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Habitats Regulations Assessment of the Stafford Borough Local Plan 2020-2040 (Preferred Options)

Authors: Durwyn Liley, Bernie Fleming & Zoe Caals

FOOTPRINT ECOLOGY, FOREST OFFICE, BERE
ROAD, WAREHAM, DORSET BH20 7PA
WWW.FOOTPRINT-ECOLOGY.CO.UK
01929 552444



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Summary

The Conservation of Habitats and Species Regulations 2017 (as amended) require local authorities to assess the impact of their local plan on the internationally important sites for biodiversity in and around their administrative areas. Together, these Special Protection Areas, Special Areas of Conservation and Ramsar sites are known as European sites. The task is achieved by means of a Habitats Regulations Assessment (HRA).

An HRA asks very specific questions of a plan. Firstly, it ‘screens’ the plan to identify if there is a risk that certain policies or allocations may have a ‘likely significant effect’ on a European site, alone or (if necessary) in-combination with other plans and projects. If the risk of likely significant effects can be ruled out, then the plan may be adopted but if they cannot, the plan must be subjected to the greater scrutiny of an ‘appropriate assessment’ to find out if the plan will have an ‘adverse effect on the integrity’ of the European sites.

Following an appropriate assessment, a Plan may only be adopted if an adverse effect on the integrity of the site can be ruled out. If necessary, a plan should be amended to avoid or mitigate any likely conflicts. This usually means that some policies or allocations will need to be modified or, more unusually, may have to be removed altogether.

This document is an interim HRA report (that will be expanded as the Plan is finalised) to accompany the Stafford Borough Local Plan at the Preferred Options stage, in October 2022. This is an early stage in the formulation of the Plan and the HRA will continue to progress as the Plan develops and further evidence becomes available.

Initial screening identified the potential for likely significant effects from general urban effects, recreation, hydrological issues and air quality. Likely significant effects (‘LSE’) were identified for:

- Cannock Chase Special Area of Conservation (‘SAC’) (general urban effects, recreation, hydrological issues and air quality);
- Motte Meadows SAC (hydrological issues);
- Pasturefields Salt Marsh SAC (hydrological issues, air quality)
- West Midlands Meres and Mosses SAC (hydrological issues, air quality);
- Midlands Meres and Mosses Phase 1 Ramsar (hydrological issues, air quality);
- Midlands Meres and Mosses Phase 2 Ramsar (hydrological issues)
- Cannock Chase Extension Canal SAC (air quality);

Policies screened in at this stage were the overall quantum of growth (Policy 1) and allocation policies (the residential allocations in Policies 9 – 12, and the gypsy and traveller accommodation allocated in policy 30) and the bespoke avoidance measures included in Policy 48.

It is too early to undertake a full appropriate assessment as key pieces of evidence are still to be collated. Following the initial screening, topics for appropriate assessment are highlighted to advise on the scope of the appropriate assessment and inform the evidence that will need

to be gathered as the Plan progresses. Later iterations of the Plan will require a full screening and the appropriate assessment sections can be updated, as relevant once more detail and evidence are available.

Urban effects

Urban effects relate to issues where development is close to the European site boundary and relates to impacts such as light, noise, cat predation, fly tipping, increased fire risk, spread of invasive species (e.g. from gardens and garden waste) and vandalism.

Policy 48 includes the provision of a 400m zone around Cannock Chase SAC within which new development will be restricted. This will eliminate risks from urban effects as it ensures development is set back from the boundary. The approach will also reduce risks relating to recreation (covered as a separate appropriate assessment topic). This is a robust policy approach that will create a buffer around the Cannock Chase SAC and ensure urban pressures are eliminated. As such there is no need for in-combination assessment and adverse effects on integrity can be ruled out, alone or in-combination.

Recreation

Recreation impacts have long been recognised at Cannock Chase SAC and include trampling, erosion, dog fouling, spread of disease and increased risk of fire.

A strategic approach to mitigation is long established, including a zone of influence of 15km and a series of mitigation measures already implemented and further measures scheduled. The strategic approach has been reviewed and updated, as set out in the Planning Evidence Base Review (PEBR) and addresses the levels of growth in all relevant local plans. With adequate mitigation in place and secured in plan policy it should be straight-forward to undertake the appropriate assessment at later stages of Plan making. The established strategic approach, agreed across the partnership, means that it should be possible to rule out adverse effects alone or in-combination for later versions of the Plan.

Hydrological issues

Hydrological issues relate to both water quality and water availability. Liaison with Severn Trent Water, the Environment Agency and Natural England is required to assess the scale of any issues and identify any mitigation measures, if necessary, before the next iteration of the Local Plan and further updates of this HRA.

Confidence can be drawn from the outcome of the HRAs for the River Basin Management Plan (RBMP) and Water Resources Management Plan (WRMP) that adverse effects on the integrity of any European sites potentially at risk from hydrological issues (i.e. water resources and water quality) can be ruled out. However, reliance on these would be misplaced until the outputs of the HRA for the Drought Plan and the Strategic Environmental Assessment for the Drainage and Wastewater Management Plan are available. Subsequent versions of the Local Plan and future iterations of the HRA should incorporate relevant findings. Until these have been subject to scrutiny, adverse effects on the integrity of the (Aqualate Mere component of the) Midland Meres and Mosses Phase 2 Ramsar site, Cannock Chase SAC, the (Chartley Moss

component of the) Midland Meres and Mosses Phase 1 Ramsar site/West Midland Mosses SAC, Mottey Meadows SAC and Pasturefields Salt Marsh SAC cannot be ruled out.

