

Cannock Chase Local Plan

HRA Report for Reg.19 consultation

Cannock Chase District Council

Final report

Prepared by LUC

January 2024



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Cannock Chase Local Plan

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Chapter 1

Introduction

1.1 LUC has been commissioned by Cannock Chase District Council (CCDC) to carry out a Habitats Regulations Assessment (HRA) of its Local Plan.

Background to the preparation of the Cannock Chase Local Plan

1.2 CCDC began work on its new Local Plan in February 2018. An Issues & Scope paper was published for consultation in summer 2018, followed by an Issues & Options consultation in summer 2019, and Preferred Options consultation in spring 2021. The Issues & Options consultation was accompanied by a HRA Scoping Report, and the Preferred Options by a HRA Screening and Appropriate Assessment; both prepared by LUC.

1.3 The Local Plan Preferred Options (February 2021) document included draft policies and site allocations. CCDC has now prepared the Pre-Submission (Regulation 19) Local Plan and this updated HRA report sets out an assessment of the policies and sites included within it. This HRA report will be subject to consultation alongside the Pre-Submission (Regulation 19) Local Plan document.

The requirement to undertake Habitats Regulations Assessment of Development Plans

1.4 The requirement to undertake HRA of development plans was confirmed by the amendments to the Habitats Regulations published for England and Wales in 2007 [See reference 1]; the currently applicable version is the Habitats Regulations 2017 [See reference 2], as amended. When preparing development plans, CCDC is therefore required by law to carry out an HRA. The Council can commission consultants to undertake HRA work on its behalf and this (the work documented in this report) is then reported to and considered by CCDC as the 'competent authority'. The Council will consider this work and would usually [See reference 3] only progress a plan if it considers that the plan will not adversely affect the integrity [See reference 4] of any 'European site', as defined below (the exception to this would be where 'imperative reasons of overriding public interest' can be demonstrated; see paragraph 1.27). The requirement for authorities to comply with the Habitats Regulations when preparing a plan is also noted in the Government's online Planning Practice Guidance [See reference 5] (PPG).

1.5 HRA refers to the assessment of the potential effects of a development plan on one or more sites afforded the highest level of protection in the UK: SPAs and SACs. These were classified under European Union (EU) legislation but, since 1 January 2021, are protected in the UK by the Habitats Regulations 2017 (as amended). Although the EU Directives from which the UK's Habitats Regulations originally derived are no longer binding, the Regulations still make reference to the lists of habitats and species that the sites were designated for, which are listed in annexes to the EU Directives:

- SACs are designated for particular habitat types (specified in Annex 1 of the EU Habitats Directive [See reference 6]) and species (Annex II). The listed habitat types and species (excluding birds) are those considered to be most in need of conservation at a European level. Designation of SACs also has regard to the threats of degradation or destruction to which the

sites are exposed and, before EU exit day, to the coherence of the ‘Natura 2000’ network of European sites. After EU exit day, regard is had to the importance of such sites for the coherence of the UK’s ‘national site network’.

- SPAs are classified for rare and vulnerable birds (Annex I of the EU Birds Directive [See reference 7]), and for regularly occurring migratory species not listed in Annex I.

1.6 The term 'European sites' was previously commonly used in HRA to refer to 'Natura 2000' sites [See reference 8] and Ramsar sites (international designated under the Ramsar Convention), and is still used in Government guidance on HRA [See reference 9] (updated in December 2023). However, other documents use alternative terms. The Levelling-up and Regeneration Act 2023 [See reference 10] uses the term 'habitats site' to refer to “a European site within the meaning of the Conservation of Habitats and Species Regulations 2017”; and a Government Policy Paper [See reference 11] on changes to the Habitats Regulations 2017 post-Brexit states that:

- Any references to Natura 2000 in the 2017 Regulations and in guidance now refer to the new 'national site network'.
- The national site network includes existing SACs and SPAs; and new SACs and SPAs designated under these Regulations.
- Designated Wetlands of International Importance (known as Ramsar sites) do not form part of the national site network. Many Ramsar sites overlap with SACs and SPAs and may be designated for the same or different species and habitats.

1.7 Although Ramsar sites do not form part of the new national site network, Government guidance [See reference 12] states that:

1.8 “Any proposals affecting the following sites would also require an HRA because these are protected by government policy:

- proposed SACs
- potential SPAs

- Ramsar sites - wetlands of international importance (both listed and proposed)
- areas secured as sites compensating for damage to a European site.”

1.9 Furthermore, the NPPF [See reference 13] and practice guidance [See reference 14] currently state that competent authorities responsible for carrying out HRA should treat Ramsar sites in the same way as SACs and SPAs. The legislative requirement for HRA does not apply to other nationally designated wildlife sites such as Sites of Special Scientific Interest or National Nature Reserves.

1.10 For simplicity, this report uses the term 'European site' to refer to all types of designated site for which Government guidance [See reference 15] requires an HRA.

1.11 The overall purpose of an HRA is to conclude whether or not a proposal or policy, or a whole development plan would adversely affect the integrity of the European site in question. This is judged in terms of the implications of the plan for a site's 'qualifying features' (i.e. those Annex I habitats, Annex II species, and Annex I bird populations for which it has been designated). Significantly, HRA is based on the precautionary principle. Where uncertainty or doubt remains, an adverse effect should be assumed.

Stages of Habitats Regulations Assessment

1.12 The HRA of development plans is undertaken in stages (as described below) and should conclude whether or not a proposal would adversely affect the integrity of the European site in question.

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

1.14 The HRA also requires close working with Natural England as the statutory nature conservation body in order to obtain the necessary information, agree the process, outcomes and mitigation proposals. The Environment Agency, while not a statutory consultee for the HRA, is also in a strong position to provide advice and information throughout the process as it is required to undertake HRA for its existing licences and future licensing of activities.

Requirements of the Habitats Regulations

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

- Step 1: Under Reg. 105(1)(b), consider whether the plan is directly connected with or necessary to the management of the sites. If not, proceed to Step 2.
- Step 2: Under Reg. 105(1)(a) consider whether the plan is likely to have a significant effect on a European site, either alone or in combination with other plans or projects (the 'Significance Test'). If so, proceed to Step 3.

1.16 [Steps 1 and 2 are undertaken as part of Stage 1: HRA screening, as outlined below.]

- Step 3: Under Reg. 105(1), make an Appropriate Assessment of the implications for the European site in view of its current conservation objectives (the 'Integrity Test'). In so doing, it is mandatory under Reg. 105(2) to consult Natural England, and optional under Reg. 105(3) to take the opinion of the general public.

1.17 [This step is undertaken during Stage 2: Appropriate Assessment, as outlined below.]

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

1.18 [This step follows Stage 2 where a finding of ‘no adverse effect’ is concluded. If this conclusion cannot be reached, the HRA process proceeds to Step 5.

- Step 5: Under Reg. 107, if Step 4 is unable to rule out adverse effects on the integrity of a European site and no alternative solutions exist then the competent authority may nevertheless agree to the plan or project if it must be carried out for ‘imperative reasons of overriding public interest’ (IROPI).

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

Typical stages of HRA

1.20 The following summarises the stages and associated tasks and outcomes typically involved in carrying out a full HRA of a development plan, based on various guidance documents [See reference 16] [See reference 17] [See reference 18].

Stage 1: Screening (the ‘Significance test’)

1.21 Task:

- Description of the development plan and confirmation that it is not directly connected with or necessary to the management of European sites.

- Identification of potentially affected European sites and their conservation objectives [See reference 19].
- Assessment of likely significant effects of the development plan alone or in combination with other plans and projects, prior to consideration of avoidance or reduction ('mitigation') measures [See reference 20].

1.22 Outcome:

- Where effects are unlikely, prepare a 'finding of no significant effect report'.
- Where effects judged likely, or lack of information to prove otherwise, proceed to Stage 2.

Stage 2: Appropriate Assessment (the 'Integrity Test')

1.23 Task:

- Information gathering (development plan and European sites [See reference 21]).
- Impact prediction.
- Evaluation of development plan impacts in view of conservation objectives of European sites.
- Where impacts are considered to directly or indirectly affect qualifying features of European sites, identify how these effects will be avoided or reduced ('mitigation').

1.24 Outcome:

- Appropriate Assessment report describing the plan, European site baseline conditions, the adverse effects of the plan on the European site, how these effects will be avoided through, firstly, avoidance, and secondly,

mitigation including the mechanisms and timescale for these mitigation measures.

- If effects remain after all alternatives and mitigation measures have been considered proceed to Stage 3.

Stage 3: Assessment where no alternatives exist and adverse impacts remain taking into account mitigation

1.25 Task:

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

1.26 Outcome:

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

1.27 It is normally anticipated that an emphasis on Stages 1 and 2 of this process will, through a series of iterations, help ensure that potential adverse effects are identified and eliminated through the avoidance of likely significant effects at Stage 1, and through Appropriate Assessment at Stage 2 by the inclusion of mitigation measures designed to avoid or reduce effects. The need to consider alternatives could imply more onerous changes to a plan document. It is generally understood that so called 'imperative reasons of overriding public interest' (IROPI) are likely to be justified only very occasionally and would involve engagement with both the Government and European Commission.

1.28 The HRA should be undertaken by the 'competent authority' - in this case CCDC - and LUC has been commissioned to do this on the authority's behalf.

The HRA also requires close working with Natural England as the statutory nature conservation body in order to obtain the necessary information and agree the process, outcomes and any mitigation proposals.

Case law

1.29 This HRA has been prepared in accordance with relevant case law findings, including most notably the ‘People over Wind’ and ‘Holohan’ rulings from the Court of Justice for the European Union (CJEU).

1.30 The People over Wind, Peter Sweetman v Coillte Teoranta (April 2018) judgment ruled that Article 6(3) of the Habitats Directive should be interpreted as meaning that mitigation measures should be assessed as part of an Appropriate Assessment and should not be taken into account at the screening stage. The precise wording of the ruling is as follows:

“Article 6(3)must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of measures intended to avoid or reduce the harmful effects of the plan or project on that site.”

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

1.32 The Holohan v An Bord Pleanala (November 2018) judgement stated that:

Article 6(3) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora must be interpreted as meaning that an ‘appropriate assessment’ must, on the one hand, catalogue the entirety of habitat types and species for which a site is protected, and, on the other, identify and examine both the implications of the proposed project for the species present on that site, and for which that site has not been listed, and the implications for habitat types and species to be found outside the boundaries of that site, provided that those implications are liable to affect the conservation objectives of the site.

1.33 In undertaking this HRA, LUC therefore considers the potential for effects on species and habitats, including those not listed as qualifying features, to result in secondary effects upon the qualifying features of European sites, including the potential for complex interactions and dependencies. In addition, the potential for offsite impacts, such as through impacts to functionally linked land, and or species and habitats located beyond the boundaries of European site, but which may be important in supporting the ecological processes of the qualifying features, has also been fully considered in this HRA.

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

There is no authority on the significance of the non-statutory status of the FLL. However, the fact that the FLL was not within a protected site does not mean that the effect which a deterioration in its quality or function could have on a protected site is to be ignored. The indirect effect was still protected. Although the question of its legal status was mooted, I am satisfied that while no particular legal status attaches to FLL, the fact that land is functionally linked to protected land means that the indirectly

adverse effects on a protected site, produced by effects on FLL, are scrutinised in the same legal framework just as are the direct effects of acts carried out on the protected site itself. That is the only sensible and purposive approach where a species or effect is not confined by a line on a map or boundary fence. This is particularly important where the boundaries of designated sites are drawn tightly as may be the UK practice.

1.35 The approach to the HRA also takes into consideration the ‘Wealden’ judgement from the CJEU.

1.36 Wealden District Council v Secretary of State for Communities and Local Government, Lewes District Council and South Downs National Park Authority (2017) ruled that it was not appropriate to scope out the need for a detailed assessment for an individual plan or project based on the annual average daily traffic (AADT) figures detailed in the Design Manual for Roads and Bridges or the critical loads used by Defra or the Environment Agency without considering the in-combination impacts with other plans and projects.

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

1.38 The HRA also takes into account the Grace and Sweetman (July 2018) judgement from the CJEU which stated that:

“there is a distinction to be drawn between protective measures forming part of a project and intended to avoid or reduce any direct adverse effects that may be caused by the project in order to ensure that the project does not adversely affect the integrity of the area, which are covered by Article 6(3), and measures which, in accordance with Article 6(4), are aimed at compensating for the negative effects of the project on a protected area

and cannot be taken into account in the assessment of the implications of the project”.

"As a general rule, any positive effects of the future creation of a new habitat, which is aimed at compensating for the loss of area and quality of that habitat type in a protected area, are highly difficult to forecast with any degree of certainty or will be visible only in the future”

“A mitigation strategy may only be taken into account at AA (a.6(3)) where the competent authority is “sufficiently certain that a measure will make an effective contribution to avoiding harm, guaranteeing beyond all reasonable doubt that the project will not adversely affect the integrity of the area”

- Otherwise it falls to be considered to be a compensatory measure to be considered under a.6(4) only where there are “imperative reasons of overriding public interest”

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

Previous HRA work

1.40 Cannock Chase’s current development plan, Local Plan (Part 1), was adopted in 2014 and was subject to HRA. The HRA report recommended mitigation measures in the form of a developer contributions scheme to fund access management measures to offset the impact of 78,000 new houses provided by the Local Plan policies of the planning authorities within the 15 kilometres Zone of Influence of Cannock Chase SAC. With these mitigation measures, the previous HRA ruled that an adverse effect on the integrity of

Cannock Chase SAC arising from the residential development set out in the adopted Cannock Chase Local Plan (Part 1) could be ruled out.

1.41 An Issues and Options consultation for the Local Plan (Part 2) took place in 2017. Following that consultation, the Council decided that, rather than continuing with the preparation of the Local Plan (Part 2) as originally intended, a full new Local Plan would instead be prepared which would also replace the adopted Local Plan (Part 1).

1.42 LUC prepared a HRA Scoping Report of the CCDC Local Plan Issues & Options in January 2019. The report set out the proposed methodology of the HRA and key assumptions that would underpin the assessment.

1.43 The HRA of the Issues & Options Local Plan screened the plan's policies and site allocations, and determined that Appropriate Assessment was required for the following impacts:

- Physical loss of habitat at Cannock Chase SAC and Cannock Extension Canal SAC: no adverse effects on integrity when safeguards in policy were taken into consideration.
- Air pollution at Cannock Chase SAC, Cannock Extension Canal SAC and West Midland Mosses SAC: adverse effects on integrity could not be ruled out without further assessment (traffic and, if necessary, air quality assessment).
- Recreation pressure and urban effects at Cannock Chase SAC: adverse effects on integrity could not be ruled out without further work on the mitigation strategy and policy wording.
- Water quantity and quality at Cannock Chase SAC (water quantity; abstraction) and Cannock Extension Canal SAC (water quality; direct pollution): no adverse effects on integrity when safeguards in policy were taken into consideration.

1.44 The March 2021 HRA report for the Preferred Options built on and updated the information gathered at the scoping stage. It has now been further updated

to assess the Pre-Submission (Regulation 19) version of the Local Plan and to respond to comments received in response to the Preferred Options consultation (see Appendix D).

Structure of this report

1.45 This chapter (Chapter 1) has introduced the requirement to undertake HRA of the Local Plan. The remainder of the report is structured as follows:

- Chapter 2: Cannock Chase Local Plan summarises the content of the Pre-Submission (Regulation 19) Local Plan, which is the subject of this report.
- Chapter 3: Approach to HRA sets out the approach used and the specific tasks undertaken during the screening and Appropriate Assessment stages of the HRA.
- Chapter 4: HRA Screening describes the findings of the screening stage of the HRA.
- Chapter 5: Appropriate Assessment describes the findings of the Appropriate Assessment stage of the HRA.
- Chapter 6: Conclusions and next steps summarises the HRA conclusions and describes the next steps to be undertaken.

1.46 Further information is provided in the appendices, as follows:

- Appendix A: Attributes of European sites with the potential to be affected by the Local Plan;
- Appendix B: Screening findings;
- Appendix C: Allocated sites considered in the HRA; and
- Appendix D: Record of consultation.

Chapter 2

Cannock Chase Local Plan

Characteristics of the Local Plan relevant to the HRA

2.1 Cannock Chase District Council is currently preparing a new Local Plan to guide future development. Once adopted, the new Local Plan will replace the Cannock Chase Local Plan (Part 1) (2014-2028), which consists of the Core Strategy for the District and the Rugeley Town Centre Area Action Plan. The current Local Plan sets out the planning strategy for Cannock Chase up to 2028.

2.2 The new Local Plan covers the period to 2040 and will form part of the Development Plan for the District, together with plans for minerals and waste prepared by Staffordshire County Council, and neighbourhood plans. There are two adopted Neighbourhood Plans for Hednesford and Cannock Wood, and four designated areas (Brereton & Ravenhill, Heath Hayes & Wimblebury, Norton Canes, and Rugeley) where Neighbourhood Plans are in preparation.

2.3 Building on the February 2021 Preferred Options document, which included draft policies and site allocations, CDC has now prepared the Pre-Submission (Regulation 19) Local Plan consultation document, which contains eight Strategic Objectives and 48 policies that support those objectives.

2.4 The eight strategic objectives (SOs) are as follows:

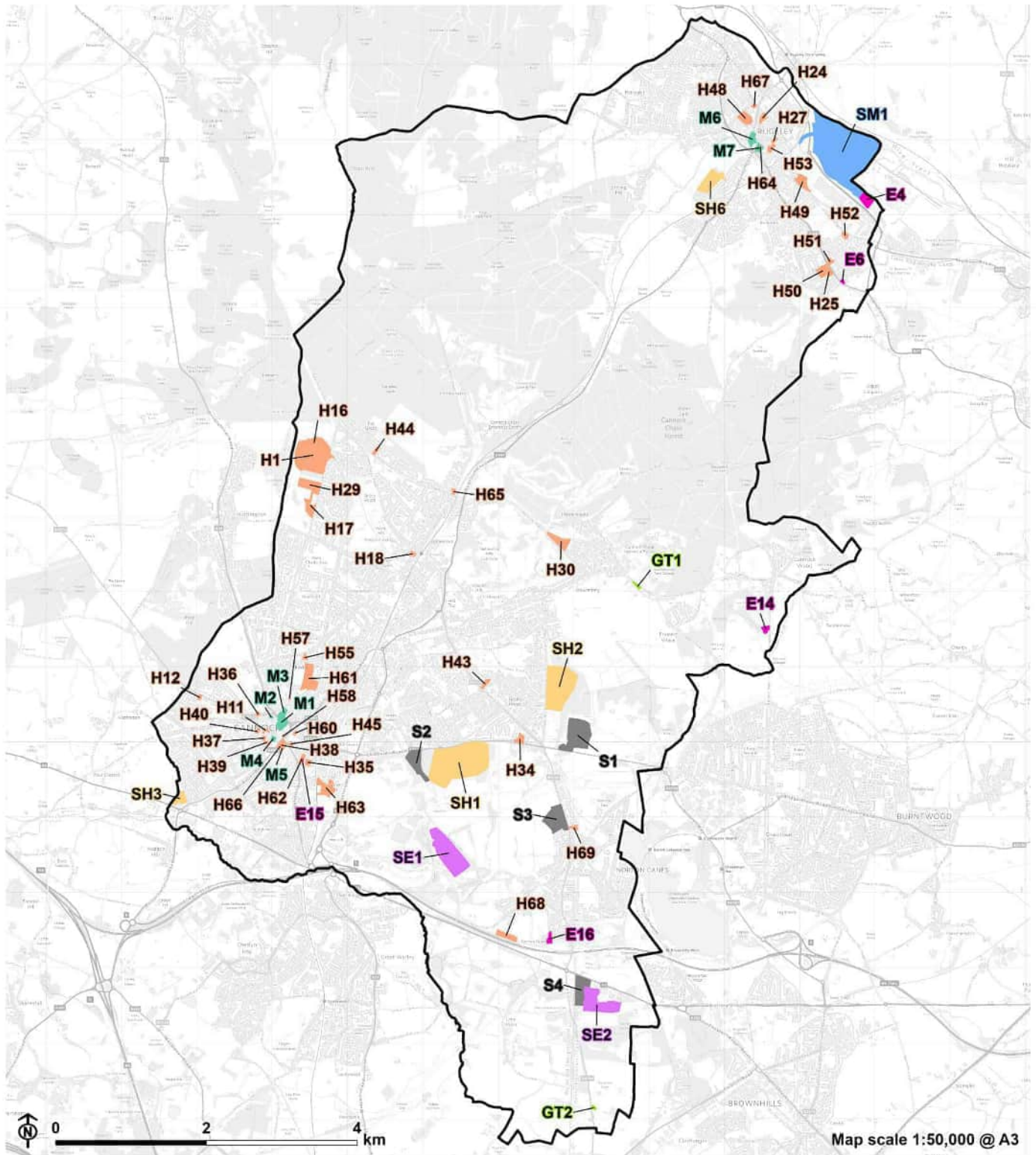
- SO1: To deliver high quality development that protects the historic environment and is appropriate, distinctive, attractive and safe
- SO2: To create community facilities and healthy living opportunities across the District

- SO3: To deliver a sufficient supply of homes to provide for housing choice and ensure all people are able to live in a decent home which meets their needs
- SO4: To encourage a vibrant local economy and workforce
- SO5: To support the provision of sustainable transport and communications infrastructure
- SO6: To create attractive Town and Local Centres
- SO7: To protect and enhance the natural environment
- SO8: To support a greener future

2.5 The development policies and site allocations within the Local Plan are set out in chapters that address each strategic objective.

2.6 The distribution of site allocations across the district is shown in Figure 2.1 and the full list of site allocations considered in this HRA is provided in Appendix C.

