish supply/demand balances; this enables water companies to identify those WRZs with potential supply deficits over the planning period[29]. The calculations account for any reductions in abstraction that are required to safeguard European sites[30] and so the WRMP process (with other regulations) helps ensure (as far as is achievable) that future changes in demand will not affect any European sites[31].

3.3.26 Anglian Water accounted for the growth predicted by RCC and other LPAs in forecasting for its current (2019) WRMP, and predicted future deficits in both the Ruthamford North and Bourne WRZs. These deficits are being met through leakage reductions and water transfers into the WRZs using existing infrastructure.

3.3.27 The 2019 WRMP was subject to HRA, which concluded that it would have no adverse effects on any European sites, including those water-resource sensitive sites and features within the Rutland Local Plan HRA study area.

3.3.28 The WRMPs provide the best estimate of future water resource demand, and therefore it is reasonable to assume that the growth predicted within the Local Plan can be accommodated without significant effects on any European sites due to PWS abstractions, assuming that the WRMP and its HRA reach this conclusion. Furthermore, since the WRMPs explicitly account for the growth predicted by the Council and other LPAs[32], 'in

[29] Forecasts are completed in accordance with the Water Resources Planning Guidelines (published by the Environment Agency) and take into account (inter alia) economic factors (economic growth, metering, pricing), behavioural factors (patterns of water use), demographic factors (population growth, inward and outward migration, changes in occupancy rate), planning policy (LPA land use plans), company policies (e.g. on leakage control and water efficiency measures) and environmental factors, including climate change. The WRMP therefore accounts for these demand forecasts based on historical trends, an established growth forecast model and through review of local and regional planning documents.

[30] For example, sustainability reductions required by the Review of Consents (RoC) or the Environment Agency's Restoring Sustainable Abstractions (RSA) programme. It should be noted that, under the WRMP process, the RoC changes (and non- changes to licences) are considered to be valid over the planning period. This means that the WRMP (and its underlying assumptions regarding the availability of water and sustainability of existing consents) is compliant with the RoC and so the WRMP can only affect European sites through any new resource and production-side options it advocates to resolves deficits, and not through the existing permissions regime.

[31] Calculations of DO include for Target Headroom (precautionary 'over-capacity' in available water) to buffer any unforeseen variation in predicted future demand; the WRMP is also reviewed on a five-yearly cycle to ensure it is performing as expected and to account for any variations between predicted and actual demand.

[32] Defra/ EA guidance on WRMPs requires that forecast population and property figures be based, wherever possible, upon plans published by local authorities (including 'adopted', 'emergent', 'consultation' and 'draft' local plans).

combination' effects between the Local Plan and the WRMP are unlikely to occur. Having said that, the Local Plan can obviously help manage demand and promote water efficiency measures through its policy controls.

3.3.29 Anglian Water is currently preparing it next WRMP (2024). The final WRMP (and its HRA) will not be issued prior to the intended consultation on the Pre-submission Local Plan (Reg. 19) in spring 2024; however, draft versions of the WRMP will have been publicly consulted on at that point, and the supply-demand deficit (as it relates to RCC) should be evident. Based on the previous WRMP it is likely that growth within Rutland will not adversely affect any European sites through water resource pressures, although this will necessarily be reviewed as the Local Plan and the 2024 WRMP are developed.

Table 3.6 Summary of European site issues in relation to water resources

Site	Notes
Rutland Water SPA / Ramsar	Rutland Water is a key regional water source and most water supplied to the WRZs that cover Rutland is likely to come from here. However, the operation of the reservoir is tightly controlled by separate permissions regimes and will not be affected by growth in Rutland. The effects of regional growth will be determined by Anglian Water's WRMP and its HRA.
Barnack Hills and Holes SAC	The site features are not considered 'water resource sensitive', and will not be vulnerable to changes in abstraction (etc.) that may be associated with the growth supported by the Local Plan.
Grimsthorpe SAC	There is no pathway for this site to be affected by changes in water quality associated with the proposals within the Local Plan.
Baston Fen SAC	Flooding and water-level management is critical to site integrity, although this is closely managed by the Welland and Deeping IDB and LWT. The RCC plan will almost certainly not affect the flooding / water management regime employed at the SAC itself (given the limited area of the River Glen catchment within the RCC area). The effects of regional growth will be determined by Anglian Water's WRMP and its HRA, although water availability for the site is not thought to be affected by PWS abstractions.