Air quality

Increased road traffic has the potential to impact air quality and is relevant where there are major roads within 200m of European sites. For Cannock Chase SAC, Cannock Extension Canal SAC, Mottey Meadows SAC, Pasturefields Salt Marsh SAC, (the Chartley Moss component of the) Midland Meres and Mosses Phase 1 Ramsar site/West Midland Mosses SAC and (the Aqualate Mere and Cope Mere components of the) Midland Meres and Mosses Phase 2 Ramsar it is necessary to first understand the potential increase in traffic likely as a result of the plan (including the in-combination effects with other relevant plans and projects). Where increases are above particular thresholds then air quality modelling will be required. At present, the Council does not have the evidence to assess the impact for any increase in traffic generated by the emerging Local Plan and such evidence will be required before adverse effects on the integrity cannot be ruled out.

Traffic data are needed to complete the HRA. These need to show current traffic flows (Average Annual Daily Traffic 'AADT' for all traffic and for Heavy Duty Vehicles 'HDVs') and flows at the end of the Plan period (with and without development across the Plan and other Local Plans), for each of the roads within 200m of the European sites. If these data show increases of more than 1,000 AADT or 200 HGV, then air quality assessment may be required to determine the level of pollutant deposition likely to occur at the SACs and then ecological assessment would also be needed to understand the sensitivity of the habitats within 200m of the roads to this level of deposition. Traffic data are being collected by a partnership of local authorities and the HRA can be updated at Publication.

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1. Introduction

Overview

- 1.1 This report is an interim Habitats Regulations Assessment (HRA) report to accompany the Stafford Borough Local Plan 2020-2040 (‘the Plan’) at the Preferred Options stage. This report has been prepared by Footprint Ecology on behalf of Stafford Borough Council. An HRA assesses the implications of a plan for legally protected European sites.
- 1.2 This report will be updated for each stage of the Plan and the HRA will be finalised at the point at which the Plan is ready for adoption.

The Stafford Borough Local Plan

- 1.3 Stafford Borough is centrally located within the county of Staffordshire. It lies between the north Staffordshire conurbation to the north, comprising of Stoke-on-Trent and Newcastle-under-Lyme, and the West Midlands conurbation to the south.
- 1.4 The Plan will be the main planning policy document for the Borough and will set out where development should take place and provide the policies which will be used in making decisions on planning applications. The new Stafford Borough Local Plan will replace the Plan for Stafford Borough 2011-2031 (which was adopted in June 2014 and Part 2 adopted in January 2017).
- 1.5 The Preferred Options follows the Issues and Options stage (February – April 2020) and following the Preferred Options there will be a Publication version of the Plan published prior to submission to the Planning Inspectorate which is anticipated in 2023.

Habitats Regulations Assessment process

- 1.6 The designation, protection and restoration of European wildlife sites is embedded in the Conservation of Habitats and Species Regulations 2017, as amended, which are commonly referred to as the ‘Habitats Regulations’. Importantly, the most recent amendments (the Conservation of Habitats and

Species (amendment) (EU Exit) Regulations 2019¹) take account of the UK's departure from the EU.

- 1.7 Regulation 105 *et seq* addresses the assessment of local plans and determines the scope of this HRA alongside recent Government Guidance on the interpretation and application of the Regulations².

European sites

- 1.8 'European sites' are the cornerstone of UK nature conservation policy. Each forms part of a 'national network' of sites that are afforded the highest degree of protection in domestic policy and law. They comprise Special Protection Areas (SPA) classified under the 1979 Birds Directive, and Special Areas of Conservation (SAC) designated under the 1992 Habitats Directive. As a matter of policy, potential SPAs (pSPAs) possible SACs (pSACs) and those providing formal compensation for losses to European sites, are also given the same protection³.
- 1.9 The network comprises safeguards for the most valuable and threatened habitats and species across the country and Europe. Prior to Brexit, this formed part of the EU-wide Natura 2000 network of SPAs and SACs to form the largest, coordinated network of protected areas in the world.
- 1.10 The designations made under the European Directives still apply and the term, 'European site' remains in use. According to long-established

¹ The amending regulations generally seek to retain the requirements of the 2017 Regulations but with adjustments for the UK's exit from the European Union. See Regulation 4, which also confirms that the interpretation of these Regulations as they had effect, or any guidance as it applied, before exit day, shall continue to do so.

² Habitats regulations assessments: protecting a European site. Defra and Natural England. 24 February 2021. <https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site> (accessed 17th August 2022)

³ For the avoidance of doubt, the list of statutory European sites also comprises: A site submitted by the UK to the European Commission (EC) before Exit Day (a candidate SAC or cSAC) as eligible for selection as a Site of Community Importance (SCI) but not yet entered on the ECs list of SCI, until such time as the Appropriate Authority has designated the site or it has notified the statutory nature conservation body that it does not intend to designate the site. After Exit Day, no further cSACs will be submitted to the EU. Statutory European sites also include SCI included on a list of such sites by the European Commission from cSACs submitted by the UK before the UK left the EU, until such time as the UK designates the site when it will become a fully designated SAC.

Government policy⁴, European sites also comprise ‘Wetlands of International Importance’ (or Ramsar sites) although these do not form part of the national network.