2.7 The Local Plan provides for a minimum of 6,308 dwellings which comprise 5,808 for local housing needs and 500 to meet the unmet needs of neighbouring areas in the Greater Birmingham and Black Country Housing Market Area. The Local Plan also provides for up to 74 hectares of land for office, manufacturing and distribution employment, in addition to other types of development (e.g. tourism) and infrastructure (e.g. transport). Details of the development quantum permitted by the Local Plan's site allocations and policies are set out in Appendix B and Appendix C.



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Figure 2.1: Local Plan allocated sites

- | | |
|--|--------------------------------------|
| Cannock Chase district boundary | Mixed use strategic site allocations |
| Residential strategic site allocations | Mixed use site allocations |
| Residential site allocations | Gypsy and traveller site allocations |
| Strategic employment site allocations | Safeguarded land |
| Employment site allocations | |

Chapter 3

Approach to HRA

3.1 The HRA of the Local Plan comprises two stages:

- Screening for likely significant effects; and
- Appropriate Assessment to determine if there will be an adverse effect on the integrity of any European site.

3.2 The HRA Scoping Report (2017) sets out the proposed approach to the HRA. Given the time that had elapsed since the Scoping Report was prepared and the case law and amendments to legislation that had emerged since, the methodology for screening the Preferred Options consultation document and the current Pre-Submission (Regulation 19) document differs from that presented in the Scoping Report. The updated methodology is set out below.

Screening assessment

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

3.4 The purpose of the screening stage is to:

- Identify all aspects of the plan that would have no effect on a European site, so that they can be eliminated from further consideration in respect of this and other plans;
- Identify all aspects of the plan that would not be likely to have a significant effect on a European site (i.e. would have some effect, because of links/connectivity, but which are not significant), either alone or in

combination with other aspects of the same plan or other plans or projects, which therefore do not require 'appropriate assessment'; and

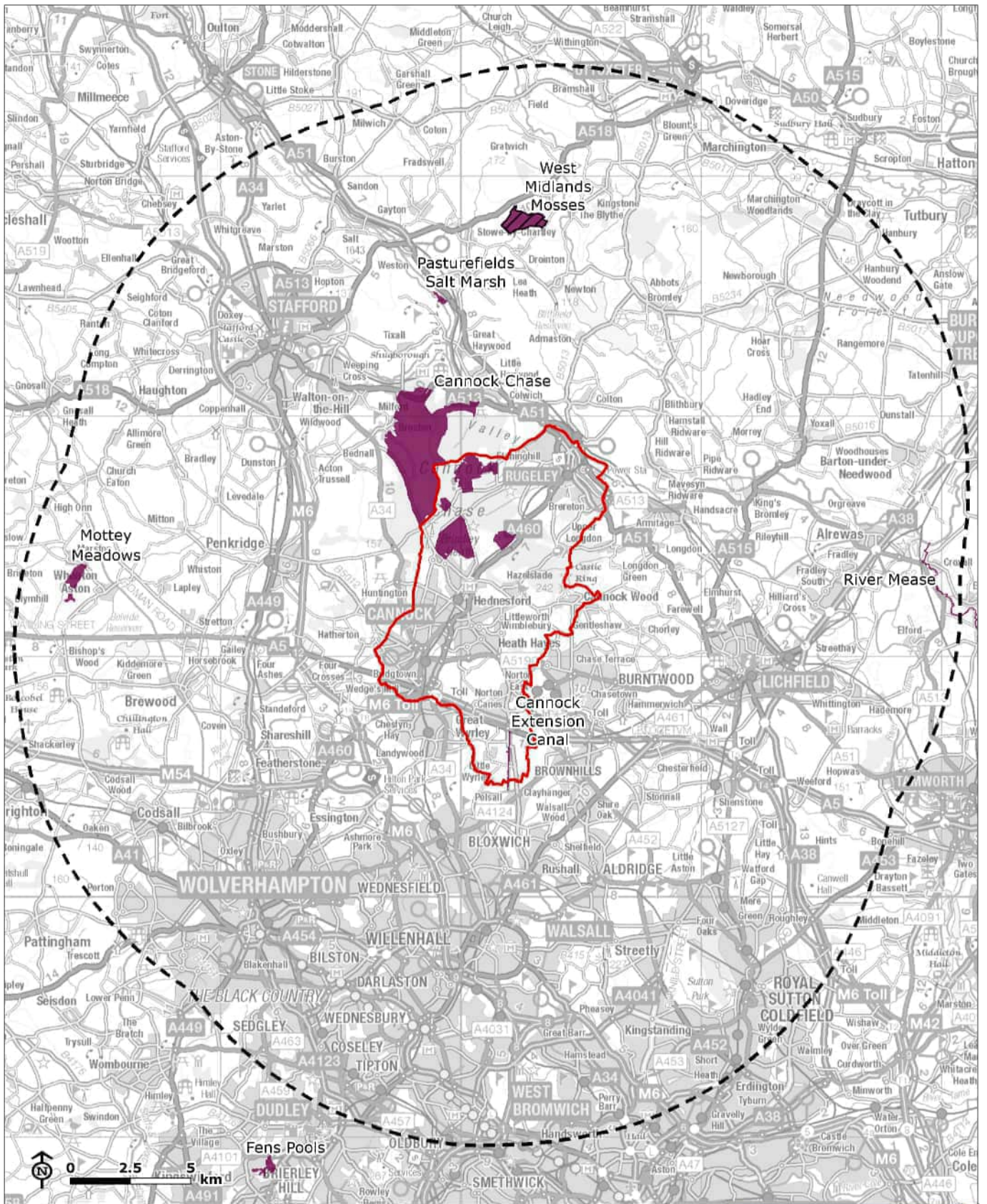
- Identify those aspects of the plan where it is not possible to rule out the risk of significant effects on a European site, either alone or in combination with other plans or projects. This provides a clear scope for the parts of the plan that will require appropriate assessment.

Identification of European sites that may be affected by the plan

3.5 As a starting point to identifying European sites that could potentially be affected by a development plan, it is established practice in HRA to consider sites within the local planning authority area covered by the plan, and other sites that may be affected beyond this area.

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

3.7 A number of European sites (Figure 3.1) have the potential to be adversely affected by the Local Plan due to their proximity and/or ecological connectivity to the plan area and have therefore been considered within this HRA.



- Cannock Chase District boundary
- 15km buffer
- Midland Meres and Mosses Ramsar site
- Special Area of Conservation

Cannock Chase HRA

Figure 3.1: European Sites Within 15km of Cannock Chase District



Map Scale @ A4: 1:225,000

Source: NE

3.8 The following European sites are within 15 kilometres of the plan area and have been scoped into the HRA:

- Cannock Chase SAC (within and adjacent to the district; north);
- Cannock Extension Canal SAC (within and adjacent to the district; south);
- Pasturefields Salt Marsh SAC (c. 6.3 kilometres north);
- West Midlands Mosses SAC (c. 7.9 kilometres north);
- Midland Meres and Mosses Ramsar site (c. 7.9 kilometres north);
- Motte Meadows SAC (c. 12.3 kilometres west); and
- River Mease SAC (c. 13.7 kilometres east).

3.9 Humber Estuary SAC, SPA and Ramsar site is c. 125 kilometres away (in a direct line) but hydrologically connected to the rivers of Cannock Chase. If the Local Plan resulted in significant water pollution, this European site could be affected and has therefore been screened in, in relation to water quality only, on a precautionary basis (and in response to Natural England comments; see Appendix D).

3.10 No other European sites have been found to have functional connectivity to the plan area.

3.11 Detailed information about each European site is provided in Appendix A, described with reference to Standard Data Forms for the SPAs and SACs, Information Sheets for Ramsar sites, and Natural England's Site Improvement Plans [See reference 22]. Natural England's conservation objectives [See reference 23] for the SPAs and SACs have also been reviewed. These state that site integrity must be maintained or restored by maintaining or restoring the habitats of qualifying features, the supporting processes on which they rely, and populations of qualifying species.

Functionally linked land

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

3.13 While the boundary of a European site will usually be drawn to include key supporting habitat for a qualifying species, this cannot always be the case where the population for which a site is designated or classified is particularly mobile. Individuals of the population will not necessarily remain in the site all the time. Sometimes, the mobility of qualifying species is considerable and may extend so far from the key habitat that forms the SAC or SPA that it would be entirely impractical to attempt to designate or classify all of the land or sea that may conceivably be used by the species [See reference 24]. HRA therefore considers whether any European sites’ qualifying species make use of functionally linked habitats, and the impacts that could affect those linked habitats.

3.14 Reliance on functionally linked land outside the designated site area is more likely where there are highly mobile species such as birds and bats; and in some cases fish and invertebrates. None of the European sites within 15 kilometres of the plan area are designated for bird or bat species; but the River Mease SAC is designated for other mobile species.

3.15 However, in this case, effects on functionally linked land can be screened out: the River Mease SAC is designated for fish species, crayfish and otters, which may rely on habitats beyond the SAC boundary. As bullhead and spiny loach are not migratory species, and white-clawed crayfish make use of habitats within and immediately adjacent to the waterbodies they live in [See reference 25], there is unlikely to be functionally linked habitat for these species within the plan area. Otter home ranges can occupy extensive areas and linear distances;

therefore the population of otter for which the River Mease SAC is designated is likely to utilise and depend upon the availability and connectivity of suitable riparian and wetland habitat in the wider region, including smaller watercourses and field drains. The only river corridor connecting the River Mease SAC with the plan area is the River Trent, which passes along the northeastern edge of the plan area, near Rugeley. However, the SAC is 13 kilometres from Cannock Chase district (as the crow flies; considerably further along the river); therefore there is unlikely to be significant habitat for River Mease SAC otters within the plan area.

3.16 None of the other sites support significant populations of mobile species. Functionally linked habitat therefore does not need to be screened into the assessment of the Cannock Chase Local Plan.

3.17 Note that Natural England, in their response to the Preferred Options consultation (see Appendix D), refer to a ‘functional link’ between Cannock Chase SAC and Chasewater and the Southern Staffordshire Coalfield Heaths SSSI. However, this comment was made with reference to recreation impacts of the Local Plan more widely, rather than in relation to the HRA. The SSSI and SAC do have a ‘functional link’ in terms of landscape and recreation use but not in HRA terms (which has a narrower definition, as set out in paragraph 3.12, above), as Cannock Chase SAC is not designated for mobile species.

Assessment of ‘likely significant effects’

3.18 As required under Regulation 105 of the Conservation of Habitats and Species Regulations 2017 [[See reference 26](#)] (as amended) (the ‘Habitats Regulations’), an assessment has been undertaken of the ‘likely significant effects’ of the Pre-Submission (Regulation 19) Local Plan. The assessment has been prepared in order to identify which policies or site allocations would be likely to have a significant effect on European sites.

3.19 Consideration has been given to the potential for the development proposed to result in significant effects associated with:

- Physical loss of/damage to habitat;
- Air pollution;
- Recreation pressure and urban impacts;
- Changes to hydrology including water quality and quantity; and
- Non-physical disturbance (noise, vibration and light).

3.20 No other effects are considered likely.

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

Interpretation of 'likely significant effect'

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

3.23 In the Waddenzee case [See reference 27], the European Court of Justice ruled on the interpretation of Article 6(3) of the Habitats Directive (translated into Reg. 102 in the Habitats Regulations), including that:

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

3.24 A relevant opinion delivered to the Court of Justice of the European Union commented that:

“The requirement that an effect in question be ‘significant’ exists in order to lay down a de minimis threshold. Plans or projects that have no appreciable effect on the site are thereby excluded. If all plans or projects capable of having any effect whatsoever on the site were to be caught by Article 6(3), activities on or near the site would risk being impossible by reason of legislative overkill.”

3.25 This opinion (the ‘Sweetman’ case) therefore allows for the authorisation of plans and projects whose possible effects, alone or in combination, can be considered ‘trivial’ or de minimis; referring to such cases as those “that have no appreciable effect on the site”. In practice such effects could be screened out as having no likely significant effect – they would be ‘insignificant’.

3.26 The HRA screening assessment therefore considers whether the Local Plan policies could have likely significant effects either alone or in combination.

In-combination effects

3.27 Regulation 105 of the Habitats Regulations 2017 requires an Appropriate Assessment where “a land use plan is likely to have a significant effect on a European site (either alone or in combination with other plans or projects) and is not directly connected with or necessary to the management of the site”. Therefore, it will be necessary to consider whether any impacts identified from the Local Plan may combine with other plans or projects to give rise to significant effects in-combination.

3.28 Where the Local Plan is likely to have an effect on its own (e.g. due to water pollution along identified impact pathways) but the effect is not likely to be significant, the in-combination assessment at screening stage needs to

determine whether there may also be the same types of effect from other plans or projects that could combine with the Local Plan's effect to produce a significant effect. If so, this likely significant effect (e.g. water pollution) arising from the Local Plan in combination with other plans or projects, would then need to be considered through the Appropriate Assessment stage to determine if water pollution would have an adverse effect on integrity of the relevant European site. Where the screening assessment has concluded that there is no impact pathway between development proposed in the Local Plan and the conditions necessary to maintain qualifying features of a European site, then there will be no in-combination effects to assess at the Screening or Appropriate Assessment stage. This approach accords with recent guidance on HRA in the HRA Handbook [\[See reference 28\]](#).

3.29 If impact pathways are found to exist for a particular effect but it is not likely to be significant from the Local Plan alone, the in-combination assessment will identify which other plans and programmes could result in the same impact on the same European site. This will focus on planned growth (including housing, employment, transport, minerals and waste) around the affected site, or along the impact corridor, for example, if impacts could arise as a result of changes to a waterway, then planned growth in local authorities along that waterway will be considered.

3.30 The potential for in-combination effects will therefore focus on plans prepared by local authorities that overlap with European sites that are within the scope of this HRA. The findings of any associated HRA work for those plans will be reviewed where available. Where relevant, any strategic projects in the area that could have in-combination effects with the Local Plan will also be identified and reviewed.

3.31 The online HRA Handbook suggests the following plans and projects may be relevant to consider as part of the in-combination assessment:

- Applications lodged but not yet determined, including refusals subject to an outstanding appeal or legal challenge;
- Projects subject to periodic review e.g. annual licences, during the time that their renewal is under consideration;

- Projects authorised but not yet started;
- Projects started but not yet completed;
- Known projects that do not require external authorisation;
- Proposals in adopted plans;
- Proposals in draft plans formally published or submitted for final consultation, examination or adoption.

3.32 The need for in-combination assessment also arises at the Appropriate Assessment stage, as discussed in the Appropriate Assessment section below.

Screening assessment

3.33 A screening assessment has been undertaken (Appendix B), which considers the potential for likely significant effects resulting from each policy and site allocation in the Pre-Submission (Regulation 19) Local Plan. The assessment considers whether significant effects are likely or uncertain (in which case Appropriate Assessment will be required) or unlikely (in which case the policies or site allocations can be screened out of further assessment. The screening assessment is conducted without taking mitigation (e.g. embedded in policy) into account, in accordance with the 'People over Wind' judgment.

3.34 For some types of impacts, the potential for likely significant effects has been determined on a proximity basis, using GIS data to determine the proximity of potential development locations to the European sites that are the subject of the assessment. However, there are many uncertainties associated with using set distances as there are very few standards available as a guide to how far impacts will travel. Therefore, where assumptions have been made, these are set out in Chapter 4.

Appropriate Assessment

3.35 Following the screening stage, if likely significant effects on European sites are unable to be ruled out, the plan-making authority is required under Regulation 105 of the Habitats Regulations to make an 'Appropriate Assessment' of the implications of the plan for European sites, in view of their conservation objectives. Appropriate Assessment should consider the impacts of the plan (either alone or in combination with other projects or plans) on the integrity of European sites with respect to their conservation objectives and to their structure and function [See reference 29]. This will involve detailed consideration of plans and projects with the potential for in-combination effects, where relevant.

3.36 Unlike the screening stage, Appropriate Assessment can take into account mitigation, for example as proposed within Local Plan policies.

Assessing the effects on site integrity

3.37 A site's integrity depends on it being able to sustain its 'qualifying features' (i.e. the habitats and species for which it has been designated) and to ensure their continued viability. The Holohan judgement also clarifies that effects on species and habitats not listed as qualifying features, but which could result in secondary effects upon the qualifying features of European sites also need to be considered. The Appropriate Assessment, if required, will build upon the information set out in Appendix A of this report, to consider the characteristics of supporting habitats and species that could be affected by impacts identified at the screening stage.

3.38 A high degree of integrity at a site is considered to exist where the potential to meet a site's conservation objectives is realised and where the site is capable of self-repair and renewal with a minimum of external management support.

3.39 A conclusion needs to be reached as to whether or not the Local Plan would adversely affect the integrity of a European site. Assessing the effects on the site(s) integrity involves considering whether the predicted impacts of the Local Plan policies and/or site allocations (either alone or in combination) have the potential to:

- Cause delays to the achievement of conservation objectives for the site.
- Interrupt progress towards the achievement of conservation objectives for the site.
- Disrupt those factors that help to maintain the favourable conditions of the site.
- Interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site.
- Cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a habitat or ecosystem.
- Change the dynamics of relationships that define the structure or function of the site (e.g. relationships between soil and water, or animals and plants).
- Interfere with anticipated natural changes to the site.
- Reduce the extent of key habitats or the population of key species.
- Reduce the diversity of the site.
- Result in disturbance that could affect the population, density or balance between key species.
- Result in fragmentation.
- Result in the loss of key features **[See reference 30]**.

3.40 The conservation objectives for each SAC and SPA (Appendix A) are generally to maintain the qualifying features in favourable condition. Natural England does not define conservation objectives for Ramsar sites but these can often be inferred from those for co-located SAC or SPA features. The Site Improvement Plans for each site provide a high level overview of the issues

(both current and predicted) affecting the condition of the designated features on the site(s) and outline the priority measures required to improve the condition of the features. An Appropriate Assessment draws on these to help to understand what is needed to maintain the integrity of the European sites.

3.41 For each site where HRA Screening has been identified an ‘uncertain’ or ‘likely significant effect’ in relation to the Local Plan, an Appropriate Assessment would set out the potential impacts and make a judgement (based on the information available) regarding whether the impact will have an adverse effect on the integrity of the site. A further in-combination assessment will need to be carried out for any likely significant effects identified where, following Appropriate Assessment, it is considered that the Local Plan will not on its own adversely affect the integrity of the European site. This will be undertaken in the same way as described above for the screening stage. Consideration would be given to the potential for mitigation measures to be implemented that could remove or reduce the likelihood or severity of the potential impacts such that there would not be an adverse effect on the integrity of the site.

Chapter 4

HRA Screening

4.1 The HRA screening of the Local Plan has determined that Appropriate Assessment is required, as likely significant effects from the plan's policies and site allocations cannot be ruled out. The reasoning for this is presented below, in response to each screening stage (described in the previous chapter).

Physical loss of habitat

4.2 Any development resulting from the Local Plan will be located within Cannock Chase District; therefore loss of habitat from within the boundaries of a European site will be able to be ruled out in relation to most of the European sites as they lie entirely outside of Cannock Chase District. However, without mitigation, the loss of habitat from within the boundaries of the European sites that lie partially within the District (Cannock Chase SAC and Cannock Extension Canal SAC) is possible if development comes forward in those areas.

4.3 None of the allocated sites lie within a European site. However the Local Plan may also provide support for development proposals outside of allocated sites so the potential for physical loss of habitat within a European site remains screened in. Mitigation (such as safeguards within policies) cannot be taken into account at the screening stage.

4.4 The following policies could result in likely significant effects relating to physical loss of habitat within a European site:

- Policy SO3.1: Provision for New Homes;
- Policy SO4.3: Sustainable Tourism and the Rural Economy; and
- Policy SO8.8: Managing Waste.

Air pollution

4.5 Air pollution is most likely to affect European sites where plant, soil and water habitats are the qualifying features, but some qualifying animal species may also be affected, either directly or indirectly, by any deterioration in habitat as a result of air pollution. Deposition of pollutants to the ground and vegetation can alter the characteristics of the soil, affecting the pH and nitrogen (N) availability that can then affect plant health, productivity and species composition. All of the sites have plant and/or water habitats or species as their qualifying feature, and Cannock Chase SAC, Cannock Extension Canal SAC, and West Midlands Mosses SAC are identified within their Site Improvement Plans as being sensitive to nitrogen. Air quality data [See reference 31] for these sites shows that habitat-specific critical loads for nitrogen are exceeded at all three sites. West Midlands Mosses SAC is in favourable condition [See reference 32], despite the critical loads being exceeded. Where SSSI units at Cannock Chase SAC and Cannock Extension Canal SAC are in 'unfavourable' condition, this is not stated as being due to nitrogen levels.

4.6 In terms of vehicle traffic, nitrogen oxides (NO_x, i.e. NO and NO₂) and ammonia (NH₄) are considered to be the key pollutants. Deposition of nitrogen compounds may lead to both soil and freshwater acidification and can cause eutrophication of soils and water; ammonia can have a direct toxic effect on plants (including lichens and mosses).

4.7 Screening guidance indicates that where plans could result in an increase (alone or in-combination) in annual average daily traffic (AADT) flows of 1,000 vehicles or 200 heavy duty vehicles (HDV) within 200m of European site features that are sensitive to air pollution, the potential for likely significant effects exists and there is a need for quantitative air quality assessment [See reference 33], [See reference 34], [See reference 35]. Typically, it is only major roads (motorways and 'A' roads) that are likely to experience any significant increases in vehicle traffic as a result of development in the Local Plan area (i.e. greater than 1,000 AADT), alone or in combination with the impacts of plans in nearby authorities, although there may be exceptions and

this would be confirmed by transport consultants through an assessment of the 'affected road network', in line with the DMRB guidance [reference 31].

4.8 Traffic modelling is currently underway. The scope of the work has been defined in a March 2023 report by Middlemarch [See reference 36], which identifies potential air pollution pathways that could arise from development across Staffordshire, Wolverhampton, Walsall, Sandwell and Dudley. Identification of those pathways has involved consideration of the sensitivity of European sites within the study area to nitrogen, nitrogen oxides or ammonia; and whether they are within 200m of a road on which traffic could increase due to development. The report takes a precautionary approach and identifies some unclassified/minor roads on which there could be significant increases in traffic, that will require further assessment (traffic modelling).