Water Quality

3.3.30 Most of Rutland lies within the catchment of the River Welland (which drains to the Wash, approximately 50km downstream), although parts of the far north and north-western areas of the county are within the catchments of the River Wreake (and hence the Soar and ultimately the Humber) and the River Witham (also the Wash). It should be noted the European sites associated with the Wash (The Wash SPA; The Wash Ramsar; and The Wash and North Norfolk Coast SAC) and the Humber (Humber Estuary SPA; and Humber Estuary Ramsar) have not been identified as sites that are in unfavourable condition due to excessive nutrients (such that 'nutrient neutrality' is being deployed or considered as mitigation) in recent NE advice to LPAs[33].

3.3.31 Most waterbodies and watercourses in the county are affected to some extent by point or diffuse sources of pollutants, notably nitrates and phosphates from agriculture. Point

[33] Letter from NE to LPA Chief Executives and Heads of Planning, 16 March 2022; Re. Advice for development proposals with the potential to affect water quality resulting in adverse nutrient impacts on habitats sites.

sources are usually discrete discharge points, such as wastewater treatment works (WwTW) outfalls, which are generally managed through specific consenting regimes that are independent of the Local Plan. Diffuse pollution is derived from a range of sources (e.g. agricultural run-off; road run-off) that cannot always be easily traced or quantified. Development promoted or supported by the Local Plan is likely to increase demand on wastewater treatment works and potentially increase non-agricultural run-off.

3.3.32 Rutland Water is fed primarily by abstractions from the River Nene upstream of Peterborough and from the River Welland upstream of Stamford[34]. The natural upstream catchment is small with minimal inputs from the River Gwash and the Egleton Brook. The main inflows into Rutland Water currently receive regulated discharges of treated sewage as well as unregulated treated sewage discharges from septic tanks.

3.3.33 With regard to sewage discharges, a water-cycle study undertaken in 2011[35] noted that "*The Appropriate Assessment carried out as part of the Habitats Directive Review of Consents concluded that there are no Water Quality Consents which have been shown to have an adverse affect* [sic] *on Rutland Water SPA, even under worst case scenarios in combination with other potentially significant influences on the site*". This nevertheless identified four wastewater treatment works (WwTW) in Rutland that may not have sufficient headroom to support the development then anticipated within their catchments (Cottesmore WwTW, Great Casterton WwTW, North Luffenham WwTW and Ryhall WwTW). The EA has more recently indicated[36] that it has concerns over the capacity of the WwTWs at Oakham and Uppingham, and the ability of these sites to accommodate the anticipated housing growth in their catchments without treatment upgrades; the current status of these upgrades has not been confirmed, although upgrades to capacity at Oakham WwTW are identified for Anglian Water's current Asset Management Plan (AMP) period (AMP7; 2020 – 2025).

Commented [FM4]: Do we have info on this?

3.3.34 Run-off from impermeable surfaces can have considerable effects on waterbodies and watercourses, and is a notable issue in both urban and rural areas. Development has traditionally sought to capture and divert rain and run-off to the nearest watercourse or treatment facility as quickly as possible, and extensive drainage networks have been developed to facilitate this. However, as developed areas have increased so have the total volumes and flow rates of run-off. This has two principal effects: firstly, impermeable surfaces provide very little resistance to the mobilisation and transport of pollutants within run-off; and secondly, flow rates and volumes often exceed the capacity of the receiving drains or watercourses, causing localised flooding or the operation of combined sewer overflows (CSOs)[37]. The effect of run-off from developed areas can be mitigated or reduced by the use of Sustainable Drainage Systems (SuDS) and by increasing the area of

[34] Note, the catchment of the Nene does not include the RCC area and so this source is not considered further.

[35] Scott Wilson (2011). *South Holland, South Kesteven and Rutland Outline Water Cycle Study: Technical Report*. Scott Wilson, Hampshire.

[36] EA response to the August 2017 draft Local Plan consultation, letter dated 25/09/17 ref. AN/2012/113769/CS-02/PO1-L01

[37] All sewerage pipes have a certain capacity, determined by the size of the pipe and the receiving water treatment works. At times of high rainfall, this capacity can be exceeded, with the risk of uncontrolled bursts. CSOs provide a mechanism to prevent this, by allowing untreated sewerage to mix with surface water run-off when certain volumes are exceeded. This is then discharged to the nearest watercourse.

permeable surfaces (both natural and artificial) within developed areas. These measures offer effective attenuation by reducing the volumes of surface run-off. They also increase the retention of pollutants and, in the case of some SuDS, can allow for treatment of pollutants.

3.3.35 With regard to European sites, only Rutland Water SPA/Ramsar and (potentially) Baston Fen SAC are considered to be vulnerable to potential changes in water quality associated with growth in the county.

3.3.36 However, it should also be recognised that the water quality effects of the Local Plan are ultimately either controlled by existing consents regimes (which must undergo HRA) or have diffuse 'in combination' effects that are difficult to quantify, and so the HRA process typically aims to ensure that suitable mitigating policy that will minimise the impacts of plan-supported development on water quality generally is provided.