- 1.11 The overarching objectives of the national network are to maintain, or where appropriate, restore habitats and species listed in Annexes I and II of the Habitats Directive to a Favourable Conservation Status, and contribute to ensuring, in their area of distribution, the survival and reproduction of wild birds and securing compliance with the overarching aims of the Wild Birds Directive.
- 1.12 The appropriate authorities must have regard to the importance of protected sites, coherence of the national site network and threats of degradation or destruction (including deterioration and disturbance of protected features) on SPAs and SACs.

Role of the competent authority

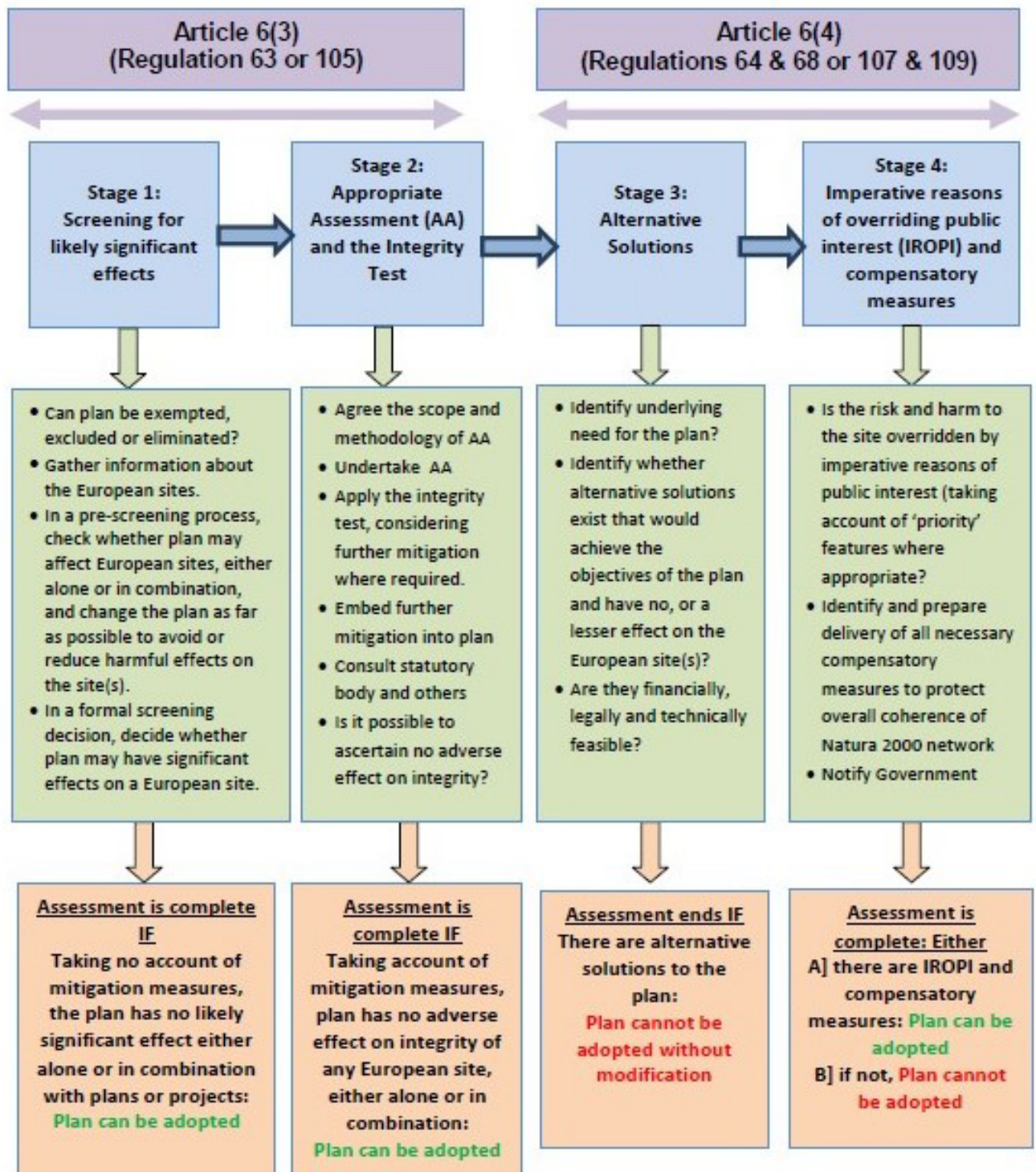
- 1.13 Although this HRA has been prepared to help the Council discharge its duties under the Habitats Regulations, the Council is the competent authority, and it must decide whether to accept this report or otherwise. Further, it should be noted that this HRA has been prepared for the purposes of preparing and examining the Plan. Individual allocations will need to be reviewed when they become the subject of an individual planning application, to ensure that if further assessment under the Habitats Regulations is necessary, it is undertaken in accordance with the requirements of appropriate assessment.

Process

- 1.14 The step-by-step process of HRA is summarised in Figure 1. Though dated prior to the latest amendments to the Regulations, the same tests still apply and it remains valid.

⁴ ODPM Circular 06/2005 : Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System (16 August 2005), to be read in conjunction with the current NPPF, other Government guidance and the current version of the Habitats Regulations.