4.9 Of the European sites within 15 kilometres of the Cannock Chase Local Plan area, the following have been scoped into the traffic modelling:

- Cannock Chase SAC:
 - A513 – runs along northern edge of district, linking Rugeley to King's Bromley and Stafford (likely to be a key commuter corridor [See reference 37]);
 - A460 – runs between Cannock and Rugeley; and
 - Camp Road – minor road outside the plan area but runs north from Hednesford and adjacent to the SAC.
- Cannock Extension Canal SAC:
 - A5 – runs roughly parallel to the M6 in the southern part of the district; and
 - B4154 Lime Lane – minor road but heads south from the A5 and crosses the SAC.
- Pasturefields Salt Marsh SAC:
 - A51 – outside the plan area but heads north from Rugeley past the SAC; may be a key commuting corridor.

- West Midland Mosses SAC and Midlands Meres and Mosses Ramsar Phase 1 site:
 - A518 – lies out of the district and does not have a direct route to it

4.10 Motte Meadows SAC has been scoped out of the assessment as only two minor roads are within 200m of it; both are single track, have low traffic capacity and do not link notable settlements or places of employment or services.

4.11 River Mease SAC was not considered in Middlemarch's scoping study. However, its qualifying features have not been identified as sensitive to air pollution (see Appendix A) and it is not considered necessary to scope it in, in relation to air pollution.

4.12 At the time of writing there was no traffic data available to confirm whether any of the allocated sites alone or, more likely, in combination (together and/or with traffic associated with other plans or projects) could increase traffic flows by 1,000 AADT. Therefore, air pollution effects at Cannock Chase SAC, Cannock Extension Canal SAC, Pasturefields Salt Marsh SAC, West Midland Mosses SAC and Midlands Meres and Mosses Ramsar Phase 1 site are screened in.

4.13 The following policies could result in likely significant effects relating to increases in air pollution at a European site:

- Policy SO2.1: Community Facilities;
- Policy SO2.3 Provision of Open Space, Sports and Recreational Buildings and Land, including Playing Fields;
- Policy SO3.1: Provision for New Homes;
- Policy SO3.4: Gypsies and, Travellers and Travelling Show People;
- Policy SO4.2: Provision for New Employment Uses;
- Policy SO4.3: Intensification of Existing Employment Sites
- Policy SO4.4: Sustainable Tourism and the Rural Economy;

- Policy SO6.5: Cannock Town Centre Redevelopment Areas;
- Policy SO6.6: Rugeley Town Centre Redevelopment Areas; and
- Policy SO8.8: Managing Waste.

Recreation and urban impacts

4.14 Recreation activities and general human presence can have an adverse impact on the integrity of a European site as a result of disturbance (e.g. of sensitive ground-nesting birds), physical damage from visitors or their dogs (e.g. through erosion, arson and trampling), or eutrophication from dog faeces. Where policies or site allocations in the Local Plan are likely to result in an increase in the local population (i.e. residential development), or where an increase in tourism is considered likely, the potential for an increase in visitor numbers and the associated impacts at sensitive European sites will be identified.

4.15 The only European site that has been identified as sensitive to recreation and urban impacts is Cannock Chase SAC. This site is not designated for bird or bat species that would be sensitive to disturbance from the presence of people or dogs but its habitats are sensitive to other forms of disturbance, for example fires.

4.16 A 2013 study [See reference 38] by Footprint Ecology based on visitor survey data [See reference 39] concluded that the 'in combination' impact of proposals involving a net increase of one or more dwellings within a 15 kilometres radius of the SAC could have an adverse effect on its integrity; with a significantly higher proportion of visitors coming from within 8 kilometres. Therefore, proposed residential or tourism development within 15 kilometres of the Cannock Chase SAC could have significant effects. Members of the Cannock Chase SAC Partnership formally acknowledge a 15 kilometres zone of influence. Further information on this is given in Cannock Chase District Council's 'Cannock Chase SAC Guidance to Mitigate the Impact of New Residential Development' (2022) [See reference 40].

4.17 This strategy has been informed by the following evidence base documents:

- Cannock Chase SAC Planning Evidence Base Review [See reference 41];
- Evidence base to inform a car-park strategy and site user strategy for Cannock Chase [See reference 42];
- Cannock Chase Visitor Survey 2018 [See reference 43];
- Public Consultation Responses Report [See reference 44];
- Detailed Implementation Plan, Site User Infrastructure, Education and Engagement [See reference 45];
- Detailed Implementation Plans, car parking [See reference 46].

4.18 The evidence base was then reviewed and updated in 2021 [See reference 47].

4.19 The evidence shows that any development that would increase the human population, tourism or visitor use within 15 kilometres of the Cannock Chase SAC may have a significant impact on the site. Development that is closest to the SAC (e.g. site H30, c.1.7 kilometres away) may have a greater impact than those further away, but evidence suggests that any residential/tourism development within 15 kilometres could have a significant effect on the SAC due to recreation pressure.

4.20 The following policies could result in likely significant effects relating to recreation pressure and urban impacts at a European site:

- Policy SO3.1: Provision for New Homes;
- Policy SO3.4: Gypsies and, Travellers and Travelling Show People;
- Policy SO4.4: Sustainable Tourism and the Rural Economy;
- Policy SO6.5: Cannock Town Centre Redevelopment Areas; and
- Policy SO6.6: Rugeley Town Centre Redevelopment Areas.

Water quantity and quality

4.21 The following sites have qualifying features that are sensitive to changes in water quantity or quality:

- Cannock Chase SAC;
- Cannock Extension Canal SAC;
- Midland Meres and Mosses (Phase 1) Ramsar site / West Midland Mosses SAC;
- Motte Meadows SAC;
- River Mease SAC; and
- Humber Estuary SAC, SPA and Ramsar site.

4.22 However, Midland Meres and Mosses (Phase 1) Ramsar site / West Midland Mosses SAC, Motte Meadows SAC and River Mease SAC are not hydrologically connected to the plan area or are upstream.

4.23 Cannock Chase SAC, Cannock Extension SAC and Humber Estuary SAC, SPA & Ramsar site have the potential to be affected by changes in water quantity or quality. Activities that could affect these sites are:

- Discharge from wastewater treatment works into watercourses;
- Abstraction from aquifers or waterbodies; and/or
- Direct run-off, for example accidental spills during construction works.

4.24 Water supply in Cannock Chase is managed by South Staffs Water (SSW) and wastewater treatment by Severn Trent Water. SSW adopted a new Water Resources Management Plan (WRMP) in December 2019. The WRMP sets out the water company's plans to maintain a balance between supply and demand over 25 years from 2020 to 2045. The South Staffordshire Water Cycle Study [See reference 48] was produced in 2020 and assesses the potential issues relating to future development in South Staffordshire and its impacts on both

water supply (SSW) and wastewater treatment and water quality (Severn Trent Water).

Discharge from wastewater treatment works

4.25 The wastewater treatment works serving Cannock Chase district are Cannock (discharges into River Sow & Penk Catchment, Rugeley (discharges into River Trent), Burntwood (Burntwood Brook), Goscote (Wyreley & Essington Canal), and Wallsall Wood (Daw End Canal). The South Staffordshire Water Cycle Study assessed potential pollution pathways between all of the wastewater treatment works in the region and concluded that none of the works serving Cannock Chase district could affect Cannock Chase SAC or Cannock Extension Canal SAC (or other European sites within the region), due to wastewater discharges into rivers.

4.26 Natural England (see Appendix D) has suggested that the Humber Estuary SAC and SPA/Ramsar site should also be assessed in relation to potential water quality / quantity effects. The River Trent flows into the Humber Estuary; therefore discharges into the River Trent could potentially reach the Humber. The ecological quality of the Humber is moderate [See reference 49] and the catchment is not one that has been identified by Natural England as requiring nutrient neutrality (due to high levels of phosphorus or nitrogen); however the Water Cycle Study has identified that waste water treatment works in the district require infrastructure upgrades in order to meet the needs of planned housing growth, which suggests that future development could result in an increase in nutrients to the River Trent if not mitigated; therefore water quality effects at Humber Estuary SAC and SPA/Ramsar site remain screened in.

Abstraction for water supply

4.27 The Water Cycle Study also identifies potential effects on Cannock Chase SAC due to abstraction from the River Trent upstream of the River Tame, and from the River Sow, including Doxey Brook. The Sherwood Sandstone aquifer

also supplies much of the region's water and lies beneath Cannock Chase SAC [See reference 50]. MAGIC [See reference 51] shows drinking water abstraction close to Cannock Chase SAC (near the junction of Marquis Drive and the A460) and a principal aquifer beneath the northern and western parts of Cannock district, including parts of Cannock Chase SAC. This impact is more likely to be relevant to allocated sites north of Hednesford.

4.28 Water is also abstracted from Chasewater Reservoir, which feeds into Cannock Extension Canal SAC; however, this is used to maintain water levels in the canals, rather than for drinking water. Water levels in the Cannock Extension Canal SAC are managed by the Canal & River Trust as the navigation authority for the canal and other canals connected to it. Levels in Chasewater Reservoir are therefore not linked to population increases within the district and will not be affected by the Local Plan.

Direct run-off

4.29 Changes in water quality related to direct run-off are relevant at allocated sites SE2 and S4 (adjacent or near to Cannock Extension Canal SAC) and at allocated site SH2, which is hydrologically connected to Cannock Extension SAC via Chasewater and Southern Staffordshire Coalfield Heaths SSSI (unit 13, Chasewater Reservoir), and SH3, which is c.100m uphill. There are no site allocations close to / upstream of watercourses passing through Cannock Chase SAC. Where development is permitted outside of allocated sites, this could also result in changes in water quality / quantity at Cannock Extension Canal SAC or Cannock Chase SAC.

4.30 Effects due to changes in water quantity are screened in for Cannock Chase SAC and for water quality at Cannock Extension Canal SAC and Humber Estuary SAC and SPA/Ramsar site. Water quantity is relevant to all allocated sites (alone or in combination) but particularly residential allocations where development results in use of water from groundwater or River Trent tributaries that pass through Cannock Chase SAC.

4.31 The following policies could result in likely significant effects relating to changes in water quality or quantity at a European site:

- Policy SO2.3 Provision of Open Space, Sports and Recreational Buildings and Land, including Playing Fields;
- Policy SO3.1: Provision for New Homes;
- Policy SO3.4: Gypsies and, Travellers and Travelling Show People;
- Policy SO4.2: Provision for New Employment Uses;
- Policy SO4.3: Intensification of Existing Employment Sites;
- Policy SO4.4: Sustainable Tourism and the Rural Economy;
- Policy SO6.5: Cannock Town Centre Redevelopment Areas;
- Policy SO6.6: Rugeley Town Centre Redevelopment Areas;
- Policy SO7.7: Amendments to the Green Belt; and
- Policy SO8.8: Managing Waste.

Non-physical disturbance

4.32 Noise and vibration effects, e.g. during the construction of new housing or other development, are most likely to disturb bird species and are thus a key consideration with respect to European sites where birds are the qualifying features, although such effects may also impact upon some mammals and fish species. Artificial lighting at night (e.g. from streetlamps, flood lighting and security lights) is most likely to affect bat populations and some nocturnal bird species, and therefore have an adverse effect on the integrity of European sites where bats or nocturnal birds are a qualifying feature. As none of the European sites in this HRA are designated for (or have supporting species that are) bird or bat species (other than Humber Estuary SPA and Ramsar site, which is only scoped in for potential effects on water quality), noise, vibration and light pollution need not be considered in this assessment.

Screening conclusion

4.33 Appropriate Assessment is required as likely significant effects from the Pre-Submission (Regulation 19) Local Plan, alone or in combination with other projects or plans, cannot be ruled out without further assessment (which would include taking mitigation into account).

4.34 The scope of the Appropriate Assessment has been narrowed down by considering each policy and site allocation, to determine whether it would result in the type of development that could have an effect on a European site; this is detailed in Appendix B. The proposed policies in the Pre-Submission (Regulation 19) Local Plan that permit the type of development that could affect European sites are listed below. All of the proposed site allocations are screened in.

4.35 Policies giving rise to the need for Appropriate Assessment of the Local Plan:

- **Policy SO2.1:** Community Facilities
- **Policy SO2.3:** Provision of Open Space, Sports and Recreational Buildings and Land, including Playing Fields
- **Policy SO3.1:** Provision for New Homes
- **Policy SO3.4:** Gypsies and Travellers and Travelling Show People
- **Policy SO4.2:** Provision for New Employment Uses
- **Policy SO4.3:** Intensification of Existing Employment Sites
- **Policy SO4.4:** Sustainable Tourism and the Rural Economy
- **Policy SO6.5:** Cannock Town Centre Redevelopment Areas
- **Policy SO6.6:** Rugeley Town Centre Redevelopment Areas
- **Policy SO7.7:** Amendments to the Green Belt
- **Policy SO8.8:** Managing Waste

Chapter 5

Appropriate Assessment

5.1 The HRA screening has identified the need for Appropriate Assessment, as likely significant effects from the Local Plan (alone or in combination with other projects or plans) at Cannock Chase SAC, Cannock Extension Canal SAC, Pasturefields Salt Marsh SAC, West Midland Mosses SAC and Midlands Meres & Mosses Ramsar (Phase 1) site, and Humber Estuary SAC, SPA and Ramsar site cannot be ruled out without further assessment. These likely significant effects from the Local Plan relate to potential physical loss of habitat, air pollution, recreation pressure / urban impacts, and changes in water quantity or quality.

5.2 For each type of impact that has been identified, the Appropriate Assessment considers the effects on each of the European sites, the elements of the Local Plan (and other plans or projects, where relevant) that would have those effects, and any mitigation or safeguards in place that would reduce the effects. The assessment then considers whether there would be an adverse effect on the integrity of a European site.

5.3 The following policies in the Local Plan will result in the type of development or activities that could affect European sites (see Chapter 4):

- Policy SO2.1: Community Facilities
- Policy SO2.3: Provision of Open Space, Sports and Recreation Buildings and Land, including Playing Fields;
- Policy SO3.1: Provision for New Homes;
- Policy SO3.4: Gypsies and Travellers and Travelling Show People;
- Policy SO4.2: Provision for New Employment Uses;
- Policy SO4.3: Intensification of Existing Employment Sites
- Policy SO4.4: Sustainable Tourism and the Rural Economy;

- Policy SO6.5: Cannock Town Centre Redevelopment Areas;
- Policy SO6.6: Rugeley Town Centre Redevelopment Areas; and
- Policy SO8.8: Managing Waste.

5.4 All allocated sites have been screened in, although some types of effect apply only to sites in specific areas (see Appendix B).

Physical loss of habitat

5.5 None of the allocated sites are within a European site, although it was not possible to rule out loss of habitat within a European site at the screening stage as four of the Local Plan policies in theory permit development in locations other than allocated sites (SO3.1, SO4.2, SO4.3 and SO8.8).

5.6 However, mitigation can be taken into account in the Appropriate Assessment. The extracts of Local Plan policies reproduced in the text box below provide safeguards that mean that development would not be permitted within Cannock Chase SAC or Cannock Extension Canal SAC. Note that Policy SO7.3 uses the term ‘habitats site’ to refer to European sites (see also paragraph 1.6).

POLICY SO7.1: PROTECTING, CONSERVING AND ENHANCING BIODIVERSITY AND GEODIVERSITY

“Development proposals will support the protection, conservation, enhancement and restoration of designated biodiversity and geodiversity sites, ecological networks, irreplaceable habitats and priority habitats, and the protection and recovery of legally protected and priority species populations. Development proposals whose primary objective is to conserve or enhance biodiversity will be supported..

Development with the potential to have a significant effect on the integrity of any internationally designated Special Area of Conservation (SAC), Special Protection Area (SPA) or Ramsar, or associated functionally linked land or watercourse (either alone or in combination with other plans and projects) will not be supported, unless a Habitats Regulations Assessment (HRA) has concluded there will be no adverse impacts on site integrity, in accordance with the requirements of the Conservation of Habitats and Species Regulations 2017 (as amended).

POLICY SO7.3: HABITAT SITES

Development will not be permitted where it would lead directly or indirectly to an adverse effect on habitats sites and the effect cannot be avoided or mitigated.

The effective avoidance and/or mitigation of any identified adverse effects must be demonstrated to the Council as competent authority, and secured by means of a suitable mechanism (for example, a legal agreement) prior to the approval of the development."

Air pollution

5.7 A number of policies within the Local Plan (SO2.1, SO2.3, SO3.1, SO3.4, SO4.2, SO4.4, SO6.5, SO6.6, SO8.8), and allocated sites associated with them, permit development that could increase traffic on the following major roads that pass within 200m of European sites sensitive to air pollution:

- Cannock Chase SAC: A513, A460 & Camp Road
- Cannock Extension Canal SAC: A5 & B4154
- Pasturefields Salt Marsh SAC: A51

- West Midland Mosses SAC and Midlands Meres and Mosses Ramsar Phase 1 site: A518.

5.8 There is currently insufficient data (paragraph 5.18 below confirms what is required) to confirm the affected road network or quantify changes in traffic flows that could arise from development associated with the Local Plan. However, where location is specified within policies it can help narrow down the development that is likely to contribute to an effect:

- Policy SO2.1 requires major developments to contribute to new community facilities.
- Policy SO3.1 plans for a minimum of 6,308 new homes, across five strategic allocations, 29 non-strategic and some homes in rural areas (where specific criteria are met). Only the largest site allocations have the potential to generate >1,000 AADT alone, although some/all of the other sites could have in-combination effects at any/all of the three SACs. The largest sites are:
 - South Lichfield Road, Cannock (700 homes, site ref. SH1): close to the A5 which passes Cannock Extension Canal SAC; and
 - Rugeley Power Station, Rugeley (1,000 homes, site ref. SM1): close to the A513 which passes Cannock Canal SAC.
- Policy SO3.4: plans for two site allocations for five pitches plus 13 additional residential pitches for Gypsies & Travellers, and 10 plots for Travelling Show People (outside of Green Belt) (could contribute traffic to A460 passing within 200m of Cannock Chase SAC).
- Policy SO2.3 encourages leisure/sport facilities within major developments (any allocated sites / development over 10 homes / 1 ha; locations not specified).
- Policy SO4.2 plans for 74ha of new employment development (within seven existing employment areas and outside of existing employment areas, which could be anywhere in district).
- Policy SO4.3 permits the intensification of existing employment sites (mainly in Cannock and Rugeley, which could contribute traffic to the A460

past Cannock Chase SAC or the A5 close to Cannock Extension Canal SAC).

- Policy SO4.4 encourages sustainable tourism in rural areas (could contribute traffic to any of the major roads passing within 200m of the three SACs).
- Policy SO6.5 identifies redevelopment areas (five allocated sites) in Cannock town centre (less likely to contribute significantly to traffic on major road passing within 200m of West Midland Mosses SAC).
- Policy SO6.6 identifies redevelopment areas (two allocated sites) in Rugeley town centre (less likely to contribute significantly to traffic on major road passing within 200m of Cannock Extension Canal SAC).
- Policy SO8.8 permits waste development (close to primary road network, so less likely to contribute significantly to traffic on major roads passing within 200m of Cannock Chase SAC).

5.9 Several of the policies within the Local Plan seek to reduce travel by car:

- Policy SO4.5 supports live/work accommodation within residential areas;
- Policy SO5.1 requires major developments to set out how they will reduce reliance on private cars, for example by locating development close to public transport and local services.
- Policy SO5.2 requires major development proposals to demonstrate digital technologies including infrastructure for home working and journey planning;
- Policy SO5.3 encourages the shift to low and zero carbon transport ; and
- Policy SO5.4 supports measures to improve facilities for cycling, walking and public transport.

5.10 Policies SO7.1 and SO7.3 also provide general protection for the SACs. Policy SO7.3 states that “Development will not be permitted where it would lead directly or indirectly to an adverse impact on habitats sites and the effect cannot be avoided or mitigated”. The supporting text for the policy also states that:

“The habitat which Cannock Chase SAC is designated for (European Lowland Heathland) is also known to be harmed by increases in the level of atmospheric deposition of Nitrogen Oxide, Nitrite & Nitrate (collectively referred to as NO_x) and NH₃. A number of different types of development can increase the levels of NO_x and NH₃ deposition on Cannock Chase SAC; both directly (via increasing industrial and agricultural emissions) or indirectly (via increasing traffic usage on main roads than run within 200m of the boundary of the SAC). Where it is possible that a development may result in harm to Cannock Chase SAC via significantly increasing the level of NO_x deposition (directly or indirectly, alone or in combination with other developments) then the Council will be required to conduct a Habitats Regulations Assessment prior to determining the application. If it is determined that the application could cause harm to the SAC then the developer will need to avoid their impact and/or provide mitigation proportional to their harm or else the application will need to be refused. Guidance will be provided by the Council to the developer on a case by case base where NO_x or NH₃ deposition is determined to be an issue.”

and

“The impact of air pollution on the integrity of the Cannock Extension canal SAC and its qualifying features is currently unknown.”

5.11 At present, the wording of this text suggests that the Council will undertake HRA of every application (any development could increase traffic in-combination). It is also difficult for individual developments to mitigate in-combination effects arising from the Local Plan as a whole, unless an individual development contributes a large proportion of the traffic past a European site. It is therefore recommended some of this text is incorporated into the wording of Policy SO7.3 itself, with a clearer explanation of what is required of applicants prior to completion of the Council’s traffic and air quality assessment and identification of any necessary strategic mitigation. It is expected that the

wording will need to be amended once the traffic data and air quality assessment have been completed. The text should also acknowledge that there may be effects at other European sites besides Cannock Chase SAC and Cannock Extension Canal SAC. Note also that Natural England has specifically requested (Appendix D) that the effects of ammonia are assessed; this should be added to the identified pollutants in the policy text. Suggested revisions to the wording of this policy are provided in Chapter 6.