Table 3.7 Summary of European site issues in relation to water quality

Site	Notes
Rutland Water SPA / Ramsar	The main inflows into Rutland Water currently receive regulated discharges of treated sewage as well as unregulated treated sewage discharges from septic tanks. In addition, the reservoir will receive nutrient inputs from local diffuse sources (particularly agriculture). These inputs maintain the reservoir in a eutrophic state that has led in the past to regular algal blooms. Development within the reservoir catchment (including upstream of Stamford in the Welland catchment) has the potential to add to the nutrient loading in the reservoir; this is likely to include most of the allocation sites within Rutland.
Barnack Hills and Holes SAC	There is no pathway for this site to be affected by changes in water quality associated with the proposals within the Local Plan.
Grimsthorpe SAC	There is no pathway for this site to be affected by changes in water quality associated with the proposals within the Local Plan.
Baston Fen SAC	A small part of the catchment of the West Glen River (principally, the area immediately around Essendine) is within the RCC area and so this watercourse (and hence, indirectly, the SAC or its mobile interest features) could theoretically be exposed to the outcomes of the RCC plan.

Flooding / water level management

3.3.37 The implementation of the European Floods Directive (Directive 2007/60/EC) in England and Wales is being co-ordinated with the Water Framework Directive. Catchment Flood Management Plans (prepared by the EA), Shoreline Management Plans (prepared by coastal local authorities and the EA), River Basin District Flood Risk Management Plans (prepared by the EA) and Local Flood Risk Management Strategies set out long term policies for flood risk management. The delivery of the policies from these long-term plans will help to achieve the objectives of these plans and the RBMPs.

3.3.38 Development supported by the Local Plan is unlikely to significantly alter regional flood risk levels, but may exacerbate the effects of local flooding. Run-off from impermeable surfaces can have considerable effects on waterbodies and watercourses, meaning that flow rates and volumes often exceed the capacity of the receiving drains or watercourses.

This can lead to local water quality impacts on European sites. The effect of run-off from developed areas can be mitigated or reduced by the use of SuDS and by increasing the area of permeable surfaces (both natural and artificial) within developed areas. However, no European sites are considered to be exposed to potential changes in flood risk that may result from the Local Plan.

3.3.39 Some sites and features may be dependent on water levels being maintained by surface water or groundwater inputs, which may in turn be affected by abstraction or development (e.g. through dewatering of exacavations, which can be an issue for groundwater levels). Rutland Water SPA/Ramsar and Baston Fen SAC are dependent on surface water inputs and subsequent water level management (there is no evidence of groundwater dependent ecosystems being present at any sites).

Table 3.8 Summary of European site issues in relation to flooding / water level management

Site	Notes
Rutland Water SPA / Ramsar	Development in Rutland is unlikely to affect the flooding or water-level management regime associated with this site, which is controlled by the abstraction regime, out of catchment inputs, and water-level management within the nature reserve areas. The effects of developments close to the site may need to be considered, although there is limited hydraulic connectivity between the reservoir and the underlying geology.
Barnack Hills and Holes SAC	There is no pathway for this site to be affected by changes in flooding / water management associated with the proposals within the Local Plan.
Grimsthorpe SAC	There is no pathway for this site to be affected by changes in flooding / water management associated with the proposals within the Local Plan.
Baston Fen SAC	Flooding and water-level management is critical to site integrity, although this is closely managed by the Welland and Deeping IDB and LWT. The RCC plan will not affect the flooding / water management regime employed at the SAC itself. Allocations or other developments proposed or promoted by the RCC plan within the catchment of the West Glen River might expose this watercourse (and hence, indirectly, the SAC or its mobile interest features) to the effects of the RCC plan.

Effects on functional habitats or species away from European Sites

3.3.40 The provisions of the Habitats Regulations ensure that 'direct' (encroachment) effects on European sites as a result of land use change (i.e. the partial or complete destruction of a European site) are extremely unlikely under normal circumstances, and this will not occur as a result of the Local Plan. However, many European interest features (particularly more mobile animal species) may use or be reliant on non-designated habitats outside of a European site during their life-cycle. Developments some distance from a European site can therefore have an effect on the site if its population of interest features is reliant on the habitats being affected by a development and sufficient numbers are exposed to the environmental changes. All of the above aspects (recreation, water resources, etc.) can therefore also affect European site integrity indirectly through effects on functional habitats outside of the designated site boundary.

3.3.41 With regard to the European sites within the study area, this is only a potential issue for Rutland Water SPA/Ramsar and Baston Fen SAC, although the SIP and supplementary advice for these sites do not identify any known areas of functionally-linked land (other than the compensatory habitats at Rutland Water).