Outline of the four-stage approach to the assessment of plans under the Habitats Regulations



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Figure 1: Outline of the assessment of plans under the Habitat Regulations

- 1.15 Throughout all stages, there is a continual consideration of the options available to avoid and mitigate any identified potential impacts. A competent authority may consider that there is a need to undertake further levels of evidence gathering and evaluation at the appropriate assessment stage in order to provide the necessary certainty. At this point the competent authority may identify the need to add to or modify the plan in order to adequately protect the European site, and these mitigation measures may be added through the imposition of particular restrictions and conditions.
- 1.16 For plans, the stages of HRA are often quite fluid, with the plan normally being prepared by the competent authority itself. This gives the competent authority the opportunity to repeatedly explore options to prevent impacts, refine the plan and rescreen it to demonstrate that all potential risks to European sites have been successfully dealt with.
- 1.17 When preparing a plan, a competent authority may therefore go through a continued assessment as the plan develops, enabling the assessment to inform the development of the plan. For example, a competent authority may choose to pursue an amended or different option where impacts can be avoided, rather than continue to assess an option that has the potential to significantly affect European site interest features.
- 1.18 After completing an assessment, a competent authority should only adopt a plan where it can be ascertained that there will not be an adverse effect on the integrity of the European site(s) in question. In order to reach this conclusion, the competent authority may have made changes to the plan, or modified the project with restrictions or conditions, in light of their appropriate assessment findings.
- 1.19 Where adverse effects cannot be ruled out, further exceptional tests are set out in Regulation 107. In exceptional cases, this allows a plan to be taken forward where there are no 'alternative solutions', where 'imperative reasons of overriding public interest' apply and where compensation can be delivered. It should be noted that meeting these tests is a rare last resort and ordinarily, competent authorities seek to ensure that a plan or project is fully mitigated for, or it does not proceed.
- 1.20 In such circumstances where a competent authority considers that a plan should proceed under Regulations 107, they must notify the relevant Secretary of State. Normally, planning decisions and competent authority duties are then transferred, becoming the responsibility of the Secretary of State, unless on considering the information, the planning authority is

directed by the Secretary of State to make their own decision on the plan or project at the local level. The decision maker, whether the Secretary of State or the planning authority, should give full consideration to any proposed 'overriding reasons' for which a plan or project should proceed despite being unable to rule out adverse effects on European site interest features, and ensure that those reasons are in the public interest and are such that they override the potential harm. The decision maker will also need to secure any necessary compensatory measures, to ensure the continued overall coherence of the European site network if such a plan or project is allowed to proceed.

Definitions, references to case law and guidance

- 1.21 This HRA follows principles of case law, both UK and EU. It also refers as appropriate to the Habitats Regulations Assessment Handbook (Tyldesley & Chapman, 2021), to which Footprint Ecology subscribes. We also follow relevant government guidance.
- 1.22 Drawing on the Handbook, other relevant guidance and case law, we clarify the following terms used in the flow chart (Figure 1):
- 1.23 In Stage 1, A **likely significant effect** following Waddenzee⁵, is a '*possible significant effect; one whose occurrence cannot be excluded on the basis of objective information*'. It is a low threshold and simply means that there is a risk or doubt regarding such an effect. The screening stage is a preliminary examination, sometimes described as a coarse filter, or following Sweetman⁶, as '*a trigger for the obligation to carry out an appropriate assessment*'. There should however be credible evidence to show that there is a real rather than a hypothetical risk of effects that could undermine a site's conservation objectives. This was amplified in the Bagmoor Wind⁷ case where '*if the absence of risk... can only be demonstrated after a detailed investigation, or expert opinion, [then] the authority must move from preliminary examination to appropriate assessment*'.

⁵ Waddenzee: European Courts C -127/02 Waddenzee 7th September 2004, reference for a preliminary ruling from the Raad van State.

⁶ Sweetman: European Court C – 258/11 Sweetman 11th April 2013, reference for a preliminary ruling from the Supreme Court of Ireland

⁷ Bagmoor Wind: UK courts Bagmoor Wind v The Scottish Ministers, Court of Session [2012] CSIH

- 1.24 Following the People Over Wind judgement⁸, when making screening decisions for the purposes of deciding whether an appropriate assessment is required, competent authorities cannot take into account any mitigation measures.
- 1.25 Stage 2 involves the **appropriate assessment and integrity test**. Here a plan can only be adopted if the competent authority can demonstrate that it will not adversely affect the integrity of the European site. This is a precautionary approach and means it is necessary to show the absence of harm.
- 1.26 Following Champion⁹ ‘**appropriate**’ is not a technical term but simply indicates that the assessment needs to be appropriate to the task in hand.
- 1.27 The **integrity** of a European site has been described as 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 classified¹⁰. An alternative definition, after Sweetman¹¹, is ‘the lasting preservation of the constitutive characteristics of the site’.
- 1.28 In terms of the burden of proof, the HRA of development plans was first made a requirement in the UK following a ruling by the European Court of Justice in EC v UK¹². However, the judgement¹³ recognised that any assessment had to reflect the actual stage in the strategic planning process and the level of evidence that might or might not be available. This was given expression in the High Court (Feeney)¹⁴ which stated: “*Each ... assessment ... cannot do more than the level of detail of the strategy at that stage permits*”.
- 1.29 The need to consider possible **in-combination** effects arises at stage 1 – the screening and also at stage 2 – the appropriate assessment and integrity test. The effects of the plan in -combination with other plans or projects are the cumulative effects which will or might arise from the addition of the

⁸ *People Over Wind and Sweetman v Coillte Teoranta* (2018) [2018] PTSR 1668

⁹ *R (on the application of Champion v North Norfolk District Council* [2015] 1 WLR 3170 at para 41

¹⁰ Para 20 of the ODPM Circ. 06/2005

¹¹ *Sweetman v An Bord Pleanála* (2014) [2014] PTSR 1092 at paragraph 39

¹² *Commission v UK* (C-6/04) [2005] ECR I-9017

¹³ *Commission of the European Communities v UK* Opinion of Advocate General Kokott

¹⁴ *Feeney v Oxford City Council* [2011] EWHC 2699 Admin at paragraph 92

effects of other relevant plans or projects alongside the plan under consideration. If during the stage 1 screening it is found the subject plan would have no likely effect alone, but might have such an effect in-combination then the appropriate assessment at stage 2 will proceed to consider cumulative effects. Where a plan is screened as having a likely significant effect alone, the appropriate assessment should initially concentrate on its effects alone. Exceptionally, the Wealden decision¹⁵ requires the impacts of air pollution to be considered alone and in-combination.