5.12 At the previous stage of the HRA it was noted that these policies (and supporting text) could provide sufficient safeguards to ensure that single large developments (for example South of Lichfield Road, Cannock [SH1], or Rugeley Power Station [SM1]) are required to demonstrate avoidance or mitigation of any effects on European sites. While these more general policies still do not make reference to air quality, the site allocation policies that have been prepared and included in the current Regulation 19 version of the Local Plan do make reference to air quality. For example, the site allocation policy for SH1: South of Lichfield Road, Cannock states that development will need to demonstrate how it will avoid any adverse impacts on air quality because of increased vehicle traffic.

5.13 While these measures may avoid adverse air quality effects on the integrity of Cannock Chase SAC by application of the policy/supporting text above to individual development proposals, this does not remove the need for CCDC to identify and if necessary mitigate potential effects on European sites from the Local Plan as a whole, either alone or in combination with other plans or projects.

5.14 Traffic data is therefore required that shows current traffic flows (AADT for all traffic and for HDVs) and flows at the end of the plan period (with and without Local Plan development), that identifies the affected road network, in line with Design Manual for Roads and Bridges guidance LA105 [\[See reference 52\]](#), and then assesses the changes in traffic flow where roads pass within 200m of a European site. This may include the following strategic roads within 200m of European sites: A513, A460, Camp Road, A5, B4154, A51 and A518 where they pass Cannock Chase SAC, Cannock Extension Canal SAC, Pasturefields

Salt Marsh SAC, and West Midland Mosses SAC and Midlands Meres and Mosses Ramsar Phase 1 site.

5.15 If this data shows increases of more than 1,000 AADT or 200 HDV from the Local Plan alone or in combination with other plans and projects, then air quality assessment will be required to determine the level of pollutant deposition likely to occur at the SACs, in line with Institute of Air Quality Management guidance [See reference 53]. Ecological assessment may also be needed to understand the sensitivity of the habitats within 200m of the roads to this level of deposition. If likely significant effects are identified, mitigation will need to be agreed, tested and secured prior to the adoption of the Local Plan.

5.16 It is therefore not currently possible to rule out adverse air quality effects on the integrity of Cannock Chase SAC, Cannock Extension Canal SAC, Pasturefields Salt Marsh SAC, and West Midland Mosses SAC and Midlands Meres and Mosses Ramsar Phase 1 site, due to a lack of traffic data.

Recreation pressure and urban effects

5.17 Effects could not be ruled out at the screening stage because Cannock Chase SAC is sensitive to recreation pressure and urban effects (e.g. fires) and pre-existing evidence (see para. 4.16 above) has identified that any new homes within 15 kilometres of Cannock Chase SAC would have an adverse effect on its integrity (in combination with residential development from other districts).

5.18 The Local Plan provides general protection for Cannock Chase SAC within Policy SO7.1 (see paragraph 5.6, above) and more specifically in Policy SO7.3, which states:

Policy SO7.3 Habitat Sites

Development will not be permitted where it would lead directly or indirectly to an adverse effect on habitats sites and the effect cannot be avoided or

mitigated. The effective avoidance and/or mitigation of any identified adverse effects must be demonstrated to the Council as competent authority, and secured by means of a suitable mechanism (for example, a legal agreement) prior to the approval of the development.

Cannock Chase SAC

To ensure the integrity of Cannock Chase SAC is not adversely affected by increased recreational use, all development that results in a net increase in homes, or an increase in tourism or visitor use of Cannock Chase SAC will be required to supply the council (as competent authority) such information as reasonably required for the CA to undertake a HRA or make a financial contribution in accordance with the most up to date Cannock Chase SAC Partnership Mitigation Scheme.

This mitigation may include:

- Contributions to habitat management and creation;
- Access management and visitor infrastructure;
- Publicity, education and awareness raising;
- Provision of additional recreation space within development sites where they can be accommodated, and where they cannot by contributions to off-site alternative recreation space; and measures to encourage sustainable travel.

5.19 Although the current mitigation strategy does not require alternative recreation space, the wording of the policy is flexible to accommodate changes to the guidance, should the evidence base be reviewed further. The most up to date guidance published by CCDC is the April 2022 guidance document [[See reference 54](#)], which states that:

“As the entire district is within 15 kilometres of the Cannock Chase SAC... any development which would produce a net increase in the number of homes or increase tourism or visitor use of Cannock Chase SAC will be required to undertake a Habitats Regulations Assessment (HRA) or make a financial contribution before development takes place.

The types of development affected includes any development which would produce a net increase in the number of homes, new homes arising through the conversion of existing buildings, houses in multiple occupation, sheltered accommodation and care homes falling within Use Class C3 and gypsy and traveller pitches.

Hotels, holiday lets, and camping & caravan sites will also need to undertake a Habitats Regulations Assessment (HRA) or provide a financial contribution if they could generate visitors to Cannock Chase SAC.

Prior approval and permitted developments, such as conversion of offices into new homes, are also affected by the Cannock Chase SAC requirement. The HRA process and consultation with Natural England must be undertaken before Cannock Chase District Council can determine if a development is permitted development or if prior approval can be granted.”

5.20 The guidance document then sets out the developer contribution required: £290.58 plus legal costs, per net dwelling, which will be reviewed annually. The financial contribution must be paid before the development commences.

5.21 The broad principles of the mitigation strategy and the mechanisms for collecting developer contributions have been incorporated into the Cannock Chase Developer Contributions SPD [See reference 55], which states:

“The majority of Cannock Chase SAC mitigation measures will be addressed via CIL funds collected from all residential developments (in use class C3, with the exception of affordable housing) across the District. However, where a site is in close proximity to the SAC and/or is proposing any other use (e.g. residential caravans/mobile homes; tourist accommodation) which has the potential to impact upon the SAC, then site and scheme specific SAC issues will be addressed via Planning Obligations where necessary.”

“Since adoption of the Local Plan (Part 1) in June 2014, Natural England’s advice to the partnership of Local Planning Authorities on the subject of mitigating the adverse effect of developments planned within the acknowledged zone of influence, which could otherwise threaten the integrity of the SAC, has changed. The original focus of the advice was that a combination of habitat and visitor management measures in and around the SAC, plus provision of large areas of Suitable Alternative Natural Green Spaces (SANGS) together with smaller targeted open spaces on medium sized housing developments of 50+ dwellings was required. As a result of further analysis and discussions with the two main landowners of the SAC and its surroundings (Staffordshire County Council and the Forestry Commission) Natural England has produced a set of Strategic Access Management and Mitigation Measures (SAMMM) with a 15 year timeframe comprising increasing on-site presence, development of volunteering and education programmes, car parking and footpath management strategies, physical improvements to paths, implementation of a parking plan, way marking, interpretation and monitoring. These have been agreed with the Local Planning Authority partners.

In relation to most housing developments in the District, funds collected via CIL to be allocated for these mitigation measures (set out in the SAMMM) will be sufficient to fulfil the Council’s obligations under the Habitat

Regulations. So that element of Local Plan Policy CP5 which sets out that developments of 50 dwellings or more will be expected to provide additional on-site open space as part of the SAC mitigation strategy and that part of Policy CP13 which identifies SANGS as one element of the overall mitigation strategy will no longer be pursued.”

5.22 This remains appropriate for the most recent mitigation strategy and guidance.

5.23 The mitigation strategy (contributions to SAMMM from residential development within 15 kilometres of the SAC) is based on a review of planned housing across all neighbouring authorities, at the time the mitigation strategy was first developed in 2017. [See reference 56]. The figures were then updated in 2021 [reference 44] to estimate the number of new dwellings that would arise within 15 kilometres of the SAC, between 2019 and 2040. The approach and zone of influence remain valid for the updated figures.

5.24 The 2021 figures for housing in Cannock Chase district that were assessed were:

- Developments permitted before 2022: 3,694.
- Developments without planning permission: 2,378.
- Total within 8 kilometres: 6,072.
- None within 8-15 kilometres zone.

5.25 The figures in the current Local Plan broadly align with these: Policy SO3.1 plans for a minimum of 6,308 (of which 1,265 have planning permission and 454 are under construction), plus 500 to meet the unmet needs of neighbouring areas.

5.26 With the mitigation strategy embedded within planning policy, which references the most up to date guidance, it is considered that there will be no adverse effects on the integrity of any European sites as a result of recreation

pressure and urban effects, as a result of the Local Plan, either alone or in combination with others plans or projects.

Water quantity and quality

5.27 Effects at Cannock Chase SAC and Cannock Extension Canal SAC could not be ruled out at the screening stage, related to:

- Water quality (direct run-off) at Cannock Extension Canal SAC: development may result in direct run-off to the SAC if site allocations or other development locations are upstream of or adjacent to Cannock Extension Canal SAC, e.g. SE2, S4 or SH2.
- Water quality (discharge from wastewater treatment works) at Humber Estuary SAC and SPA/Ramsar site: wastewater treatment works discharging into the River Trent could increase pollutants e.g. nitrogen downstream at the Humber Estuary.
- Water quantity at Cannock Chase SAC: demand for drinking water could increase abstraction of groundwater or rivers and development can alter groundwater recharge and run-off rates.

5.28 Policies SO7.1 and SO7.3 provide general protection for the SACs, and SO7.3 states:

“Any development within the water catchment area of the Cannock Extension Canal SAC will be deemed to have an adverse impact on the Cannock Extension Canal SAC. Mitigation for any identified adverse effects must be demonstrated and secured prior to approval of development and ongoing monitoring of impact on the SAC will be required.

Developments outside the water catchment area may be required to demonstrate that they will have no adverse effect on the integrity of the SAC.”

5.29 Policy SO8.3 states that:

“All new dwellings should have a maximum consumption of water of 110 litres/person/day and levels below this will be supported. All non-residential development proposals of more than 500m² gross (new build and conversions) should meet or exceed BREEAM ‘excellent’ rating”

5.30 Two other policies also seek to reduce the effects of major development (ten or more homes, or sites greater than one hectare) on the water environment.

5.31 Policy SO8.4 states that:

“All major development proposals will:

- Incorporate sustainable water management measures to reduce water use, and increase its reuse, minimise surface water run-off, and ensure that it does not increase flood risks or impact water quality elsewhere.
- Reduce the risk of flooding and maximise flood protection by including features such as trees and planting, water bodies, retention ponds and filter beds, and permeable paving. Surface drainage requirements should work with the local topography to create low maintenance sustainable drainage systems.”

5.32 Policy SO8.5 states that:

“All major development proposals will:

- Set out how any air, water, noise, light pollution or soil contamination that may arise from the development will be avoided (or, if it is not possible to avoid it how it will be mitigated);
- Protect (and where appropriate enhance and restore) water quality. Development will not be permitted without confirmation that the existing or improved sewage and wastewater treatment facilities can accommodate the new development.”

Water quality (direct run-off) at Cannock Extension Canal SAC

5.33 The Local Plan policies provide sufficient safeguards to avoid or mitigate any potential water quality effects at Cannock Extension Canal SAC (e.g. from development outside allocated sites but close to the canal), because Policy SO7.1 provides general protection for the SAC.

5.34 However, the additional detail provided by Policy SO7.3 is less useful, as the term ‘water catchment’ is ambiguous in this context and it is not clear what the impact pathway of concern is (see also comments from Natural England in Appendix D).

5.35 To improve the clarity of Policy SO7.3 and provide consistency in relation to all of the potential impact pathways, it is recommended that the subsection ‘Cannock Extension Canal SAC’ is deleted from the policy, and the wording of the policy and supporting text revised as follows (new text underlined):

POLICY SO7.3: HABITAT SITES

Development will not be permitted where it would lead directly or indirectly to an adverse effect on habitats sites and the effect cannot be avoided or mitigated.

Impact pathways could include pollution from run-off, damage to habitats, increased recreation pressure, or air pollution.

The effective avoidance and/or mitigation of any identified adverse effects must be demonstrated to the Council as competent authority, and secured by means of a suitable mechanism (for example, a legal agreement) prior to the approval of the development.

Recreation pressure at Cannock Chase SAC

To ensure the integrity of Cannock Chase SAC is not adversely affected by increased recreational use, all development that results in a net increase in homes, or an increase in tourism or visitor use of Cannock Chase SAC will be required to supply the council (as competent authority) such information as reasonably required for the CA to undertake a HRA or make a financial contribution in accordance with the most up to date Cannock Chase SAC Partnership Mitigation Scheme.

This mitigation may include:

- Contributions to habitat management and creation;
- Access management and visitor infrastructure;
- Publicity, education and awareness raising;
- Provision of additional recreation space within development sites where they can be accommodated, and where they cannot by contributions to

off-site alternative recreation space; and measures to encourage sustainable travel.”

Supporting text (paragraph 304):

“Development in close proximity to Cannock Extension Canal SAC or watercourses upstream of it could result in pollution of the SAC, for example via run-off. Cannock Extension Canal SAC is connected to Chasewater Reservoir via the Wyrley and Essington Canal, although other hydrological pathways also exist.”

Water quality (discharge from wastewater treatment works) at Humber Estuary SAC and SPA/Ramsar

5.36 The Humber Estuary is c.125 kilometres away from Cannock Chase district, in a direct line (longer along the route of the River Trent); therefore pollutants from the plan area will be dispersed over a large volume of water by the time they reach the estuarine (i.e. highly dynamic) waters of the Humber Estuary such that adverse effects on integrity from the Local Plan alone can be ruled out.

5.37 Development within the plan area could contribute to in-combination effects, along with other development in the catchment. However, the Local Plan policies provide mitigation designed to avoid direct run-off of pollutants (e.g. during construction of development) and adverse effects from wastewater discharge (by requiring major developments to confirm capacity in wastewater treatment works). This policy mitigation, together with the discharge consenting regime for wastewater treatment works operated by the Environment Agency (which takes into account environmental impacts including likely significant

effects on European sites) is sufficient to conclude that the Local Plan is not likely to contribute to any potential adverse in-combination effect on the integrity of the Humber Estuary SAC and SPA/Ramsar site.

Water quantity at Cannock Chase SAC

5.38 It is likely that Policy SO8.4 in conjunction with Policy SO7.3 would provide sufficient safeguards for changes in land use or run off that could affect groundwater recharge, in proximity to Cannock Chase SAC

5.39 The South Staffordshire Water Cycle Study identified the potential need for HRA of new applications for abstraction from the River Trent upstream of Tame, or the River Sow including Doxey Brook, although these resources were identified as having water available for further licensing.

5.40 The Water Cycle Study assessed the housing need identified by each of the local authorities at that time, which included 5,112-7,614 within Cannock Chase district from 2018 to the end of the Local Plan period, with an additional 20% growth factored in. The new Local Plan plans for a number of homes within this range (6,308 plus 500 unmet need from neighbouring authorities). It is confirmed in the Water Cycle Study that South Staffs Water (and Severn Trent Water, which supplies other areas covered by the study) would have adequate water resources for all the proposed development sites. The study states: “South Staffs Water gave a RAG score of “green” to all proposed development for the water resources assessment. There are sufficient water resources to serve the proposed growth (based on the housing need summarised in section 2) within Southern Staffordshire, and the adopted WRMP has planned for the increase in demand.”

5.41 The HRA of the Water Resources Management Plan (WRMP) 2019 [See [reference 57](#)], identified some potential risks to Cannock Chase SAC from some of the measures considered within the draft WRMP to manage water supply and treatment. However, as a result of the assessment, those components were not taken forward in the WRMP and the HRA was able to

conclude no adverse effects on the integrity of Cannock Chase SAC (and other European sites).

5.42 Any water abstraction is regulated by the Environment Agency. This takes into account environmental impacts including likely significant effects on European sites. Therefore any new abstraction from the resources identified in the Water Cycle Study as having potential links to Cannock Chase SAC would be controlled by the Environment Agency and not permitted if there were adverse effects on the integrity of a European site.

5.43 It is therefore considered that there will be no adverse effects on the integrity of any European sites as a result of changes in water quantity or quality, as a result of the Local Plan.

Chapter 6

Conclusions and next steps

6.1 This HRA has considered the potential effects of the Pre-Submission version of the Cannock Chase Local Plan on European sites. Four types of effect (physical habitat loss, air pollution from vehicle traffic, recreation pressure and urban effects, and water quantity/quality) were identified as having potentially significant effects at the Screening stage and Appropriate Assessment was carried out. It has been possible to rule out adverse effects on the integrity of European sites in relation to physical loss of habitat, recreation pressure and water quantity/quality, due to safeguards provided within Local Plan policies.

6.2 Adverse effects on integrity have not been able to be ruled out in relation to air pollution from vehicles at Cannock Chase SAC, Cannock Extension Canal SAC, Pasturefields Salt Marsh SAC, and West Midland Mosses SAC and Midlands Meres and Mosses Ramsar Phase 1 site: traffic data is required. The next steps required to address this is set out below.

6.3 This HRA report will be published for consultation alongside the Pre-Submission (Regulation 19) Local Plan document. Following any amendments to policy and/or consultation responses, the HRA will be updated prior to adoption of the Local Plan.

Next steps: assessing air pollution

6.4 Traffic data will need to show current traffic flows (AADT for all traffic and for HDVs) and modelled flows at the end of the plan period (with and without Local Plan development) and identify the affected road network, in line with Design Manual for Roads and Bridges guidance LA105 [See reference 58]. It will then need to assess the changes in traffic flow where roads pass within 200m of a European site. This is likely to include the A513, A460, Camp Road, A5, B4154,

A51 and A518 where they pass Cannock Chase SAC, Cannock Extension Canal SAC, Pasturefields Salt Marsh SAC, and West Midland Mosses SAC and Midlands Meres and Mosses Ramsar Phase 1 site. If this data shows increases of more than 1,000 AADT or 200 HDV from the Local Plan alone or in combination with other plans and projects, then air quality assessment will be required in line with Institute of Air Quality Management guidance [See reference 59]. Ecological assessment may also be needed. If likely significant effects are identified, mitigation will need to be agreed, tested and secured prior to the adoption of the Local Plan.

6.5 The type of mitigation that may be required depends on the location of any identified air pollution exceedance, and where the traffic contributing to that exceedance is coming from. However, mitigation for air pollution from a Local Plan typically involves a package of measures including some or all of the following:

- Measures that reduce travel by fossil-fuelled vehicles throughout the plan area, e.g. improvements to walking/cycling/public transport routes and facilities; provision for electric vehicles; support for home working (e.g. broadband infrastructure, live/work units); or policies that limit new parking within development.
- Measures that reduce or slow traffic flows on a road close to a European site e.g. road restrictions; traffic calming; or emissions charging (clean air zones).
- Measures that reduce traffic from a specific development, if modelling shows that one or more site allocation contributes a large proportion of traffic to a road past a European site e.g. altering site capacity or development mix to reduce likely number of cars (fewer homes overall, or a higher proportion of flats); requirements for travel plans; layout of development to discourage access via sensitive roads; or HGV or site servicing strategies.
- Other measures that could contribute to a reduction in pollutants at a European site but which are not directly linked to Local Plan development, for example the planting of tree belts to create a barrier to pollutant dispersal (takes time to establish, so not appropriate where mitigation is

required prior to development); or a reduction in other sources of pollutants, for example changing land use or farm management to reduce the area of fertilised land (ammonia) near to a European site (could be part of a wider green infrastructure / biodiversity strategy).

Next steps: amendments to Policy

SO7.3

6.6 Policy 7.2 provides general protection for European sites, and Policy 7.3 provides additional detail, for example in relation to recreation pressure at Cannock Chase SAC. However, the additional detail provided in relation to other types of impact is less useful.

6.7 To improve the clarity of Policy SO7.3 and provide consistency in relation to all of the potential impact pathways, it is recommended that the subsection 'Cannock Extension Canal SAC' is deleted from the policy, and the wording of the policy and supporting text revised as below.

6.8 To incorporate air pollution into the policy, it is recommended that a version of the policy's current supporting text (paragraph 6.302) is incorporated into the policy itself, along with a clearer explanation of what is required of applicants prior to the completion of the council's traffic and air quality assessment, and subsequent identification of any required mitigation. The wording will need to be amended once the traffic data (and air quality assessment) have been completed, and the requirement for mitigation is better understood.

6.9 The text should acknowledge that there may be air pollution effects at other European sites besides Cannock Chase SAC and Cannock Extension Canal SAC. Note also that Natural England have specifically requested (Appendix D) that the effects of ammonia are assessed; this should be added to the identified pollutants in the policy text.

6.10 Amended or new text is shown underlined.

POLICY SO7.3: HABITAT SITES

Development will not be permitted where it would lead directly or indirectly to an adverse effect on habitats sites and the effect cannot be avoided or mitigated.

Impact pathways could include pollution from run-off, damage to habitats, increased recreation pressure, or air pollution.

The effective avoidance and/or mitigation of any identified adverse effects must be demonstrated to the Council as competent authority, and secured by means of a suitable mechanism (for example, a legal agreement) prior to the approval of the development.

Recreation pressure at Cannock Chase SAC

To ensure the integrity of Cannock Chase SAC is not adversely affected by increased recreational use, all development that results in a net increase in homes, or an increase in tourism or visitor use of Cannock Chase SAC will be required to supply the council (as competent authority) such information as reasonably required for the CA to undertake a HRA or make a financial contribution in accordance with the most up to date Cannock Chase SAC Partnership Mitigation Scheme.

This mitigation may include:

- Contributions to habitat management and creation;
- Access management and visitor infrastructure;
- Publicity, education and awareness raising;

- Provision of additional recreation space within development sites where they can be accommodated, and where they cannot by contributions to off-site alternative recreation space; and measures to encourage sustainable travel.”

Air pollution

“Habitats sites can be impacted by increases in the level of atmospheric concentrations of Nitrogen Oxide, Nitrite & Nitrate (collectively referred to as NO_x) and NH₃. A number of different types of development can increase the levels of NO_x and NH₃ in the air both directly (via increasing industrial and agricultural emissions) or indirectly (via increasing traffic usage on main roads than run within 200m of the boundary of a habitats site).