3.3.42 For Baston Fen, the interest feature (spined loach) may be functionally dependent on spawning areas in the Glen River, although the catchment for this only forms a very small proportion of the RCC area.

3.3.43 It is likely waterbirds associated with Rutland Water periodically use other wetland sites in the region (e.g. Eye Brook Reservoir SSSI; or Priory Water in Melton Borough). There is no data to suggest a potentially significant functional linkage or dependency.

3.3.44 However, it is recognised that some areas of cropped lowland farmland may be important for certain wintering waterbirds typically associated with coastal and wetland SPAs (e.g. Mason & MacDonald 1999; Gillings 2003), and that this behaviour is under-recorded by the standard Wetland Bird Survey (WeBS) monitoring technique.

3.3.45 The 2016 SPA Review (JNCC, 2016) identifies a broad group of species that are known to be associated with or reliant on cropped habitats, which are under-represented in the SPA network (although the SPA Review suggests that this should be addressed outside the SPA Review process through "*wider countryside measures to preserve and promote permanent pasture as feeding and roosting habitat for the species*"). Of the species identified in the Rutland Water SPA/Ramsar citations, only wigeon and teal have potential associations with cropped habitats.

3.3.46 There is little information on the feeding habits of teal in agricultural habitats although they typically forage close to wetlands and it is likely that the use of particular fields is opportunistic, depending on inundation. In contrast, wigeon are closely associated with cropped habitats within ~2km of a roost site, particularly short improved grasslands that are close to water or partially flooded; and the species exhibits a relatively high level of fidelity to roost and feeding sites (JNCC 2016). Suitable habitats away from Rutland Water may be utilised and have some functional value to the wigeon population, although it should be noted that these species retain a preference for damp grassland near waterbodies, typically with longer sight-lines, rather than agricultural land generally.

3.3.47 With regard to flyways for birds using Rutland Water, specific routes or corridors have not been identified. The RSPB provided a high-level map and guidance[38] in 2009 that assigned one of three sensitivity ratings (high, medium or unknown) to each 1km square in England; for Rutland, the landscape within ~4 – 5km of Rutland Water SPA/Ramsar and Eye Brook Reservoir SSSI was categorised as having a 'high' sensitivity to wind farm development. More recent studies[39] have identified areas in the east of England as having a 'moderate' sensitivity to wind turbine and power line installations (although the study only included two of the Rutland Water SPA interest features).

[38] Bright J.A., Langston R.H.W. & Anthony S. (2009). *Mapped and written guidance in relation to birds and onshore wind energy development in England*. RSPB Research Report No. 35. RSPB, Beds.

[39] Gauld JG et al. (2022). Hotspots in the grid: Avian sensitivity and vulnerability to collision risk from energy infrastructure interactions in Europe and North Africa. *Journal of Applied Ecology* (pre-publication).

3.4 Issues and Options Review

3.4.1 The Issues and Options documentation has been reviewed to inform this report and identify potential pathways for effects.

3.4.2 As noted, the plan framework provided by the Issues and Options is too high-level to support a meaningful HRA screening or appropriate assessment; this report does not therefore provide any formal or guideline HRA conclusions and all observations within the report are necessarily preliminary and subject to further assessment as the plan evolves and the baseline data are updated.

3.4.3 However, **none of the objectives or options will make adverse effects on any European sites fundamentally unavoidable** (i.e. the objectives or options will not 'bake in' adverse effects that cannot be avoided or mitigated irrespective of how the objectives and options are defined though allocation and policy).

3.4.4 The HRA is not a balancing test (i.e. it is not balancing positive effects against negative). This report also does not rank options according to their risk of affecting European sites as (a) there is insufficient information to provide a robust ranking assessment and (b) any such ranking might result in the premature exclusion of viable or preferable options for marginal HRA-related reasons; and (c) many of the factors potentially affecting the European sites locally are essentially 'in combination' quantum of development effects that would require consideration irrespective of the option selected.

3.5 Plan Development Considerations

3.5.1 As noted, RCC is completing various reports and studies to update the environmental baseline for the Local Plan, some of which will be relevant to the HRA baseline (see **Section 3.1**). These will be accounted for as the HRA process is undertaken alongside the emerging pla.

3.5.2 There may be a need for allocation site proposers to provide ecological studies depending in the size, nature and location of a site submitted for allocation; in particular, it may be necessary to assess whether a potential allocation site is likely to have any functional associations or connectivity any European sites (particularly in relation to wigeon and teal associated with Rutland Water SPA / Ramsar).

Commented [FM5]: Is there a preferred term in the context of the RCC plan?

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Appendix A
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Appendix B
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