¹⁵ Wealden District Council v Secretary of State for Communities and Local Government, Lewes District Council and the South Downs National Park Authority (Defendants) and Natural England (Interested Party) [2017] EWHC 351 (Admin).

2. European sites in and around Stafford Borough

Overview of potentially relevant European sites

- 2.1 We have used 20km from the boundary of the Borough as an initial area of search (20km providing a reasonable area of search within which policies could reasonably be considered to generate measurable effects). Air quality impacts at plan level are typically considered to relate to a 10km distance (Chapman & Kite, 2021) while generic analysis of Footprint Ecology visitor data to countryside sites in the UK (Weitowitz et al., 2019) indicates that the majority of visitors originate within a 12.6km radius. The choice of 20km is therefore precautionary.
- 2.2 Sites that fall within this initial area of search are listed in Table 1. SAC sites are shown in Map 1 and the map highlights those within 20km. Similarly Map 2 shows SPA sites and Map 3 Ramsar sites.

Table 1: European Sites within a 20km radius

SAC	SPA	Ramsar
Brown Moss	Peak District Moors (South Pennine Moors Phase 1)	Midland Meres and Mosses Phase 1 ¹⁶
Cannock Chase		Midland Meres and Mosses Phase 2 ¹⁷
Cannock Chase Extension Canal		
Mottey Meadows		
Pasturefield Salt Marsh		
Peak District Dales		
River Mease		
South Pennine Moors		
West Midlands Mosses ¹⁸		

¹⁶ This Ramsar is comprised of a number of SSSIs: Chartley Moss SSSI, Brown Moss SSSI, Wybunbury Moss SSSI and Betley Mere SSSI are within 20km of the Borough.

¹⁷ This Ramsar is comprised of a number of SSSIs: Aqualate Mere SSSI, Cop Mere SSSI, Black Firs and Cranberry Bog SSSI and Oakhanger Moss SSSI are within 20km of the Borough.

¹⁸ This SAC is comprised of 4 SSSIs, Chartley Moss SSSI and Wybunbury Moss SSSI lie within 20km of Stafford Borough

Initial review of sites and potential impact pathways

2.3 Potential impact pathways - ways in which elements of the Plan might impact the relevant European sites - are summarised in Table 2. Potential impact pathways are then summarised by each European site in Table 3. Many of the European sites listed are well outside the Stafford Borough and as such impacts such as direct loss of habitat are not relevant.

2.4 It can be seen that there are no potential pathways identified that might relate to Brown Moss SAC, Peak District Dales SAC, the River Mease SAC, the South Pennine Moors SAC or the Peak District Moors (South Pennine Moors Phase 1) SPA. These are therefore excluded from any further consideration and are not relevant to the screening.

Table 2: Potential Impact Pathways

Pathway	Explanation
General urban effects	Effects on a European site from nearby development, including light, noise, domestic cats, spread of invasive species, etc. Either adding to existing levels in urban areas or creating new issues in non-urban areas, for example affecting the ability of light sensitive species to navigate the landscape or deterring use of existing habitat/feeding/roosting sites.
Recreation impacts	Effects on a European site caused by human use of site for recreational activities and their consequences, including walking, riding, sports, organised activities etc. Effects may include direct disturbance of species by people, dogs or vehicles, trampling, erosion, fire, vandalism, fly tipping.
Hydrological impacts (water quality & availability)	Effects on a European site from altered local water quality or from interruption, reduction or other interference of local hydrology, including groundwater, surface standing water or watercourses.
Air Quality	Effects on a European site from changes in local air quality, primarily likely from increased vehicle traffic associated with growth in the Plan.

Table 3: Potential impact pathways with a tick indicating where the pathway is relevant to the site. Distances are the approximate distances from the nearest part of the European site to the nearest part of the Borough boundary and where no distance is given the European site is within or overlaps the Stafford Borough boundary.

European site	Approx. distance (km) from Borough boundary	General urban effects	Recreation	Water issues	Air quality	Notes and for grey shaded rows, reasons for elimination from rest of plan
SACs						
Brown Moss SAC	18.7					Located near Whitchurch and far from Borough boundary. No major roads within 200m. Managed as a nature reserve by Shropshire Council. Distance rules out all impact pathways.
Cannock Chase SAC		✓	✓	✓	✓	On plateau and therefore only hydrological links relate to groundwater. Urban effects a risk where development in close proximity. Recreation a long standing issue. Site has roads within 200m.
Cannock Extension Canal SAC	9.5				✓	Boat traffic can be an issue but recreation eliminated as boat use carefully monitored by the Canals and Rivers Trust and regular dredging ensures water doesn't become turbid. Site has roads within 200m. Water quality highlighted in Site Improvement Plan (SIP) and supplementary advice but no hydrological links to Borough as Canal fed from Chasewater Reservoir (which is in Lichfield District).
Mottey Meadows SAC			✓	✓	✓	Lies outside Borough but abuts the Borough boundary. Qualifies as an SAC for its hay meadows, grassland communities could be affected by water availability and water quality. No major roads nearby but there are roads within 200m. No formal public access. Only conceivable risks from recreation likely to relate to development in close proximity.
Pasturefield Salt Marsh SAC				✓	✓	Site managed by Staffordshire Wildlife Trust. Limited public access (only allowed outside bird breeding season and any visitors have to climb a locked gate), and no parking on site so no recreation concerns. Site spring-