As part of its work to assess, and if necessary mitigate, the effects of the Local Plan as a whole and in combination with other plans, the Council may put in place an air pollution mitigation strategy. If an air pollution mitigation strategy is in place, applicants must adhere to the most up to date version.”

Supporting text

Paragraph 6.302:

“Where local residents are in close proximity to the Cannock Chase SAC and able to walk directly onto it, evidence shows residents are likely to use it in a very different way to those who make a choice to visit and travel some distance, bespoke mitigation may be required in these instances.”
[delete the rest of the text in this paragraph]

Paragraph 6.304:

“Development in close proximity to Cannock Extension Canal SAC or watercourses upstream of it could result in pollution of the SAC, for example via run-off. Cannock Extension Canal SAC is connected to Chasewater Reservoir via the Wyrley and Essington Canal, although other hydrological pathways also exist.”

[delete the sentence “The impact of air pollution on the integrity of the Cannock Extension Canal SAC and its qualifying features is currently unknown.”]

New paragraph:

“Work is ongoing to quantify and assess the increases in traffic that would arise from the Local Plan, and the resulting effects of air pollution at habitats sites. Habitats sites with sensitive habitats in proximity to roads that could be affected by the Local Plan are: Cannock Chase SAC, Cannock Extension Canal SAC, Pasturefields Salt Marsh SAC, West Midland Mosses SAC and Midlands Meres and Mosses Ramsar Phase 1 site.

If it is found that traffic or air pollution screening thresholds (as set out in Design Manual for Roads and Bridges guidance ‘LA105 Air quality’; and Institute of Air Quality Management guidance ‘Air quality impacts on nature sites’) are exceeded on roads past any of these habitats sites, then the Council will work with Natural England to assess whether the air pollution could have an adverse effect on the integrity of the habitats site/s, and to agree any necessary mitigation. If a mitigation strategy is required, it will be agreed and secured prior to adoption of the Local Plan.”

LUC

January 2024

Appendix A

Attributes of European sites with the potential to be affected by the Local Plan

A.1 This appendix contains information about the European sites scoped into the HRA. Information about each site's area, the site descriptions, qualifying features and pressures and threats are drawn from Natural England's Site Improvement Plans (SIPs), Supplementary Advice Notes, and the Standard Data Forms or Ramsar Information Sheets available from the JNCC website. Site conservation objectives are drawn from Natural England's website and are only available for SACs and SPAs.

Cannock Chase SAC

(1,244.2 hectares)

Qualifying Features

- H4030 European dry heaths
- H4010 Northern Atlantic wet heaths with *Erica tetralix*

Conservation Objectives

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

Appendix A Attributes of European sites with the potential to be affected by the Local Plan

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

Key Vulnerabilities

- Undergrazing - needs conservation grazing by appropriate animals to build on the restoration of the dry and wet heathland habitats and address a number of management issues. Grazing animals such as cattle will diversify the physical structure of the heathland habitats by creating habitat mosaics across the site that in turn will benefit the special fauna at Cannock Chase
- Drainage - The water supply to the wetland habitats needs further investigation and there are artificial, historic drainage structures in the Oldacre Valley that need to be assessed to establish their impact on the wetland vegetation.
- Hydrological changes - There has been a reduction in the extent of the valley mire and changes in the vegetation in the Sher Brook Valley which indicate a move towards a drier wetland vegetation. Investigations have revealed that former groundwater outflows that are now dry, and peat in situations too dry to currently lead to the formation of peat. Such features indicate that there has been a general reduction in elevation of groundwater outflows along the valley
- Water quality – At present, neither Oldacre valley nor the Sher Brook valley are functioning correctly hydrologically to support the wetland habitats present (or those expected to be there) and both are showing signs of nutrient enrichment.
- Disease - The fungal plant disease *Phytophthora pseudosyringae* is widespread on several parts of the main body of the Chase, affecting bilberry, a major part of the heathland vegetation.

Appendix A Attributes of European sites with the potential to be affected by the Local Plan

- Air pollution: impact of atmospheric nitrogen deposition - Nitrogen deposition on Cannock Chase Special Area of Conservation currently exceeds the relevant critical loads for the site. Possible effects of this seen on the ground include an increase in bramble across the site and a shorter *Calluna vulgaris* lifecycle resulting in the plants ageing faster.
- Wildfire / arson - Accidental and deliberate fires have caused massive damage to Cannock Chase over the decades.
- Invasive species - A range of invasive species are present on the SAC and on surrounding land.
- Lowland heathland vegetation is an especially fragile wildlife habitat and the fauna that live in it are restricted to it making them especially vulnerable to site impacts. One of the biggest threats to the special features of Cannock Chase is recreational disturbance and the direct and indirect damaging impacts it can have on the heathland's flora and fauna. Erosion, path widening, trampling, arson, pollution of soil from horse dung and dog waste can change the vegetation over time away from heathland and disturbance in the breeding season also directly harms reptiles and birds that nest on the ground in the open heathland.
- Inappropriate scrub control – average cover of scrub and trees is significantly over the target level for the heathland.
- Climate Change - the vulnerability of Cannock Chase SAC overall to climate change has been assessed by Natural England as being low, taking into account the sensitivity, fragmentation, topography and management of its habitats.

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

- Dry heathland – *Calluna vulgaris*, *Ulex gallii*, *Calluna vulgaris* and *Deschampsia flexuosa* heaths.
- Within the heathland, species of northern latitudes occur, such as cowberry *Vaccinium vitis-idaea* and crowberry *Empetrum nigrum*.

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- Cannock Chase has the main British population of the hybrid bilberry *Vaccinium intermedium*, a plant of restricted occurrence. There are important populations of butterflies and beetles, as well as European nightjar *Caprimulgus europaeus* and five species of bats.
- Cannock Chase is also a regional refuge for declining and vulnerable reptile species such as adder, common lizard, and slow worm.

Cannock Extension Canal SAC

(5 hectares)

Qualifying Features

- S1831. Floating water-plantain *Luronium natans*

Conservation Objectives

- Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;
 - The extent and distribution of the habitats of qualifying species
 - The structure and function of the habitats of qualifying species
 - The supporting processes on the habitats of qualifying species rely
 - The populations of qualifying species, and,
- The distribution of qualifying species within the site.

Key Vulnerabilities

- Water pollution – Targets for water quality to support Floating water-plantain (BOD level 'B', DO >70%, TP <20µg/l) were not met in recent (2015/16) water quality monitoring. Historic sediment loads into the canal have also occurred.
- Water levels – The Cannock Extension Canal has very little flow of water due to being a cul-de-sac off a long level section of the Wyrley & Essington Canal. There are no locks on either canal. The water-plantain *Luronium natans* population may face limitations in abundance due to the restricted inflow from the southern end, which is insufficient to counteract leakage and evaporation.
- Overgrazing - Large groups of Canada geese are grazing on the water plants in the canal. There is a risk that this could affect the vegetation community including Floating water-plantain as well as contributing additional nutrients via excreta.
- Invasive species - New Zealand pigmyweed *Crassula helmsii*, Water fern *Azolla filiculoides*, Water pennywort *Hydrocotyle ranunculoides*, and Parrot feather watermilfoil *Myriophyllum aquaticum* have been present on the canal in the recent past.
- Air pollution: risk of atmospheric nitrogen deposition - Nitrogen deposition exceeds site relevant critical load.
- Climate change - The overall vulnerability of this particular SAC to climate change has been assessed by Natural England as being high, taking into account the sensitivity, fragmentation, topography and management of its habitats/supporting habitats.

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

- Cannock Extension Canal in central England is an example of anthropogenic, lowland habitat supporting floating water-plantain *Luronium natans* at the eastern limit of the plant's natural distribution in England. A

Appendix A Attributes of European sites with the potential to be affected by the Local Plan

very large population of the species occurs in the canal, which has a diverse aquatic flora and rich dragonfly fauna, indicative of good water quality. The low volume of boat traffic on this terminal branch of the Wyrley and Essington Canal has allowed open-water plants, including floating water-plantain, to flourish, while depressing the growth of emergents.

West Midlands Mosses SAC

(184.62 hectares)

Qualifying Features

- H3160. Natural dystrophic lakes and ponds
- H7140. Transition mires and quaking bogs

Conservation Objectives

- Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;
 - The extent and distribution of qualifying natural habitats.
 - The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely.

Key Vulnerabilities

- Water pollution - On each of the component sites (i.e. Clarepool Moss, Wybunbury Moss, Abbots Moss, and Chartley Moss) the features have

Appendix A Attributes of European sites with the potential to be affected by the Local Plan

been historically impacted by, and remain vulnerable to, changes in water quality and nutrient enrichment from their surrounding catchment.

Dystrophic pools at Abbots Moss are to subject to artificial drainage for peat extraction and agriculture, and currently fail to meet their water quality objectives whilst those at Clarepool Moss require testing. The SAC is also currently subject to nutrient pressures, principally from agriculture, forestry and development; surface water and groundwater should be restored to a natural low-nutrient status.

- Hydrological changes - All of the component areas of transition mire are impacted by historic drainage. At Clarepool, Chartley and Wybunbury Mosses some of this damage has been partially repaired but further measures to restore a naturalised hydrology are needed in all locations. As well as surface water, ground water is also an important water supply mechanism to the mosses. Hence the SAC is vulnerable to groundwater abstractions and artificial flooding as well as catchment drainage.
- Air pollution: impact of atmospheric nitrogen deposition - Nitrogen deposition and acidity exceed site relevant critical loads and there is evidence of impacts on bryophytes as a result of this. Ground level ozone is also regionally important as a toxic air pollutant but does not yet have critical levels associated with it.
- Inappropriate scrub control - The transition mire habitat at each of the component sites experiences continual re-colonisation by scrub, typically birch and pine as a consequence of past hydrological change e.g. historical drainage and cumulative nutrient enrichment together with readily available seed sources. The presence of excessive amounts of scrub and trees affects the mire habitat by increasing the rate of drying out and by the addition of nutrients.
- Game management: pheasant rearing - Nutrient enrichment in the areas of pheasant pens and disturbance to ground flora from game birds are a local issue at Clarepool and Chartley Mosses. Erosion may be caused by shoot activities and access restrictions due to shooting can restrict rewetting and conservation management activities.

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- Fisheries – Fishing stocking is inappropriate at the site. Fish communities may exert a strong influence on overall lake ecology and may cause or exacerbate eutrophication symptoms.
- Forestry and woodland management - restocking of land in close proximity to Abbots Moss could cause shade, nutrient enrichment and enhanced evapotranspiration and serve as an undesirable seed source for scrub (e.g. Pine) encroachment.
- Habitat fragmentation - The sites are small and geographically isolated from each other. The threat of localised species extinction is greater and so the chances of recolonisation by lost species is very low. An example of this is provided by the extinction from Abbots Moss and Wybunbury Moss in recent decades of the white-faced darter dragonfly, a species dependent on dystrophic pools. The nearest donor population is more than 20 miles away.
- Hydrological connectivity – Natural dystrophic lakes and ponds rely on hydrological connectivity for water supply and to support some migratory species, but a degree of isolation provides protection from pollution and invasive species. Connectivity via groundwater should be maintained, but connectivity with surface water may provide pollution source to the feature. Transition mires and quaking bogs similarly rely on water flows. For these features, restoration of natural hydrological processes (groundwater and surface water) is required to sustain and restore the habitat and associated species.
- Climate Change- The overall vulnerability of this SAC to climate change has been assessed by Natural England as being high, taking into account the sensitivity, fragmentation, topography and management of its habitats.

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

- Characteristic species of H3160 habitat Natural dystrophic lakes and ponds includes: *Utricularia* spp (bladderworts), *Sphagnum* spp, *Comarum palustre* (marsh cinquefoil), *Juncus bulbosus* (bulbous rush), *Nymphaea*

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alba, *Menyanthes trifoliata* and *Potamogeton polygonifolius* (bog pondweed) with associates of *Sparganium angustifolium* (floating bur-reed), *Eleogiton fluitans* (floating club rush) and *Drepanocladus* spp. Assemblage of dragonflies and damselflies (including white-faced darter *Leucorrhinia dubia* [no longer present at this site], downy emerald *Cordulia aenea* and black darter *Sympetrum danae*). All of the above have been almost totally lost from Abbots Moss as a consequence of eutrophication). The white-faced dragonfly is still extant at Chartley Moss

- The lake at Clarepool Moss is unusual as a dystrophic type on account of its relatively base-rich character, which is reflected in the presence of a diverse fauna and flora. The two at Abbots Moss are more typical, base-poor examples. The dystrophic lakes and ponds at this site are associated with Schwingmoor development, a characteristic of this habitat type in the West Midlands. Schwingmoor is an advancing floating raft of bog-moss *Sphagnum*, often containing NVC type M3 *Eriophorum angustifolium* bog pool community, which grows from the edge of the pool and can completely cover over the pool;
- Floating rafts of *Sphagnum*-dominated vegetation have developed over semi-liquid substrates within basins. In the UK this type of *Sphagnum*-dominated vegetation with a scatter of sedges *Carex* species and cranberry *Vaccinium oxycoccos* is confined to this part of England and mid-Wales.
- Management of the hydrological catchments beyond the SAC boundary can affect the qualifying transition mires and quaking bogs habitat. All four component sites have activities in their catchments which are known or suspected to be to be damaging.

Midland Meres and Mosses (Phase 1) Ramsar Site

(510.88 hectares)

Qualifying Features

- Ramsar criterion 1a — a particularly good example of a natural or near natural wetland, characteristic of this biogeographical region, The site comprises the full range of habitats from open water to raised bog.
- Ramsar criterion 2a - supports a number of rare species of plants associated with wetlands. The site contains the nationally scarce six-stamened waterwort *Elatine hexandra*, needle spike-rush *Eleocharis acicularis*, cowbane *Cicuta virosa*, marsh fern *Thelypteris palustris* and elongated sedge *Carex elongate*.
- Ramsar criterion 2a - Contains an assemblage of invertebrates, including the following rare wetland species. 3 species considered to be endangered in Britain, the caddis fly *Hagenella clathrata*, the fly *Limnophila fasciata* and the spider *Cararita limnaea*. Other wetland Red Data Book species are; the beetles *Lathrobium rufipenne* and *Donacia aquatica*, the flies *Prionocera pubescens* and *Gonomyia abbreviata* and the spider *Sitticus floricola*.

Conservation Objectives

- Ramsar criterion – peatland.
- The conservation objectives for the site are to maintain in favourable condition the habitat types for which the site is designated.

Key Vulnerabilities

- Invasive species - considered a major impact on this site.
- Water quality - eutrophication is considered a major impact on this site.
- Recreational pressure and disturbance - in line with other bog and mire habitats, trampling and erosion are likely to be a significant issue where public access occurs.
- Water quality - declines in water quality through nutrient enrichment and sediment.
- Land use in surrounding areas - agricultural practices and urban runoff are likely to affect the scattered sites through nutrient enrichment and sedimentation.

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

- The qualifying features are dependent on the site's range of wetland habitats (also qualifying features), including those designated as the SAC.

Pasturefields Salt Marsh SAC

(7.8 hectares)

Qualifying Features

- 1340. Inland salt meadows

Conservation Objectives

- Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;
 - The extent and distribution of qualifying natural habitats
 - The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely.

Key Vulnerabilities

A.2 No issues affecting the Natura 2000 feature(s) were identified for this site in the Site Improvement Plan, however information on vulnerability to the qualifying feature's supporting processes is set out in the Supplementary Advice for Conservation Objectives.

- Climate change- The overall vulnerability of this particular SAC to climate change has been assessed by Natural England as being high, taking into account the sensitivity, fragmentation, topography and management of its habitats/supporting habitats.
- Functional connectivity to the wider landscape – There are six other inland saltmarshes within five miles of Pasturefields. They are all small sites and likely to have similar ecological and hydrological characteristics to Pasturefields. Whether the conservation of qualifying features at Pasturefields depends on maintenance or restoration of these sites is not known but species associated with Pasturefields might survive better in a landscape of numerous scattered saltmarshes.
- Hydrology – It is likely that the saltmarsh exists as a result of historic salt prospecting (drilling to bring salt to the surface); therefore restoring a more natural hydrological regime could destroy the qualifying features.

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- Water quality – Water quality at the saltmarsh exceeds chloride concentration targets (defined by the WFD).
- Undesirable species – the following species are undesirable and their spread may be encouraged by changes in surface condition, soils, nutrient levels or hydrology: *Deschampsia cespitosa*, large *Carex* spp., *Cirsium arvense*, *Cirsium vulgare*, *Rumex crispus*, *Rumex obtusifolius*, *Urtica dioica* and *Senecio* spp.
- Air quality – there are no set Critical Loads or Levels for this habitat type. Adopting the thresholds given for coastal saltmarsh habitats, this SAC is not currently exceeding values for ammonia, nitrogen and nitrogen oxides.

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

A.3 Pasturefields Salt Marsh is the only known remaining example in the UK of a natural salt spring with inland saltmarsh vegetation. The vegetation consists of red fescue *Festuca rubra*, with common saltmarsh-grass *Puccinellia maritima*, lesser sea-spurrey *Spergularia marina*, saltmarsh rush *Juncus gerardii* and sea arrowgrass *Triglochin maritimum* in the most saline situations.

A.4 This extremely rare habitat contains a number of halophytic plants and is locally important for breeding waders including:

- Snipe, *Gallinago gallinago*
 - Habitat preference: grassland, heathland, moorland, freshwater, farmland, and coastal wetlands
 - Diet: insects, earthworms and crustaceans in the mud.
- Common redshank, *Tringa totanus*
 - Habitat preference: rivers, wet grassland, moors and estuaries.
 - Diet: invertebrates, especially earthworms, crane-fly larvae (inland) crustaceans, molluscs, marine worms (estuaries).

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- Lapwing, *Vanellus vanellus*
 - Habitat preference: breeding season prefer spring sown cereals, root crops, permanent unimproved pasture, meadows and fallow fields. They can also be found on wetlands with short vegetation. In winter they flock on pasture and ploughed fields
 - Diet: worms and insects

A.5 Key species of the inland salt meadows are: *Puccinellia maritima*, *Plantago maritima*, *Spergularia marina*, *Suaeda maritima*, *Festuca rubra*, *Juncus gerardii*, *Armeria maritima*, *Agrostis stolonifera*, *Glaux maritima*, *Triglochin maritima*, *Leontodon autumnalis*. The abundance of these species should be restored to enable them to be a viable component of the Annex 1 habitat.

A.6 The salt-marsh vegetation types comprising the H1340 feature occur within the site along with other communities of wet neutral semi improved grassland (generally a mosaic of MG10, MG9 and MG6 grassland and rush-pasture).

A.7 The site received surface water from the River Trent on its southwest side and runoff from the land on its northeast side. The site's water table and hydrology may therefore be affected by changes in the use of the land, water abstraction, flood alleviation, development and mineral extraction in the wider catchment.

Mottey Meadows SAC

(43.7 hectares)

Qualifying Features

- 6510 Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*)

Conservation Objectives

- Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;
 - The extent and distribution of qualifying natural habitats
 - The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely.

Key Vulnerabilities

- Water Pollution - The hay meadow community type is reliant on a clean water supply. However both the local groundwater and the local watercourse which floods occasionally are enriched with excess nutrients. The source of the nutrient enrichment is thought to stem from the adjacent dairy farms, maize crops, run off, and leachates. Excess nutrients enable more vigorous plant species to take over reducing the biodiversity value of the MG4 grassland.
- Hydrological changes – Both flooding and drought would have a detrimental impact on the site’s qualifying features. For example, inadequate flooding conditions could prompt a transition from H6510 to alternative vegetation types, such as inundation grassland or swamps.
- Water abstraction - The Whiston Brook catchment appears to be affected by over abstraction; trickle irrigation has been highlighted as one of the main reasons for this with much of the catchment being used to grow soft fruit. The MG8 and MG4 grassland types are sensitive to water level changes.
- Air pollution – the SAC is currently exceeding the Critical Load/Level for ammonia and nitrogen.

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- Change in land management - Annual hay cut and aftermath grazing are essential management requirements for the MG4 and MG8 grassland.
- Functional connectivity with wider landscape – The SAC is isolated within farmland and there is a restore target to restore connecting features in the wider landscape.
- Climate Change- The overall vulnerability of this SAC to climate change has been assessed by Natural England (2015) as being high, taking into account the sensitivity, fragmentation, topography and management of its habitats. MG4 and MG8 grasslands have precise hydrological requirements, and the effects of climate change could cause flooding and drought, negatively affecting the features.
- Undesirable species – Undesirable non-woody and woody vascular plants may require active management to avert an unwanted succession to a different and less desirable state.

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

- The site contains grassland with limited influence of agricultural intensification and so demonstrates good conservation of structure and function. There are transitions to other dry and wet grassland types. The site is important for a range of rare meadow species, including fritillary *Fritillaria meleagris* at its most northerly native locality.
- The site's surface flooding regime and sub surface irrigation can be affected by land use change, water abstraction, flood alleviation, development and mineral extraction in the catchment. At the moment, surface water from the catchment is enriched by diffuse pollution sourced mainly from agriculture. Restoration of a cleaner surface water supply is required before a more natural or more typical hydrological regime can be restored.
- The following are key species within the qualifying habitats: Great burnet *Sanguisorba officinalis*, Meadow foxtail *Alopecurus pratensis*, Snake's head fritillary *Fritillaria mealegaris*, saw-wort *Serratula tinctoria* and

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meadow thistle *Cirsium dissectum*. Their abundance should be maintained to enable them to be a viable component of the feature.

River Mease SAC

(23.03 hectares)

Qualifying Features

- 3260 Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation
- 1149 Spined loach *Cobitis taenia*
- 1163 Bullhead *Cottus gobio*
- 1092 White-clawed (or Atlantic stream) crayfish *Austropotamobius pallipes*
- 1355 Otter *Lutra lutra*

Conservation Objectives

- Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;
 - The extent and distribution of qualifying natural habitats and habitats of qualifying species
 - The structure and function (including typical species) of qualifying natural habitats
 - The structure and function of the habitats of qualifying species
 - The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely

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- The populations of qualifying species, and,
- The distribution of qualifying species within the site.

Key Vulnerabilities

- Water pollution – Increased water pollution can lead to increased algal growth and a subsequent decline in habitat quality. Some phosphate stripping has been carried out, however further reductions are desirable. Discharges from septic tanks are thought to be one source of pollution, and requires fuller understanding, as well as sources of high levels of ammonia that impact species. At this SAC, there are also elevated levels of copper, zinc and lead concentrations which have been observed in stream sediments that are in proximity to A class roads with hotspots at crossings with the A42, other A roads and pollution from urban development.
- Drainage - The SAC is under pressure from drainage, which affects the naturalised flow pattern, leading to a more ‘flashy’ river. Roads act as conduits for drainage flows. As such, SuDS should be required at all new development schemes.
- Water course flow – The River Mease is not currently meeting flow targets. This is due to excess water from discharges entering the river system. This is causing the loss of naturalised low flow conditions which are considered necessary for the long-health and integrity of the site.
- Inappropriate weirs, dams and other structures -These can restrict species population size and distribution, and prevent fish movement. To be dealt with through the River Restoration Plan.
- Fisheries – Fish stocking can cause elevated levels of competition and predation. Fish densities to be maintained at a level at or below the natural environmental carrying capacity of the river.
- Invasive species - The SAC is under pressure from invasive species, including Himalayan balsam, Japanese knotweed and American signal crayfish (which carry a crayfish plague).

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- Siltation - The SAC is under pressure from siltation, which impacts the spawning habitat of the bullhead and spined loach.
- Water abstraction - The SAC is under pressure from water abstraction, which changes the naturalised flow pattern. Sources include regulated agriculture-related abstraction, transfer to the Ashby canal and 11 sewage treatment works within the catchment area.
- Climate Change- The overall vulnerability of this particular SAC to climate change has been assessed by Natural England as being high, taking into account the sensitivity, fragmentation, topography and management of its habitats and supporting habitats.

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

- Watercourses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation
 - Habitat: The River Mease SAC supports good examples of water plants from the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation (Rivers with floating vegetation often dominated by watercrowfoot). Submerged aquatic vegetation is varied, particularly in the lower reaches of the river, and is characterised by frequent river water-crowfoot *Ranunculus fluitans*, common watercrowfoot *R. aquatilis*, blunt-leaved pondweed *Potamogeton obtusifolius*, fennel pondweed *P. pectinatus*, arrowhead *Sagittaria sagittifolia* and yellow water-lily *Nuphar lutea*.
- Spined loach *Cobitis taenia*
 - Habitat: optimum habitat consists of sandy substrates with plenty of dense macrophytes interspersed with open sandy areas.
 - Diet: at night they they consume sand on the riverbed and with it small animals and other organic material.
- Bullhead *Cottus gobio*

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- Habitat: appears to favour fast-flowing, clear shallow water with a hard substrate (gravel/cobble/pebble) and is frequently found in the headwaters of upland streams. However, it also occurs in lowland situations on softer substrates so long as the water is well-oxygenated and there is sufficient cover. It is not found in badly polluted rivers.
- White-clawed (or Atlantic stream) crayfish *Austropotamobius pallipes*
 - Habitat: The white-clawed crayfish lives in a diverse variety of clean aquatic habitats but especially favours hard-water streams and rivers.
 - Food: worms, insect larvae, snails, small fish, macrophytes and algae.
 - A major threat to the native white-clawed crayfish is posed by the introduction of non-native species of crayfish, which have been farmed in Britain since the late 1970s. It is believed that disease was introduced and is spread by the most frequently farmed species, the North American signal crayfish *Pacifastacus leniusculus*, a carrier of the disease. Crayfish plague can be introduced into a waterbody not only by entry of signal crayfish but also by water, fish or equipment that has been in contact with signals. This greatly increases the risk to remaining white-clawed crayfish populations.
- Otter *Lutra lutra*
 - Habitat: Otters are semi aquatic, living mainly along rivers. Otters can travel widely over large areas. Some are known to use 20 kilometres or more of river habitat. Otters tend to live alone as they are very territorial. The Otter is also a 'European Protected Species' in the UK, and it is an offence to disturb, capture, injure or kill an otter (either on purpose or by not taking enough care), or to damage, destroy or obstruct access to its breeding or resting places, without first getting a Licence.
 - Diet: They mainly eat fish, though crustaceans, frogs, voles and aquatic birds may also be taken. Being at the top of the food chain, an otter needs to eat up to 15% of its body weight in fish daily.
- The following are key species within the qualifying habitats: River water crowfoot *Ranunculus fluitans*, stream water crowfoot *R. penicillatus* spp. *pseudofluitans*, water-starworts *Callitriche* spp. Flowering rush *Botumus*

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umbellatus, Pondweeds *Potamogeton* spp, bur-reeds *Sparganium* spp. Water plantain *Alisma plantago-aquatica*, spiked milfoil *Myriophyllum spicatum*, yellow water-lily *Nuphar lutea*, arrowhead *Sagittaria sagittifolia*. Their abundance should be restored to enable them to be a viable component of the feature.

- The river and its characteristic biological communities may be dependent on the integrity of sections of river channel, riparian areas, and transitional and marine waters that lie outside of the site boundary. For example, headwater areas and tributaries may not fall within the site boundary, yet a range of species characteristic of the site may use these areas for spawning and juvenile development and be critical for sustaining populations within the site. Fully developed riparian zones are essential to site integrity, yet part of this zone may lie outside of the site boundary, particularly if the river channel is operating under natural processes and moves laterally over time within the floodplain. The tributaries will also act as refuges from high flow conditions and pollution incidents.

Humber Estuary SAC, SPA and Ramsar site

Humber Estuary SAC Qualifying Features

- S1364 *Halichoerus grypus*: Grey seal
- H1130 Estuaries
- H2160 Dunes with *Hippophae rhamnoides*
- S1099 *Lampetra fluviatilis*: River lamprey
- H2110 Embryonic shifting dunes
- H1140 Mudflats and sandflats not covered by seawater at low tide
- H2120 Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes")

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- H1150 Coastal lagoons
- H2130 Fixed dunes with herbaceous vegetation ("grey dunes")
- H1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
- H1110 Sandbanks which are slightly covered by sea water all the time
- H1310 *Salicornia* and other annuals colonising mud and sand
- S1095 *Petromyzon marinus*: Sea lamprey

Humber Estuary SPA Qualifying Features

- A052 *Anas crecca*: Teal
- A050 *Anas penelope*: Eurasian wigeon
- A053 *Anas platyrhynchos*: Mallard
- A169 *Arenaria interpres*: Ruddy turnstone
- A059 *Aythya ferina*: Common pochard
- A062 *Aythya marila*: Greater scaup
- A021 *Botaurus stellaris*: Great bittern
- A675 *Branta bernicla bernicla*: Brent goose
- A067 *Bucephala clangula*: Common goldeneye
- A144 *Calidris alba*: Sanderling
- A149 *Calidris alpina alpina*: Dunlin
- A143 *Calidris canutus*: Red knot
- A137 *Charadrius hiaticula*: Common ringed plover
- A081 *Circus aeruginosus*: Eurasian marsh harrier
- A082 *Circus cyaneus*: Hen harrier
- A130 *Haematopus ostalegus*: Eurasian oystercatcher

Appendix A Attributes of European sites with the potential to be affected by the Local Plan

- A157 *Limosa lapponica*: Bar-tailed godwit
- A156 *Limosa limosa islandica*: Black-tailed godwit
- A160 *Numenius arquata*: Eurasian curlew
- A158 *Numenius phaeopus*: Eurasian whimbrel
- A151 *Philomachus pugnax*: Ruff
- A140 *Pluvialis apricaria* : European golden plover
- A141 *Pluvialis squatarola*: Grey plover
- A132 *Recurvirostra avosetta*: Pied avocet
- A195 *Sterna albifrons*: Little tern
- A048 *Tadorna tadorna*: Common shelduck
- A164 *Tringa nebularia*: Common greenshank
- A162 *Tringa totanus*: Common redshank
- A142 *Vanellus vanellus*: Northern lapwing
- Waterbird assemblage

Humber Estuary Ramsar site qualifying features

A.8 Criterion 1:

- near-natural estuary with the following component habitats: dune systems and humid dune slacks, estuarine waters, intertidal mud and sand flats, saltmarshes, and coastal brackish/saline lagoons.

A.9 Criterion 3:

- *Halichoerus grypus*: Grey seals

A.10 Criterion 5:

Appendix A Attributes of European sites with the potential to be affected by the Local Plan

- Waterfowl assemblages (non-breeding)

A.11 Criterion 6:

- *Tadorna tadorna*: Common shelduck
- *Pluvalis apricaria*: Eurasian golden plover
- *Calidris canutus*: Red knot
- *Calidris alpina*: Dunlin
- *Limosa limosa*: Black-tailed godwit
- *Limosa lapponica*: Bar-tailed godwit
- *Tringa tetanus*: Common redshank

A.12 Criterion 8:

- *Lampetra fluviatilis*: River lamprey
- *Petromyzon marinus*: Sea lamprey

Conservation Objectives

A.13 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats and habitats of qualifying species
- The structure and function (including typical species) of qualifying natural habitats
- The structure and function of the habitats of qualifying species
- The supporting processes on which qualifying natural habitats and habitats of qualifying species rely

Appendix A Attributes of European sites with the potential to be affected by the Local Plan

- The populations of qualifying species, and,
- The distribution of qualifying species within the site.

Key Vulnerabilities

- Water Pollution - There is an annual Dissolved Oxygen (DO) sag in the tidal River Ouse which has been present for many years, but has shown improvements more recently due to reductions in pollution. The DO sag means that at certain times of year, the water quality thresholds set out in the conservation objectives for the site are not being met. It is possible that the DO sag may cause a barrier to sea lamprey when they are migrating through the area during the summer months; however there is currently not enough evidence available to draw accurate conclusions of the impact of the DO sag so further research is necessary. Due to the timing of the DO sag, it is unlikely that river lamprey are affected. There is concern around pollutants leaching from Capper Pass, a former aluminium smelting plant. Several of the Barton and Barrow clay pits on the south bank fail the total Phosphorus (P) target and need lake management plans and nutrient budgets. Many pits have not been tested for water quality but this may be an issue given the impoverished macrophyte communities. Further investigation is needed into the impacts. There is an issue with Tributyltin (TBT) in the sediment, which although possibly historical in origin, may need more investigation, as well as awareness campaigns to prevent the scale of this issue in the future. High concentrations of nutrients in water can cause phytoplankton and macroalgae blooms which can reduce DO availability, impacting fish, epifauna and infauna; this then affects the availability of habitats for qualifying bird species.
- Coastal Squeeze - The gradual and persistent loss of intertidal habitat due to sea level rise and presence of fixed defences affects every saltmarsh and mudflats where saltmarsh is absent. This is causing a loss of designated SAC features which needs to be addressed. A loss in mudflat can in turn affect SPA bird features that depend on these habitats.
- Changes in species distributions - There are declines in populations of SPA bird features due to unknown factors. Further investigation is needed

Appendix A Attributes of European sites with the potential to be affected by the Local Plan

to find the cause(s) of the declines and work to address the issues. River and sea lamprey spawn in freshwater sites many kilometres upstream of the designated site. Further investigations are needed to identify key spawning areas and raise awareness of these areas to prevent deterioration

- Undergrazing - Lack of recent grazing by livestock has resulted in suitable habitat no longer being maintained for roosting/loafing SPA birds. Investigation is needed to ensure that any future introduction of grazing would be neutral or beneficial to the saltmarsh and dune SAC features
- Invasive species - The presence of *Azolla* in the drains at Far Ings is currently being addressed. The presence of Himalayan Balsam is a catchment wide issue and there are localised patches of Giant Hogweed and Japanese Knotweed. Marine invasive species are also present with the slipper limpet and Chinese mitten crab being an issue, however the extent is unknown and more investigation is necessary.
- Natural Changes to site conditions - Changes in the topography and habitats in the inner estuary may lead to a reduction of important habitats such as mudflats. There is evidence of changes including increased growth of *Salicornia* on mudflats. There are also increasing sediment loads within North Killingholm Haven Pits, which is affecting water levels and sluice functioning. The causes are unknown and need further investigation. Storm events in 2013 affected the structure of designated features. Due to climate change, these extreme weather events are more likely to occur and therefore it is important to gain an understanding of the effects of these events on protected habitats.
- Public Access/Disturbance - Recreational disturbance could be contributing to the declines in breeding and migratory bird populations at certain locations including East Halton Skitter, Barton Pits, Faxfleet and Welwick. The floodbank is adjacent to the river and there are many dog walkers, birders and other regularly occurring activities which may be causing disturbance to birds. Offroad vehicles can also cause disturbance to bird features
- Fisheries: Fish stocking - Several of the clay pits on the south bank of the estuary have active fisheries or have had fisheries in the past and still

Appendix A Attributes of European sites with the potential to be affected by the Local Plan

support non-native fish. The over-stocking of native and non-native fish is destructive to the clay pits freshwater habitat, having a negative impact on water quality and is implicated in the decline of macrophytes and in many of clay pits. The decline in macrophytes and water quality may both negatively impact SPA waterbirds.

- Fisheries: Commercial marine and estuarine - Dredges (inc. hydraulic), benthic trawls and seines and shore-based activities are categorised as 'Red' for the mudflats and sandflats not covered by seawater at low tide interest feature (and specifically the sub-feature: Eelgrass communities) as part of Defra's revised approach to commercial fisheries management in EMSs. Requisite mechanisms are being implemented by North Eastern IFCA and Eastern IFCA. Commercial fishing activities categorised as 'amber or green' under Defra's revised approach to commercial fisheries in EMSs are being assessed by North Eastern IFCA and Eastern IFCA to determine whether management is required. For activities categorised as 'green', these assessments should take account of any relevant in combination effects with other fishing activities
- Direct land take from development- An illegal flood defence has been created on the Hesse forshore where material has been dumped.
- Air Pollution: Impact of atmospheric nitrogen deposition- Nitrogen deposition exceeds site relevant critical loads.
- Shooting/Scaring- There is unauthorised wildfowling and game bird management in areas such as Haverfield Quarries. Investigation is needed to understand the extent of the unauthorised wildfowling and the potential impacts on SPA features.
- Direct impact from third party- Commercial scale collection of *Salicornia* occurs near Saltfleetby. There was a proposal in 2013 regarding the harvesting of this species. There are management measures in place through 'Codes of Conduct' but these have had limited management success.
- Inappropriate scrub control- Successional scrub encroachment on grassland and reedbeds at Haverfield Quarries could reduce the likelihood of breeding by the marsh harrier.

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

- The SPA is used by non-breeding merlin *Falco columbarius*, peregrine F. peregrinus and short-eared owl *Asio flammeus*, and breeding common tern *Sterna hirundo* and kingfisher *Alcedo atthis* (all species listed in Annex I to the EC Birds Directive) in numbers of less than European importance (less than 1% of the GB population).
- The qualifying features are dependent on the site's range of wetland habitats (also qualifying features), including those designated as the SAC.
- The site's habitat and species are sensitive to changes in water and air quality.

Appendix B

Screening findings

B.1 This appendix shows which types of impacts on European sites could potentially result from each of the policies and site allocations in the Pre-Submission (Regulation 19) Cannock Chase Local Plan.

B.2 If a policy could provide mitigation for adverse effects of European sites, this is identified, although in line with the People over Wind judgement, mitigation is not taken into account at the screening stage.

Policies

Policies unlikely to have a significant effect

No new development / activities

B.3 The following policies have been screened out of further assessment (no Appropriate Assessment is required) as they will not result in new development / activities:

- **Policy SO1.1: Protecting, Conserving and Enhancing the Distinctive Local Historic Environment:** no new development / activities.
- **Policy SO1.2: Enhancing the Quality of the Built Environment:** sets principles for design but will not result in new development / activities.
- **Policy SO1.3: Creating Safe Places Which Deter Crime and Reduce the Fear of Crime:** sets principles for design but will not result in new development / activities.

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- **Policy SO2.2: Safeguarding Health and Amenity:** sets principles for design but will not result in new development / activities.
- **Policy SO3.2: Housing Choice:** sets out desired housing mix for new development but will not itself result in new development / activities
- **Policy SO3.3: Delivering High Quality Housing:** sets principles for design but will not result in new development / activities.
- **Policy SO4.1: Safeguarding Existing Employment Areas for Employment Uses:** safeguards existing employment areas but will not itself result in new development / activities.
- **Policy SO4.6: Provision for Local Employment and Skills:** no new development / activities.
- **Policy SO5.1: Accessible Development:** sets principles for design but will not result in new development / activities.
- **Policy SO5.7: Parking Provision:** requires major developments to consider parking provision but will not itself result in new development / activities.
- **Policy SO6.1 Hierarchy of Town and Local Centres:** defines the hierarchy of town and local centres but will not itself result in new development / activities.
- **Policy SO6.2: Provision of Main Town Centre Uses and Town Centre Services:** seeks to maintain the viability of town centre uses and retail, but will not itself result in new development / activities.
- **Policy SO6.4: Town Centre Design:** sets principles for design but will not result in new development / activities.
- **Policy SO7.1: Protecting, Conserving and Enhancing Biodiversity and Geodiversity:** no new development / activities.
- **Policy SO7.2: Biodiversity Net Gain:** no new development / activities.
- **Policy SO7.3: Habitat Sites:** no new development / activities.
- **Policy SO7.4: Protecting, Conserving and Enhancing Landscape Character:** no new development / activities.

- **Policy SO7.5: Protecting, Conserving and Enhancing the Cannock Chase Area of Outstanding Natural Beauty:** no new development / activities.
- **Policy SO7.6: Protecting, Conserving and Enhancing the Green Belt:** seeks to protect the character and openness of the Green Belt and makes reference to a new community park associated with a strategic site allocation but will not itself result in new development / activities.
- **Policy SO7.8: Protecting, Conserving and Enhancing Green Infrastructure:** safeguards the strategic green space network and will not result in new development / activities.
- **Policy SO8.1: Low and Zero Carbon Energy and Heat Production:** renewable energy infrastructure; no likely significant effects.
- **Policy SO8.2: Achieving Net Zero Carbon Development:** sets emissions standards for new development and will not result in new development / activities.
- **Policy SO8.4: Managing Flood Risk:** sets principles for minimising the flood risk of new developments and will not itself result in new development / activities.
- **Policy SO8.5: Avoiding Air, Water, Noise or Light Pollution and Soil Contamination:** sets principles for minimising or mitigating pollution in major developments but will not result in new development / activities.
- **Policy SO8.6: Brownfield and Despoiled Land and Under-Utilised Buildings:** sets principles for prioritising under-utilised land and buildings for new developments and will not result in new development / activities.
- **Policy SO8.7: Safeguarding Mineral Reserves:** safeguards sites for minerals extraction identified in the Staffordshire Minerals Local Plan and will not itself result in new development / activities.

New development / activities but no likely significant effects

B.4 The following policies will result in new development / activities, but these are not likely to have significant effects on European sites and therefore have been screened out of further assessment; no Appropriate Assessment is required:

- **Policy SO2.4: Allotments and Community Gardens:** allotments and community food growing sites; no likely significant effects.
- **Policy SO2.5: Providing Opportunities for Healthy Living and Activity through Active Design:** green infrastructure and sports/fitness infrastructure within major developments. Improving green infrastructure could in theory increase trips to European sites from residential development, but the contribution of this within major developments is likely to be minor compared with the presence of new homes themselves (assessed in relation to Policy SO3.1). Policy SO2.3 is the main policy relating to sports provision in major developments and this policy supports but does not significantly add to that; therefore, does not need to be assessed separately.
- **Policy SO4.5: Live Work Accommodation:** employment development, changes in water abstraction/discharge, changes in vehicle traffic. This policy allows live-work spaces within residential areas, which could result in impacts associated with changes in water quality/quantity or air quality; but this is unlikely to result in significant effects beyond those already generated by residential development.
- **Policy SO5.2: Communication Technologies:** communications infrastructure; no likely significant effects.
- **Policy SO5.3: Low and Zero Carbon Transport:** Sustainable transport facilities (within major development) and changes in vehicle traffic; no likely significant effects.
- **Policy SO5.4: Maintaining and Improving the Transport System:** Changes in vehicle traffic and other forms of travel. While the policy refers

to improvements to transport infrastructure, any such development will not result directly from this policy and will be subject to project-level HRA as required

- **Policy SO5.5: Hatherton Canal Restoration Corridor:** Green and blue infrastructure. This project could in theory increase visits to the Cannock Extension Canal SAC, 5 kilometres from Hatherton Canal but linked via the canal network, but this SAC is not sensitive to recreation pressure.
- **Policy SO5.6: Safeguarding Proposed Recreational Footpath and Cycle Routes:** Walking and cycling infrastructure. These proposals are not close enough to Cannock Chase SAC to significantly increase visitor numbers there (recreation pressure) and may also contribute to a reduction in vehicle trips within the plan area
- **Policy SO6.3: Safeguarding Existing Town Centre Services:** Changes of use within retail areas and changes in traffic. Changes of use in buildings within existing town centres are unlikely to result in significant changes in vehicle traffic (air pollution) at European sites.
- **Policy SO6.7: Hednesford Town Centre Redevelopment Areas:** plans for small scale development within existing town centres, which is unlikely to result in significant changes in vehicle traffic (air pollution) past European sites.
- **Policy SO8.3: Sustainable Design:** renewable energy infrastructure and green & blue infrastructure, within major developments. Improving green links could in theory increase trips to European sites from residential development (recreation pressure), but the contribution of this within major developments is likely to be minor compared with the presence of new homes themselves (assessed in relation to Policy SO3.1).