European site	Approx .distance (km) from Borough boundary	General urban effects	Recreation	Water issues	Air quality	Notes and for grey shaded rows, reasons for elimination from rest of plan
						fed from deep underground so water issues from abstraction. There is potential for surface run-off. Site has roads within 200m.
Peak District Dales SAC	17.1					Very large European site which only just clips the 20km buffer. Distance rules out all impact pathways.
River Mease SAC	16.4					Nearest part of SAC well outside Borough. Catchment does not extend to Borough ¹⁹ . Neither air quality nor recreation identified as a pressure or threat in SIP or supplementary conservation advice.
South Pennine Moors SAC	19.2					Moorland SAC with recreation pressure and air quality identified as risks from HRA work for other local authorities ²⁰ however distance from Borough removes risks
West Midlands Mosses SAC				✓	✓	Chartley Moss SSSI lies within the Borough. It is a National Nature Reserve. There are only minor roads within 200m. Site is a floating peat bog (schwingmoor) and extremely unsafe to visit without an experienced guide and access is restricted to a few specially arranged events each year, therefore no risks from recreation. Water supply and water quality fundamental and may be affected by local development in catchment, however site improvement plan identifies agriculture and surrounding land use as current issue. A518 is just within 200m of the northern corner of

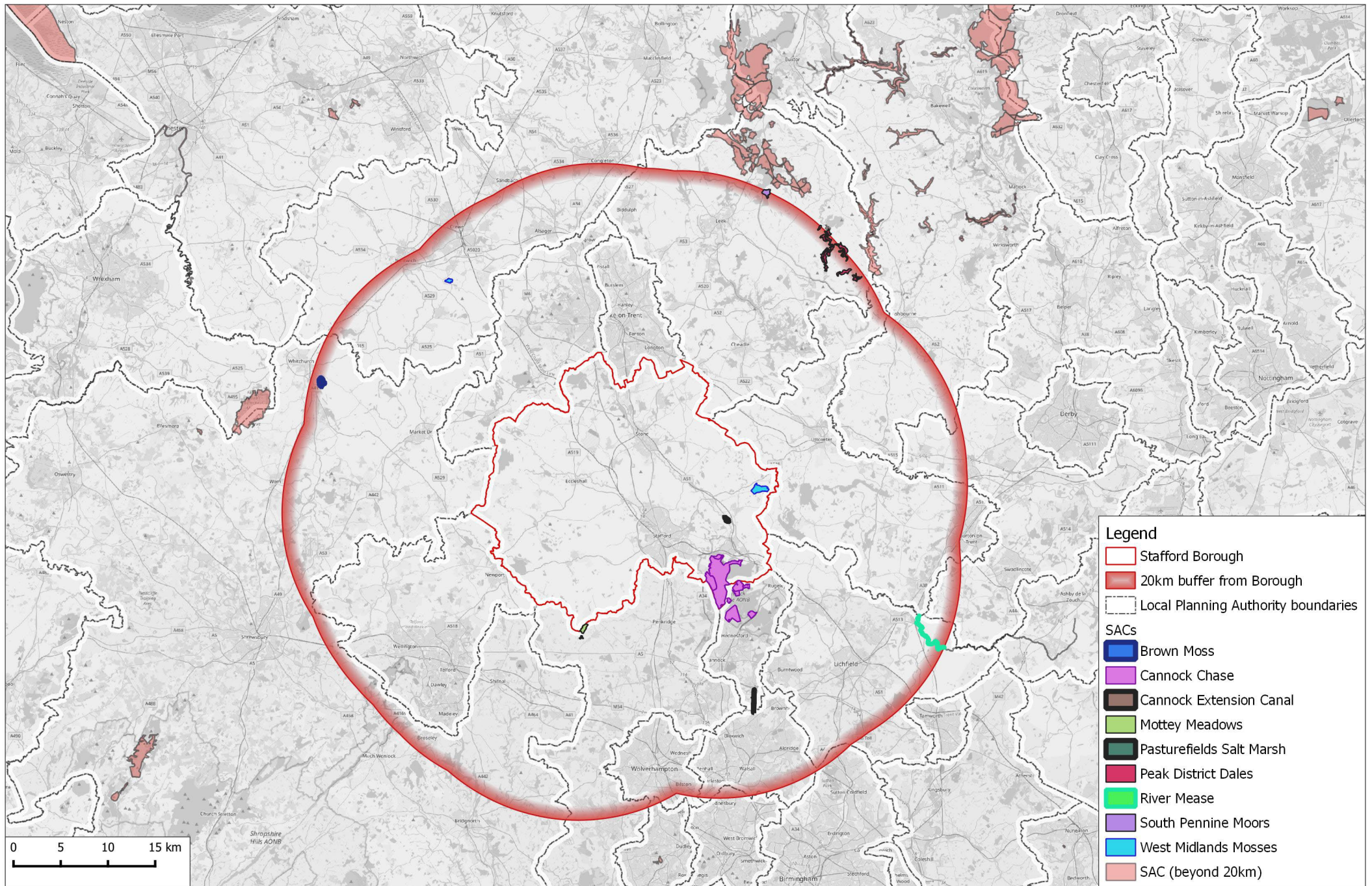
¹⁹ See: <https://environment.data.gov.uk/catchment-planning/OperationalCatchment/3303> (accessed 31/8/22)