Potential mitigation

B.5 The following policies may contribute to mitigation for impacts associated with the Local Plan:

- **Policy 2.3: Provision of Open Space, Sports and Recreational Buildings and Land, Including Playing Fields:** requires major developments to provide new and/or enhanced open space (incl. semi natural spaces), which may contribute to mitigation for recreation pressure at European sites.
- **Policy SO4.5: Live Work Accommodation:** may also reduce the requirement for travel within the plan area and therefore contribute towards mitigation for air pollution impacts.
- **Policy SO5.1: Accessible Development:** requires major developments to set out how they will reduce reliance on private cars, for example by locating development close to public transport and local services. This will contribute towards mitigation for air pollution impacts.
- **Policy SO5.2: Communication Technologies:** may indirectly reduce the requirement for travel within the plan area and therefore contribute towards mitigation for air pollution impacts.
- **Policy SO5.3: Low and Zero Carbon Transport:** encourages the shift to low and zero carbon transport and could therefore contribute towards mitigation for air pollution impacts.
- **Policy SO5.4: Maintaining and Improving the Transport System:** seeks to encourage sustainable travel and reduce pollution from transport and may therefore contribute towards mitigation for air pollution impacts.
- **Policy SO7.1: Protecting, Conserving and Enhancing Biodiversity and Geodiversity:** states that “ Development with the potential to have a significant effect on the integrity of any internationally designated Special Area of Conservation (SAC), Special Protection Area (SPA) or Ramsar, or associated functionally linked land or watercourse (either alone or in combination with other plans and projects) will not be supported, unless a Habitats Regulations Assessment (HRA) has concluded there will be no adverse impacts on site integrity, in accordance with the requirements of the Conservation of Habitats and Species Regulations 2017 (as amended).” This therefore provides general protection for European sites.

Appendix B Screening findings

- **Policy SO7.2: Biodiversity Net Gain:** seeks biodiversity net gain which will may contribute indirectly to biodiversity protection and enhancement within European sites.
- **Policy SO7.3: Habitat Sites:** states that “Development will not be permitted where it would lead directly or indirectly to an adverse effect on habitats sites and the effect cannot be avoided or mitigated. The effective avoidance and/or mitigation of any identified adverse effects must be demonstrated to the Council as competent authority, and secured by means of a suitable mechanism (for example, a legal agreement) prior to the approval of the development.” It also provides specific protection for Cannock Chase SAC (all residential development must contribute to mitigation for recreation pressure, in line with the most up to date Cannock Chase SAC Partnership Mitigation Scheme) and Cannock Extension Canal SAC (developments ‘within the water catchment area’ of Cannock Extension Canal SAC must mitigate any adverse effects on the SAC).
- **Policy SO8.3: Sustainable Design:** requires residential developments to have a maximum water consumption of 110litres/person/day; and for non-residential developments of more than 500m² to meet or exceed BREEAM ‘excellent’, which will contribute to mitigation for impacts associated with water abstraction and discharge.
- **Policy SO8.4: Managing Flood Risk:** requires major developments to incorporate sustainable drainage systems and flood protection, which could contribute to mitigation for impacts on water quantity / quality.
- **Policy SO8.5: Avoiding Air, Water, Noise or Light Pollution and Soil Contamination:** requires major development to demonstrate how air, water, noise and light pollution and soil contamination will be avoided or mitigated. It provides protection for Air Quality Management Areas, and states that development will not be permitted without confirmation that existing or improved sewage/wastewater treatment facilities can accommodate new development. This policy will contribute to mitigation for air pollution and changes to water quantity/quality (and would have also provided mitigation for non-physical disturbance, which has been screened out).

Policies that may have likely significant effects

Policy SO2.1: Safeguarding the Provision of Community Facilities

B.6 Likely activities (operation) to result as a consequence of the proposal:

- Community facilities (within major development)
- Changes in vehicle traffic

B.7 Type of adverse effect that could arise from likely activities:

- Air pollution

B.8 Does the policy need to be screened into the Appropriate Assessment?

- Yes – community facilities have the potential to act as a trip generator. This policy relates to community facilities as part of major development; therefore the principle of development and its location will be assessed separately (e.g. allocated sites and Policy SO3.1) but with reference to this policy where relevant

Policy SO2.3: Provision of Open Space, Sports and Recreational Buildings and Land, including Playing Fields

B.9 Likely activities (operation) to result as a consequence of the proposal:

- Sports and recreation facilities (within major development)
- Changes in water abstraction / discharge
- Changes in vehicle traffic

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B.10 Type of adverse effect that could arise from likely activities:

- Air pollution
- Changes in water quantity or quality

B.11 Does the policy need to be screened into the Appropriate Assessment?

- Yes – sports and recreation facilities have the potential to act as a trip generator and, depending on the type of facility (e.g. swimming pool), could result in changes to water abstraction / discharge. This policy relates to sports facilities as part of major development; therefore the principle of development and its location will be assessed separately (e.g. allocated sites and Policy SO3.1) but with reference to this policy where relevant.

Policy SO3.1: Provision for New Homes

B.12 (Minimum of 6,308 dwellings at five strategic housing allocations, 29 non-strategic allocations, and within rural areas where certain criteria are met.)

B.13 Likely activities (operation) to result as a consequence of the proposal:

- Residential development
- Changes in water abstraction / discharge
- Changes in vehicle traffic

B.14 Type of adverse effect that could arise from likely activities:

- Recreational pressure / urban effects
- Changes in water quality/quantity
- Air pollution
- Loss of habitat

B.15 Does the policy need to be screened into the Appropriate Assessment?

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- Yes – Cannock Chase SAC and Cannock Extension Canal SAC are sensitive to changes in water quantity / quantity, air pollution and loss of habitat; Cannock Chase SAC is also sensitive to recreation pressure / urban effects (fires), and West Midland Mosses SAC is sensitive to air pollution.
- Residential development without 15 kilometres of Cannock Chase SAC (the whole plan area) could result in an increase in recreation pressure / urban effects. No allocated sites are within a European site but non-allocated development in rural areas could in theory result in loss of habitat. There is insufficient information (traffic data and information on water abstraction / discharge) to rule out effects due to changes in water quality / quantity and air pollution, at the screening stage.

Policy SO3.4: Gypsies and Travellers and Travelling Show People

B.16 (Two site allocations for five pitches plus 13 additional residential pitches and 10 plots for Travelling Show People)

B.17 Likely activities (operation) to result as a consequence of the proposal:

- Development of residential pitches for Gypsies, Travellers and Travelling Showpeople
- Changes in water abstraction / discharge
- Changes in vehicle traffic

Type of adverse effect that could arise from likely activities:

- Recreational pressure
- Changes in water quality/quantity
- Air pollution

B.18 Does the policy need to be screened into the Appropriate Assessment?

- Yes – although the quantum of development is small, the residential development permitted by this policy will combine with the residential development permitted by Policy SO3.1.

Policy SO4.2: Provision for New Employment Uses

B.19 (74a hectares, with 22.8 hectares provided on seven allocated (safeguarded) sites.)

B.20 Likely activities (operation) to result as a consequence of the proposal:

- Employment development and supporting facilities (e.g. childcare)
- Changes in water abstraction / discharge
- Changes in vehicle traffic

B.21 Type of adverse effect that could arise from likely activities:

- Changes in water quality/quantity
- Air pollution
- Loss of habitat

B.22 Does the policy need to be screened into the Appropriate Assessment?

- Yes – there is insufficient data (traffic data and information on water abstraction / discharge) to rule out effects due to changes in water quality / quantity and air pollution, at the screening stage. Employment development could in theory take place within a European site although this policy directs Use Class E development to town centres and therefore will not be within a European site.

Policy SO4.3: Intensification of Existing Employment Sites

B.23 (Up to c.16 hectares at 16 existing employment locations)

B.24 Likely activities (operation) to result as a consequence of the proposal:

- Employment development
- Changes in water abstraction / discharge
- Changes in vehicle traffic

B.25 Type of adverse effect that could arise from likely activities:

- Changes in water quality/quantity
- Air pollution

B.26 Does the policy need to be screened into the Appropriate Assessment?

- Yes – there is insufficient data (traffic data and information on water abstraction / discharge) to rule out effects due to changes in water quality / quantity and air pollution, at the screening stage.

Policy SO4.4: Sustainable Tourism and the Rural Economy

B.27 Likely activities (operation) to result as a consequence of the proposal:

- Employment development
- Tourist accommodation
- Visitor and recreational facilities
- Blue infrastructure

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- Changes in water abstraction / discharge
- Changes in vehicle traffic

B.28 Type of adverse effect that could arise from likely activities:

- Recreation pressure
- Changes in water quality/quantity
- Air pollution
- Loss of habitat

B.29 Does the policy need to be screened into the Appropriate Assessment?

- Yes – tourism and employment development could improve access to European sites and increase visitor pressure (Cannock Chase SAC is sensitive to urban effects: fire) and could in theory take place within a European site. Is not possible to quantify changes in water quality / quantity or vehicle traffic that could occur as a result of this policy.

Policy SO6.5: Cannock Town Centre Redevelopment Areas

B.30 (Five allocated sites in Cannock)

B.31 Likely activities (operation) to result as a consequence of the proposal:

- Mixed use development
- Changes in water abstraction / discharge
- Changes in vehicle traffic

B.32 Type of adverse effect that could arise from likely activities:

- Recreational pressure

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- Changes in water quality/quantity
- Air pollution

B.33 Does the policy need to be screened into the Appropriate Assessment?

- Yes – sites will result in the same types of development as the residential and employment site allocations (although there is no possibility that development will occur within a European site, with this policy).

Policy SO6.6: Rugeley Town Centre Redevelopment Areas

B.34 (Two allocated sites in Rugeley.)

B.35 Likely activities (operation) to result as a consequence of the proposal:

- Mixed use development
- Changes in water abstraction / discharge
- Changes in vehicle traffic

B.36 Type of adverse effect that could arise from likely activities:

- Recreational pressure
- Changes in water quality/quantity
- Air pollution

B.37 Does the policy need to be screened into the Appropriate Assessment?

- Yes – as for Policy SO6.5.

Policy 7.7: Amendments to the Green Belt

B.38 Likely activities (operation) to result as a consequence of the proposal:

- Active travel routes
- Direct run-off

B.39 Type of adverse effect that could arise from likely activities:

- Changes in water quality

B.40 Does the policy need to be screened into the Appropriate Assessment?

- Yes – most of the policy identifies which of the allocated sites require changes to green belt boundary to enable them, and also identifies amendments to the Green Belt boundary to accommodate growth beyond the plan period, which will not itself result in new development / activities. However, the policy also allocates four sites (S1-S4) to safeguard land for active travel and biodiversity mitigation to compensate for the loss of Green Belt associated with other policies. This development will be small in scale but one site (S4) is adjacent to Cannock Extension Canal SAC.

Policy SO8.8: Managing Waste

B.41 Likely activities (operation) to result as a consequence of the proposal:

- Waste management facilities
- Changes in vehicle traffic
- Changes in water abstraction / discharge

B.42 Type of adverse effect that could arise from likely activities:

- Air pollution
- Loss of habitat

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- Changes in water quantity / quality

B.43 Does the policy need to be screened into the Appropriate Assessment?

- Yes – this policy could increase HDV traffic on roads within the district. There is current insufficient information (potential development type/location, traffic data) to rule out air pollution or water quantity/quality effects. As this policy is not associated with allocated sites, development could in theory take place within a European site.

Allocated sites

B.44 The following part of this appendix lists allocated sites and considers which sites need to be screened in for different types of impacts.

Air pollution

B.45 Screening criteria ('Allocated site could have a significant effect if...'): Development increases traffic flows by at least 1,000 AADT or 200 HDVs AADT (alone or in combination) on the following roads:

- A513 (where it passes Cannock Chase SAC)
- A460 (where it passes Cannock Chase SAC)
- A5 (where it passes Cannock Extension Canal SAC)
- A518 (where it passes West Midland Mosses SAC / Midland Meres & Mosses (Phase 1) Ramsar site)

B.46 Allocated sites meeting screening criteria (sites to be considered in Appropriate Assessment):

- **There is currently insufficient data to quantify changes in traffic flows** that could arise from development associated with the Local Plan,

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but traffic is more likely on some roads from allocated sites in specific areas:

- A513 – runs along northern edge of district so **allocated sites in and around Rugeley** are more likely to contribute to traffic on this road (e.g. commuting to/from Stafford)
- A460 – runs between Cannock and Rugeley, so **all allocated sites** could contribute traffic to this road
- A5 – runs roughly parallel to the M6 in the southern part of the district and likely to only be used by the allocated sites adjacent to the road e.g. **E13, E15, E17, and SH3**.
- A518 – lies out of the district and does not have a direct route to it. Likely that **no allocated sites** will have a significant effect alone although **all allocated sites** could contribute to an effect in combination.

Recreation pressure

B.47 Screening criteria:

- Residential development within 15 kilometres of Cannock Chase SAC

B.48 Allocated sites meeting screening criteria (sites to be considered in Appropriate Assessment):

- **All allocated sites**

Change in water quantity/ quality

B.49 Screening criteria:

- Development is close to / upstream of watercourse that passes through Cannock Chase SAC or close to Cannock Extension Canal SAC.

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- Development discharges to watercourses in / groundwater under the Cannock Chase SAC and exceeds treatment capacity of wastewater treatment works.
- Development extracts water from watercourses in / groundwater under Cannock Chase SAC.

B.50 Allocated sites meeting screening criteria (sites to be considered in Appropriate Assessment):

- Site **SE2** and **S4** are adjacent to Cannock Chase Extension Canal SAC and **SH2** is hydrologically connected via Chasewater and Southern Staffordshire Coalfield Heaths SSSI.
- SH2 Land to the East of Wimblebury Road, Heath Hayes. There is a water course to the east of the site and is upstream of and connected to Chasewater and Southern Staffordshire Coalfield Heaths SSSI (unit 13) which is hydrologically linked to Cannock Extension Canal SAC.
- There are no sites adjacent to or upstream of Cannock Chase SAC.
- The location of water abstraction, treatment and discharge, and the capacity of treatment works, is currently unknown; although MAGIC [See **reference 60**] shows drinking water abstraction close to Cannock Chase SAC (near the junction of Marquis Drive and the A460) and a Principal aquifer beneath the northern and western parts of Cannock district, including parts of Cannock Chase SAC. This impact is more likely to be relevant to **allocated sites north of Hednesford**.

Loss of habitat

B.51 Screening criteria:

- Development is within Cannock Chase SAC or Cannock Extension Canal SAC

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B.52 Allocated sites meeting screening criteria (sites to be considered in Appropriate Assessment):

- No site allocations are within a European site.

Appendix C

Allocated sites considered in the HRA

C.1 Residential, employment and mixed-use site allocations, based on the Pre-Submission (Regulation 19) Local Plan document received November 2023.

Table C.1: Allocated sites considered in the HRA - Strategic Site Allocations

Site Reference	Location	Type	Capacity
SH1	South Lichfield Road, Cannock	Housing	700 homes
SH2	Land east of Wimblebury Road, Heath Hayes	Housing	up to 400 homes
SH3	Land to rear of Longford House, Watling Street Cannock	Housing	45 homes
SH6	Former Hart School, Burnthill Road, Rugeley (Hagley Park)	Housing	145 homes
SM1	Former Rugeley Power Station, Rugeley	Mixed use	Up to 1,000 homes; up to 5 hectares employment, plus education/community uses
SE1	Kingswood Lakeside Extension 2, Norton Canes	Employment	Up to 500,000 square metres (8.6 hectares)

Appendix C Allocated sites considered in the HRA

Site Reference	Location	Type	Capacity
SE2	Watling Street Business Park Extension	Industrial	50,000 square metres (5.5 hectares)

Table C.2: Allocated sites considered in the HRA - Sites under construction (Table A in the Local Plan)

Site Reference	Location	Type	Capacity
H1	Land to the West of Pye Green Road, Hednesford (Northern end of site adj. Pye Green Road)	Housing	168 homes
H11	108, 102-106 High Green Court, Cannock	Housing	8 homes
H12	Whitelodge, New Penkridge Road, Cannock	Housing	2 homes
H17	Land west of Pye Green Road, Hednesford Cannock (Adj. Pye Green Road. Part of larger site)	Housing	59 homes
H30	Land at Rawnsley Road, Hazel Slade	Housing	60 homes
H44	268, Bradbury Lane, Hednesford	Housing	10 homes
H55	77 Old Fallow Road, Cannock	Housing	11 homes

Appendix C Allocated sites considered in the HRA

Site Reference	Location	Type	Capacity
H57	Unit E Beecroft Court, Cannock	Housing	20 homes
H25	Main Road, Brereton (between Cedar Tree Hotel and Library)	Housing	27 homes

Table C.3: Allocated sites considered in the HRA - Proposed allocations which already have planning permission, are already allocated or have a resolution to grant planning permission for housing (Table B in the Local Plan)

Site Reference	Location	Type	Capacity
H16	Land west of Pye Green Road, Hednesford Cannock (Land Northern end of the larger site)	Housing	51 homes
H18	Land adjacent and to the rear of 419-435, Cannock Road, Hednesford	Housing	25 homes
H45	23 Walsall Road, Cannock	Housing	12 homes
H58	Cromwell House, Mill Street, Cannock	Housing	11 homes
M6	Rugeley Market Hall and Bus Station, Rugeley	Mixed use	Up to 50 homes

Appendix C Allocated sites considered in the HRA

Site Reference	Location	Type	Capacity
M7	Land at Wellington Drive, Rugeley	Mixed use	Up to 20 homes
H24	Market Street garages, Rugeley (incorporating BT telephone exchange)	Housing	Up to 28 homes
H27	Heron Court, Heron Street, Rugeley	Housing	10 homes
H48	Aelfgar School, Taylors Lane, Rugeley	Housing	58 homes
E6	Land at the Academy Early Years Childcare (Former Talbot Public House), Main Road, Brereton	Employment	537 square metres (0.14 hectares)
E14	Hill Farm, 84 Hayfield Hill, Cannock Wood, Rugeley	Employment	0.55 hectares
E16	Land Off Norton Green Lane, Norton Canes	Employment	0.56 hectares

Table C.4: Allocated sites considered in the HRA - Proposed Allocations – Additional Sites from Development Capacity Study (Table C in the Local Plan)

Site Reference	Location	Type	Capacity
H29	Land at 521, Pye Green Road, Hednesford, Cannock	Housing	80 homes
M1	Land bound by Ringway, Church Street and Market Hall Street, Cannock Town Centre	Mixed use	Up to 70 homes
H32 / M5	Avon Road/Hallcourt Lane, Cannock	Mixed use	Up to 22 homes
M3	Beecroft Road Car Park, Cannock	Mixed use	Up to 35 homes
H34	Land at Chapel Street, Heath Hayes	Housing	Up to 20 homes
H35	Land at Girton Road/Spring Street, Cannock	Housing	Up to 24 homes
H36	Park Road Offices, Cannock	Housing	Up to 25 homes
H37	Police Station Car Park, Cannock	Housing	Up to 25 homes
H38	Land at Walsall Road, Avon Road, Hunter Road, Hallcourt Lane, Cannock	Housing	Up to 24 homes–

Appendix C Allocated sites considered in the HRA

Site Reference	Location	Type	Capacity
H39	-6 - 28 Wolverhampton Road, Cannock	Housing	Up to 25 homes
H40	Danilo Road Car Park, Cannock	Housing	Up to 20 homes
M4	Backcrofts Car Park, Cannock	Mixed use	Up to 20 homes
M2	Park Road Bus Station, Cannock	Mixed use	Up to 15 homes
H43	243, Hill Street, Hednesford, Cannock	Housing	Up to 13 homes
"H60	41, Mill Street, Cannock	Housing	Up to 15 homes
H61	Cannock Chase High School, Lower Site, Campus, Hednesford Road	Housing	Not defined (up to 4.18ha)
H62	Springvale Area Service office, Walhouse Street, Cannock	Housing	10 homes
H63	Former Rumer Hill Industrial Estate, Cannock	Housing	Up to 99 homes
H65	A Dunford and Son, Brindley Heath Road, Cannock	Housing	Up to 15 homes
H66	Land at the Corner of Avon Road and Hunter Road, Cannock	Housing	Up to 18 homes

Appendix C Allocated sites considered in the HRA

Site Reference	Location	Type	Capacity
H49	Land at The Mossley, off Armitage Road	Housing	Up to 40 homes
H50	Nursery Fields, St Michaels Road, Brereton	Housing	Up to 35 homes
H51	Castle Inn, 141, Main Road, Brereton	Housing	Up to 27 homes
H52	Gregory Works, Armitage Road, Brereton	Housing	Up to 23 homes
H53	Land off Lichfield Road, Rugeley	Housing	Up to 20 homes
H64	The Fairway Motel, Horsefair, Rugeley	Housing	Up to 17 homes
H67	Land at Pendlebury Garage and Petrol Station, 5 Wolseley Road, Rugeley	Housing	Up to 18 homes
H68	Land off Norton Hall Lane, Norton Canes	Housing	Up to 55 homes
H69	272 Hednesford Road, Norton Canes	Housing	Up to 11 homes
GT1	Land at Cannock Wood, Rawnsley	Gypsy and Traveller pitches	3 pitches
GT2	Land at Lime Lane, Little Wyrley	Gypsy and Traveller pitches	2 pitches
E4	Former Power Station off A51	Employment	2.1 hectares

Appendix C Allocated sites considered in the HRA

Site Reference	Location	Type	Capacity
	(adjacent to Towers Business Park), Rugeley		

Table C.5: Allocated sites considered in the HRA - Sites allocated to safeguard land for active travel and biodiversity mitigation (Policy 7.7)

Site Reference	Location	Type	Capacity
S1	East of Wimblebury Road, Heath Hayes (southern site)	Safeguarded	n/a
S2	Land at Newlands Lane, Heath Hayes, Cannock (former golf driving range)	Safeguarded	n/a
S3	Land to the west of Hednesford Road, Norton Canes	Safeguarded	n/a
S4	Jubilee Field, Watling Street	Safeguarded	n/a

Appendix D

Record of consultation

D.1 This appendix serves as a record of consultation, as relevant to the HRA.

HRA Scoping Report consultation, October 2019

Lichfield & Hatherton Canals Restoration Trust

Comment

- Paragraph 4.10
 - As a point of information, the water level in the Cannock Extension Canal is managed by Canal & River Trust as the navigation authority for the Canal and other canals connected to it.

Response

- Now acknowledged in Chapter 4, Screening (Reg 19 HRA Report)

Inland Waterways Association

Comment

- Page 32 Local Transport Plans

Appendix D Record of consultation

- Reference to “supporting a limit on the levels of boat traffic on the Cannock Extension Canal” relates to now discredited and withdrawn representations from Natural England (see IDP response). This text should be removed from the report.

Response

- The appendix listing other plans (and therefore the paragraph referred to) has been removed in the Reg 19 HRA report as the methodology for assessing in-combination effects has now been updated.

Natural England

Comment

- The scoping assessment sets out a methodology for further stages of assessment to assess if significant effects are likely to occur, either alone or in combination. It also takes into account recent rulings such as the interpretation of the Habitats Directive in the case of People over Wind and Sweetman vs Coillte Teoranta (ref: C-323/17).
- We have no particular comments to make on the scoping assessment and look forward to the next iteration of the report.

Response

- Comment noted – no further action needed.

St Modwen (Watling St)

Comment

- The following European-designation sites are within 15 kilometres of Cannock Chase District:
 - • Cannock Chase SAC – within and adjacent to the District;
 - • Cannock Extension Canal SAC – within and adjacent to the District;
 - • Pasture fields Salt Marsh SAC – c.6 kilometres away;
 - • Midland Meres and Mosses (Phase 1) Ramsar Site/ West Midland Mosses SAC – c.8 kilometres away;
 - • Motte Meadows SAC – c.13 kilometres away; and
 - • River Mease SAC – c.13 kilometres away.
- The above sites therefore fall within the 15 kilometres threshold zone of influence in terms of their proximity to Watling Street Business Park. The SAC in closest proximity to the site is Cannock Extension Canal SAC. [...].
- Assessment Assumptions
 - In terms of air pollution, the screening criteria set out in Natural England are if a plan or project would lead to a change in Annual Average Daily Traffic (AADT) vehicle flow of more than 1,000 total traffic or 200 HDV on roads within 200m of the SAC, either alone or in combination.
 - The HRA Scoping Report notes that (paragraph 4.4 refers), “Traffic forecast data (based on the planned level of growth) will therefore be needed to determine [...]. An assessment will also be undertaken to identify which European sites lie within 200m of the strategic road network.” In addition it states:
 - “Potential effects will also be considered if there is any significant development identified in the plan that would cause aerial emissions...” (Paragraph 4.5).

Appendix D Record of consultation

- In relation to the Watling Street Business Park site, traffic data used in modelling air quality in November 2017 indicated that the screening criteria would not be breached by the proposed development of site CE20 in isolation. The modelling of air quality based on this data indicated that an employment development at Watling Street Business Park could lead to a change annual mean nitrogen oxides concentration and nutrient nitrogen deposition that would exceed 1% of the critical level/load within the site boundary, but not in the area of open water (which is where the water plantain species is located).
- Consequently, in terms of impact on the Cannock Extension Canal SAC, the available data suggests the proposals on the site are not likely to cause adverse impact on the integrity of this European site.

Response

- Comments noted. The HRA Scoping Report did not made any assessment of the potential impacts of the Local Plan on European sites; rather it set out background information and introduced the HRA process that would be undertaken. This HRA report now presents an assessment of the effects on European sites.
- It was not possible at the Issues & Options stage to undertake detail air quality assessment as traffic data was not currently available; however likely significant effects are more likely to result from the Local Plan as a whole and in combination with other plans/projects, rather than from individual developments. Once an assessment of the affected road network has been carried out, it will be possible to identify whether the Plan as a whole (alone or in combination with other plans/projects) will have a likely significant effect at a European site.

Local Plan Preferred Options Consultation April 2021

Natural England

Comment

- We welcome the HRA and note that the assessment has concluded that further information is required. We wish to provide the following advice:
- The HRA scoping Report 2019 considered Humber Estuary SAC/SPA/RAMSAR in its assessment. Since the options and issues stage in 2019, the preferred policies have progressed and new sites are proposed to be allocated. We advise that the current HRA should reflect back and consider the Humber Estuary in the current HRA.
- Ammonia (NH₄) is also a key pollutant from vehicle traffic.
- Once traffic data has been gathered and you understand what is the affected road network, we advise that you review the sites that could be affected.
- One of the allocated sites is hydrologically connected to Cannock Extension Canal SAC- SH2/ SH2 (part) Land to the East of Wimblebury Road, Heath Hayes. There is a water course to the east of the site and is upstream of and connected to Chasewater and Southern Staffordshire Coalfield Heaths SSSI (unit 13) which is hydrologically linked to Cannock Extension Canal SAC.
- Consideration should be given to water quantity impacts on Cannock Extension Canal SAC and water quality impacts on Cannock Chase SAC. Also impacts from surface water should be considered.
- Appendix A- we would advise also looking at European sites conservation objectives: supplementary advice as well as the site improvement plans, as these are more up to date.

Response

- Ammonia now referred to as a key pollutant from vehicle traffic.
- Traffic modelling is currently underway, which will enable identification of roads exceeding traffic screening criteria.
- SH2 has been screened in relation to water quality/quantity.
- The HRA screening now considers the potential effects of changes to water quantity at Cannock Extension Canal SAC and water quality at Cannock Chase SAC.
- Appendix A has been updated with information from the conservation objectives supplementary advice.

Comment – In relation to the proposed development site

- Table B: All the sites will have potential for recreational impacts Cannock Chase SAC/SSSI and potentially air quality impacts on the Cannock Chase SAC/SSSI, Cannock Extension Canal SAC and West Midland Mosses SAC.
- Table C: All the sites will have potential for recreational impacts Cannock Chase SAC/SSSI and potentially air quality impacts on the Cannock Chase SAC/SSSI, Cannock Extension Canal SAC and West Midland Mosses SAC. The sites below have the following additional potential impacts listed below:
 - SH2 (part) Land to the East of Wimblebury Road, Heath Hayes: Hydrological linked to Chasewater and Southern Staffordshire Coalfield Heaths SSSI (unit 13) and consequently Cannock Extension Canal SAC.
 - H30 Land at Rawnsley Road, Hazel Slade: Significant recreational impact on Cannock Chase SAC and Hednesford Hills (Chasewater and Southern Staffordshire Coalfield Heaths SSSI which is part of the functional connectivity of Cannock Chase SAC).

Appendix D Record of consultation

- Proposed allocations: All the sites will have potential for air quality impacts on the Cannock Chase SAC/SSSI, Cannock Extension Canal SAC and West Midland Mosses SAC. The sites below have the following additional potential impacts listed below:
- E10 Turf Field, Watling Street: Potential impacts on Cannock Extension Canal SAC.

Response - – In relation to the proposed development site

- Site SH2 has been screened in in relation to water quality and Cannock Extension Canal SAC, as above.
- The potential contribution of site H30 to recreation pressure at Cannock Chase SAC has been acknowledged in the HRA. In terms of the potential for impacts on functionally linked habitats, the SSSI and SAC do have a 'functional link' in terms of landscape and recreation use, but not in HRA terms as the SAC is not designated for mobile species (and we note that this comment is not reiterated in the HRA-specific advice).
- Site E10 is no longer allocated.

Comment - In relation to the proposed policy on protecting, conserving and enhancing biodiversity and geodiversity

- We have concerns regarding the following paragraph:
- “Development which results in loss or harm to SAC, Ancient Woodland, Ancient trees or Veteran trees will need to also need to demonstrate there are ‘imperative reasons for overriding public interest’.”
- This oversimplifies the issues and we would advise that you review and check your wording. Footnote 58 of the NPPF on ancient woodlands expands on the “wholly exceptional reasons” test and mentions “public

benefit” but it is not the same as the Habitats Regulations article 6(4) derogation Test 2 (IROPI - imperative reasons of overriding public interest).

Response - In relation to the proposed policy on protecting, conserving and enhancing biodiversity and geodiversity

- Policy SO7.1 has been updated to more clearly reflect the requirements of the Habitats Regulations, and the HRA reflects this.

Comment - In relation to the proposed policy on Special Areas of Conservation

- We would advise that this policy title and first paragraph should refer to European sites and Wetlands of International Importance ('Ramsar sites'), rather than solely Special Area of Conservation (SAC).
- We would advise that the paragraph on Cannock Chase SAC needs to be revised to be clear that there are other impacts other than recreational impacts for examples, air quality, water quality direct impacts.
- We would welcome a conversation with the LPA to understand their concerns about impacts from the water catchment area of Cannock Extension Canal SAC. Is there a particular ecological pathway of concern?

Response - - In relation to the proposed policy on Special Areas of Conservation

- Policy SO7.3 is now titled 'Habitat Sites' rather than 'Special Areas of Conservation'. 'Habitat Sites' is a term used for the designated sites that are considered in a HRA and therefore includes Ramsar sites and SPAs; however the wording of the policy and its supporting text refer only to

Cannock Chase SAC (recreation pressure) and Cannock Extension Canal SAC (impacts 'within the water catchment').

- The HRA makes recommendations for revising the wording of this policy.

Severn Trent

Comment

- We have no comments to make regarding the equality, health, or habitat assessments.
- For your information we have set out some general guidelines that may be useful to you.
- Water Quality
 - Good quality river water and groundwater is vital for provision of good quality drinking water. We work closely with the Environment Agency and local farmers to ensure that water quality of supplies are not impacted by our or others operations. The Environment Agency's Source Protection Zone (SPZ) and Safe Guarding Zone policy should provide guidance on development. Any proposals should take into account the principles of the Water Framework Directive and River Basin Management Plan for the Severn River basin unit as prepared by the Environment Agency.
- Water Supply
 - When specific detail of planned development location and sizes are available a site specific assessment of the capacity of our water supply network could be made. Any assessment will involve carrying out a network analysis exercise to investigate any potential impacts. We would not anticipate capacity problems within the urban areas of our network, any issues can be addressed through reinforcing our network. However, the ability to support significant development in the rural areas is likely to have a greater impact and require greater reinforcement to accommodate greater demands.

Appendix D Record of consultation

■ Water Efficiency

- Part G of Building Regulations specify that new homes must consume no more than 125 litres of water per person per day. We recommend that you consider taking an approach of installing specifically designed water efficient fittings in all areas of the property rather than focus on the overall consumption of the property. This should help to achieve a lower overall consumption than the maximum volume specified in the Building Regulations.

Response

- We note the comments on water quality, which apply to drinking water sources, and water supply capacity.
- Policy 8.3 has been updated in the Reg.19 Local Plan to include a water consumption standard; the HRA has been updated to reflect this.
- Water is supplied to Cannock Chase District by South Staffs Water, rather than Severn Trent. The HRA takes into account the most recent Water Cycle Study for the South Staffordshire Councils, to which both Severn Trent and South Staffs Water have contributed.

Keith Dixon (local resident)

Comment

- “My comments are that the SAMM measures are flawed. Links between the espoused purposes of the SAMM (i.e. protecting Cannock Chase Special Area of Conservation and the AONB more generally for future generations) and most of the detailed measures range from tenuous to fantasy and mere image management and making it look as if something is being done. I have set out in Table 1 a complete set of criticisms of the SAMM measures in the form of myths used to promote the measures by the County Council, AONB Joint Committee and SAC Joint Board.

Appendix D Record of consultation

- I should like to add the following as where things should go from here in relation to the SAMM.” [further details provided]

Response

- The HRA makes reference to the most recent evidence and agreements around the mitigation of recreation pressure at Cannock Chase SAC. The has been developed by the SAC Partnership, which includes Natural England (the statutory consultee for planning matters relating to designated biodiversity sites).

Canal and River Trust

Comment

- Largely agree with the conclusions of the Habitat Regulations Assessment Report.
- We do wish to comment that the document lacks recognition that the Chasewater reservoir SSSI is integral to the water supply of the Cannock Extension Canal SAC. Where new development would be hydrologically connected to the water supply catchment for Chasewater reservoir this should be included in the Habitat Regulations Assessment Report. Should this not be included, there is a risk that new developments in the water supply catchment for Chasewater reservoir could be detrimental to the integrity of the Cannock Extension Canal SAC.

Response

- The assessment of impacts relating to water supply have been updated to reflect this link.

Appendix D Record of consultation

- Chasewater reservoir supplies water to the canal network rather than development; however there are potential impacts associated water pollution, which have been considered in the HRA.

References

- 1 The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007 (2007) SI No. 2007/1843. TSO (The Stationery Office), London
- 2 The Conservation of Habitats and Species Regulations 2017 (2017) SI No. 2017/1012, as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579), TSO (The Stationery Office), London
- 3 The exception to this would be where 'imperative reasons of overriding public interest' can be demonstrated; see paragraph 1.17
- 4 The integrity of a site is the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was designated. (Source: UK Government Planning Practice Guidance)
- 5 <https://www.gov.uk/guidance/appropriate-assessment>
- 6 Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the 'Habitats Directive')
- 7 Directive 2009/147/EC of 30 November 2009 on the conservation of wild birds (the 'Birds Directive')
- 8 The network of protected areas identified by the EU:
https://ec.europa.eu/environment/nature/natura2000/index_en.htm
- 9 Defra (2023) Guidance - Habitats Regulations Assessments : protecting a European site, <https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site>
- 10 Levelling-up and Regeneration Act 2023,
www.legislation.gov.uk/ukpga/2023/55/enacted
- 11 <https://www.gov.uk/government/publications/changes-to-the-habitats-regulations-2017/changes-to-the-habitats-regulations-2017>
- 12 Defra and Natural England (2021) Guidance - Habitats regulations assessments: protecting a European site,

References

- <https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site>
- 13** NPPF para 176, available from <https://www.gov.uk/guidance/national-planning-policy-framework>
- 14** The HRA Handbook, Section A3. David Tyldesley & Associates, a subscription based online guidance document:
<https://www.dtapublications.co.uk/handbook/European>
- 15** Defra and Natural England (2021) Guidance - Habitats regulations assessments: protecting a European site,
<https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site>
- 16** UK Government Planning Practice Guidance, available from <https://www.gov.uk/guidance/appropriate-assessment>
- 17** European Commission (2001) Assessment of plans and projects significantly affecting European Sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC.
- 18** The HRA Handbook. David Tyldesley & Associates, a subscription based online guidance document:
<https://www.dtapublications.co.uk/handbook/European>
- 19** Conservation objectives for SACs and SPAs are published by Natural England
- 20** In line with the CJEU judgment in Case C-323/17 People Over Wind v Coillte Teoranta, mitigation must only be taken into consideration at this stage and not during Stage 1: HRA screening
- 21** In addition to SAC and SPA citations and conservation objectives, key information sources for understanding factors contributing to the integrity of the sites include (where available) conservation objectives supplementary advice and Site Improvement Plans prepared by Natural England:
<http://publications.naturalengland.org.uk/category/5458594975711232>
- 22** Obtained from the Natural England website (www.naturalengland.org.uk)

References

- 23** Obtained from Natural England website:
<http://publications.naturalengland.org.uk/category/6490068894089216>
- 24** CHAPMAN, C. & TYLDESLEY, D. 2016. Functional linkage: How areas that are functionally linked to European sites have been considered when they may be affected by plans and projects - a review of authoritative decisions. Natural England Commissioned Reports, Number 207
- 25** https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/290346/sw1-067-tr-e-e.pdf
- 26** SI No. 2017/2012
- 27** ECJ Case C-127/02 "Waddenzee" Jan 2004
- 28** The HRA Handbook. David Tyldesley & Associates, a subscription based online guidance document [online] Available at:
<https://www.dtapublications.co.uk/handbook/European>
- 29** Assessment of plans and projects significantly affecting European sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. European Commission Environment DG, November 2001
- 30** Ibid. [reference 27]
- 31** Air Pollution Information System, Site Relevant Critical Loads
<http://www.apis.ac.uk/srcl>
- 32** SSSI unit condition <https://magic.defra.gov.uk/MagicMap.aspx>
- 33** Highways Agency, 2019, Design Manual for Roads and Bridges, LA105 Air Quality: <https://www.standardsforhighways.co.uk/dmrb/>
- 34** Institute for Air Quality Management and Assessment, 2020, Guide to the assessment of air quality impacts on designated nature conservation sites
- 35** Natural England, 2018, Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations

References

- 36** Middlemarch (2023) Creation of an Air Pollution Evidence Base Brief to Support Local Plan HRA; Staffordshire, Wolverhampton, Walsall, Sandwell and Dudley
- 37** UCL (2022) DataShine Commute [uses 2011 census], <https://commute.datashine.org.uk/#mode=allflows&direction=both&msoa=E02006118&zoom=11.3&lon=-1.8585&lat=52.7567>
- 38** Footprint Ecology, 2013, Cannock Chase SAC Visitor Impacts Mitigation Report: <https://www.footprint-ecology.co.uk/reports/Underhill-Day%20and%20Liley%20-%202012%20-%20Cannock%20Chase%20SAC%20visitor%20impacts%20mitigation%20repor.pdf>
- 39** Footprint Ecology, 2013, Cannock Chase SAC Visitor Survey <https://www.lichfielddc.gov.uk/downloads/file/634/cannock-chase-special-area-of-conservation-visitor-survey>
- 40** www.sstaffs.gov.uk/sites/default/files/2023-03/cannock_chase_sac_mitigation_guidance_2022.pdf
- 41** Footprint Ecology, 2017, Cannock Chase SAC – Planning Evidence Base Review https://www.cannockchasedc.gov.uk/sites/default/files/cannock_chase_sac_evidence_base_report_september_2017_0.pdf
- 42** Footprint Ecology, 2018, Evidence base to inform a car park strategy and a site users strategy for Cannock Chase https://www.staffordbc.gov.uk/sites/default/files/cme/DocMan1/Planning%20Policy/Further%20Information%20and%20Evidence/Habitats%20Regulation%20Assessment/Evidence%20base%20for%20strategies%20Final_Can_Chase_SAC.pdf
- 43** Footprint Ecology, 2019, Cannock Chase visitor survey 2018 https://www.cannockchasedc.gov.uk/sites/default/files/cannock_chase_visitor_survey_2018_part_1_0.pdf
- 44** Footprint Ecology, 2020, Public Consultation responses relating to the Cannock Chase SAC SAMMM detailed implementation plans: car parking,

References

- site user infrastructure, education and engagement
https://www.staffordbc.gov.uk/sites/default/files/cme/DocMan1/Cannock%20Chase%20SAC%20Partnership/Public%20Consultation%20Responses%20Report%20%202020_0.pdf
- 45** Footprint Ecology 2020 Cannock Chase SAC SAMMM Detailed Implementation Plan: site user infrastructure, education and engagement
<https://www.lichfielddc.gov.uk/downloads/file/1524/cannock-chase-sac-strategic-access-management-monitoring-measures-detailed-implementation-plan-dip-site-user-infrastructure-education-and-engagement>
- 46** Footprint Ecology (2020) Cannock Chase SAC SAMMM Detailed Implementation Plan: car parking
<https://www.lichfielddc.gov.uk/downloads/file/1525/cannock-chase-sac-strategic-access-management-monitoring-measures-detailed-implementation-plan-dip-car-parking>
- 47** Footprint Ecology (2021) Cannock Chase Special Area of Conservation Planning Evidence Base Review Stage 2,
www.cannockchasedc.gov.uk/sites/default/files/site-old/cannock_chase_sac_planning_evidence_base_report_12.07.21.pdf
- 48** JBA Consulting (2020) Southern Staffordshire Councils Water Cycle Study – Phase 1 Scoping Study,
https://www.cannockchasedc.gov.uk/sites/default/files/southern_staffordshire_water_cycle_study_feb_2020.pdf
- 49** Environment Agency (2022) Catchment data explorer, Middle Humber,
<https://environment.data.gov.uk/catchment-planning/v/c3-draft-plan/WaterBody/GB530402609202>
- 50** http://gwmforum.org/wp-content/uploads/2019/10/Poster_S_Bishop_Cannock-Chase.pdf
- 51** Aquifer designation maps and source protection zones
<https://magic.defra.gov.uk/MagicMap.aspx>
- 52** <https://www.standardsforhighways.co.uk/prod/attachments/10191621-07df-44a3-892e-c1d5c7a28d90>

References

- 53** <https://iaqm.co.uk/text/guidance/air-quality-impacts-on-nature-sites-2020.pdf>
- 54** Cannock Chase District Council (2022) Cannock Chase SAC Guidance to Mitigate the Impact of New Residential Development, April 2022, [cannock_cannock_chase_sac_updated_guidance_april_2022.pdf](https://www.cannockchasedc.gov.uk/cannock_cannock_chase_sac_updated_guidance_april_2022.pdf) ([cannockchasedc.gov.uk](https://www.cannockchasedc.gov.uk))
- 55** Develop Contributions and Housing Choices Supplementary Planning Document (2015)
https://www.cannockchasedc.gov.uk/sites/default/files/developer_contributions_spd_adopted_july_2015.pdf
- 56** Footprint Ecology, 2017, Cannock Chase SAC Planning Evidence Review
https://www.cannockchasedc.gov.uk/sites/default/files/cannock_chase_sac_evidence_base_report_september_2017_0.pdf
- 57** Ricardo Energy & Environment (2019) Final Water Resources Management Plan 2019 Habitats Regulations Assessment,
<https://www.severntrent.com/content/dam/stw-plc/water-resource-zones/2019/WRMP19-HRA-Final-Report.pdf>
- 58** <https://www.standardsforhighways.co.uk/prod/attachments/10191621-07df-44a3-892e-c1d5c7a28d90>
- 59** <https://iaqm.co.uk/text/guidance/air-quality-impacts-on-nature-sites-2020.pdf>
- 60** Aquifer designation maps and source protection zones
<https://magic.defra.gov.uk/MagicMap.aspx>

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