²⁰ E.g. Bradford, <https://www.bradford.gov.uk/Documents/BDLP/Reg18/IA/HRA%20report%20for%20Bradford%20Met%20District%20Local%20Plan%20PO%20040221.pdf> (accessed 31/8/22)

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European site	Approx .distance (km) from Borough boundary	General urban effects	Recreation	Water issues	Air quality	Notes and for grey shaded rows, reasons for elimination from rest of plan
						Chartley Moss. Wybunbury Moss 15.4km outside the Borough to the north-west and excluded from assessment due to distance.
SPA						
Peak District Moors (South Pennine Moors Phase 1)	19.2					Moorland SPA – as per South Pennine Moors SAC
Ramsar						
Midland Meres and Mosses Ph. 1 Ramsar				✓	✓	As for West Midlands Mosses SAC
Midland Meres and Mosses Ph. 2 Ramsar				✓	✓	2 component sites within Borough: Cop Mere and Aqualate Mere. No roads within 200m of Aqualate Mere and only minor roads within 200m of Cop Mere. Aqualate Mere is a National Nature Reserve but public access is limited, with a single small car park at the eastern end and two public rights of way, plus access to a bird hide. Cop Mere has a footpath around the northern periphery and is used by anglers. Given the habitats present and layout, recreation is not a concern.

Map 1: SACs within 20km



Legend

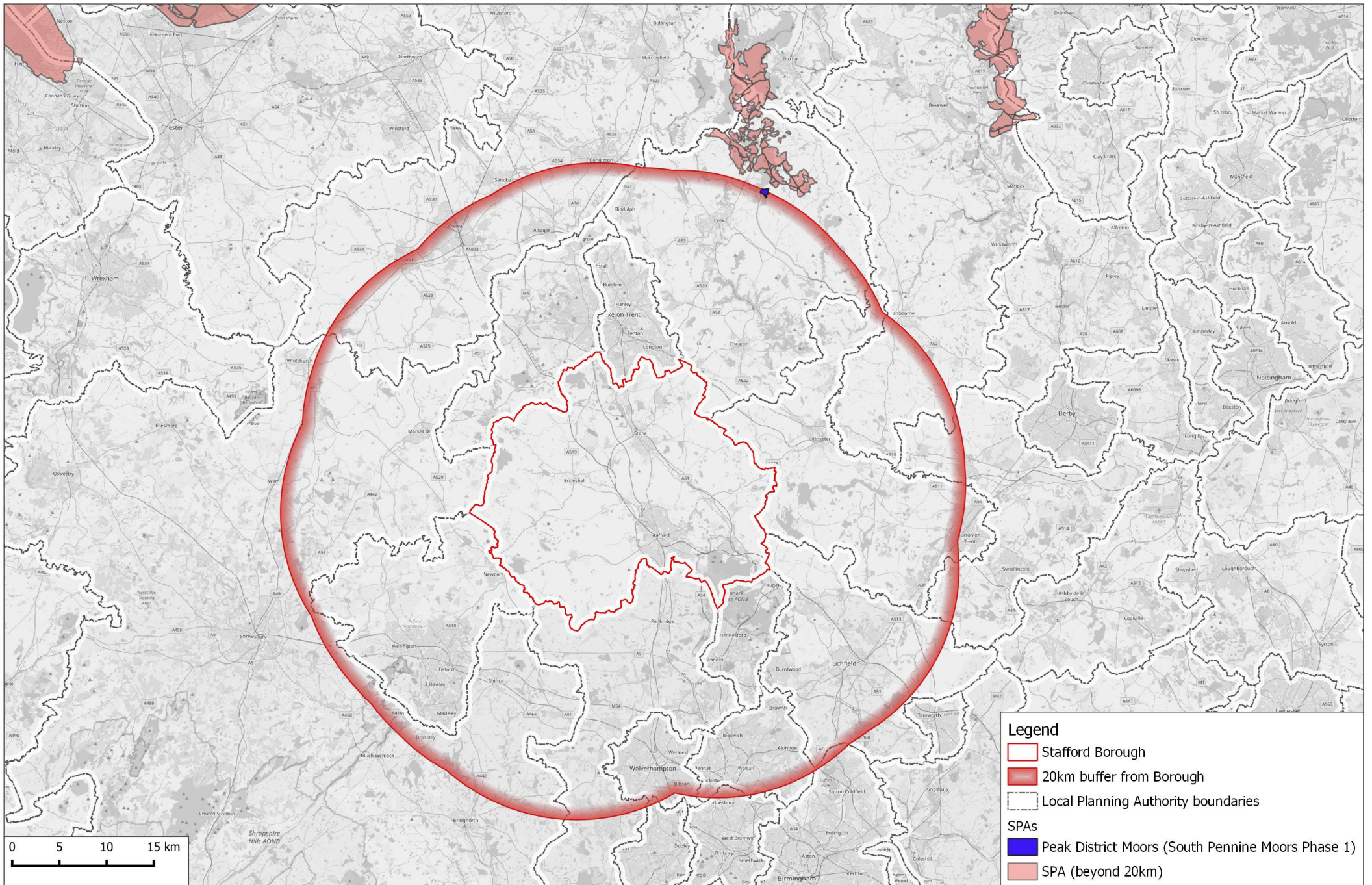
- Stafford Borough
- 20km buffer from Borough
- Local Planning Authority boundaries

SACs

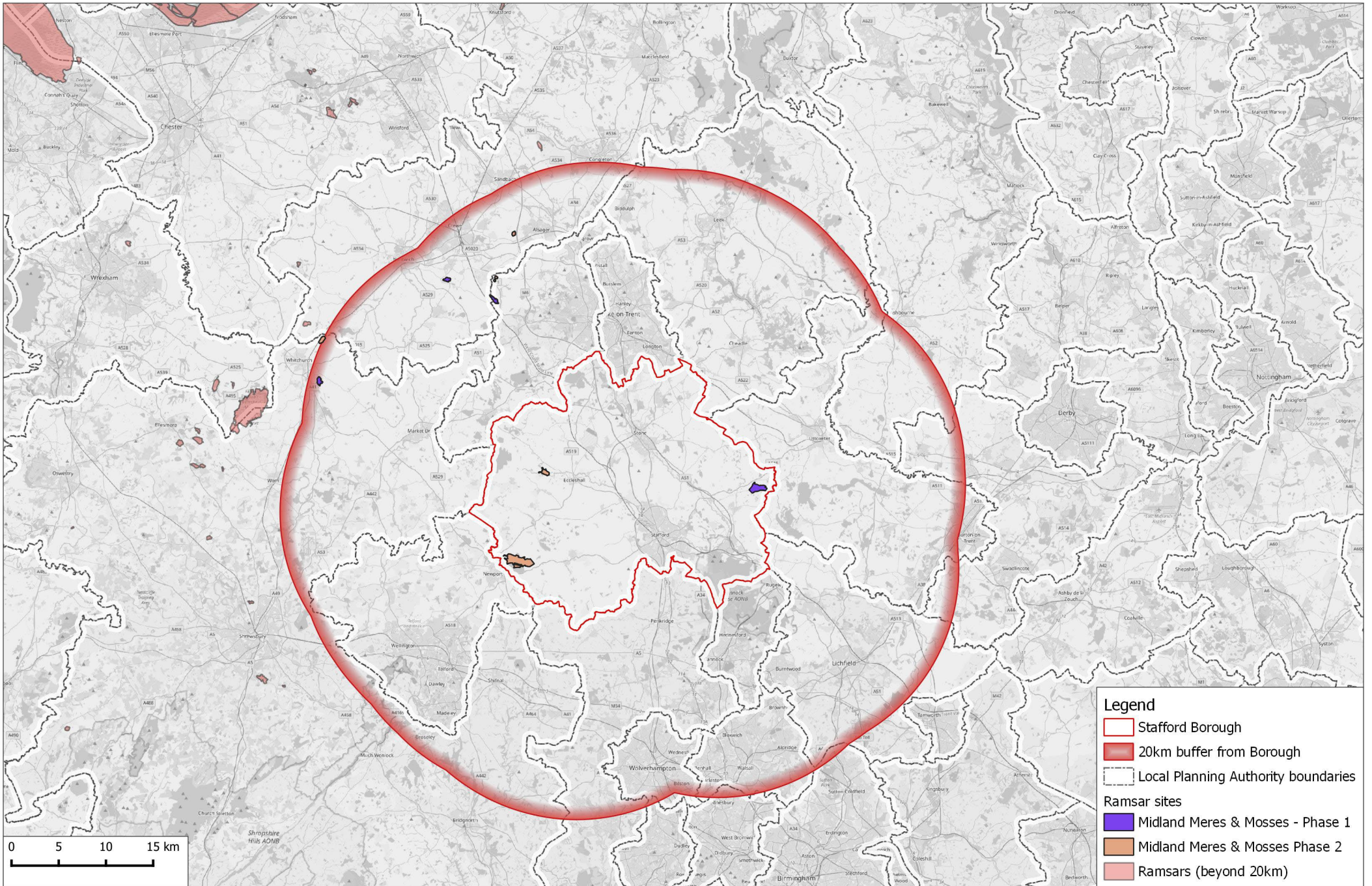
- Brown Moss
- Cannock Chase
- Cannock Extension Canal
- Motte Meadows
- Pasturefields Salt Marsh
- Peak District Dales
- River Mease
- South Pennine Moors
- West Midlands Mosses
- SAC (beyond 20km)

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Map 2: SPAs within 20km



Map 3: Ramsar within 20km



2.5 In assessing the implications of any plan or project on European sites, it is essential to fully understand the ecology and sensitivity of the sites, in order to identify how they may be affected. Appendix 1 summarises the generic conservation objectives and Appendix 2 provides detail of the relevant sites, listing their qualifying features, current threats and pressures (from the site improvement plans, 'SIPs'), descriptions of the sites. The appendix provides links to the relevant detailed conservation advice from Natural England and these links also provide access to the SIPs and the citations. Throughout the report, where we refer to supplementary advice or SIPs the relevant documents can be accessed through the hyperlinks in Appendix 2.

3. Screening for Likely Significant Effects

- 3.1 This section is an initial screening of the policies of the Plan at this stage in the plan making process.
- 3.2 The screening is the initial stage in the 4 stage process of HRA. The screening for likely significant effects of a plan involves checking all aspects of the plan and identifying any areas of potential concern, which are then examined in more detail in the appropriate assessment (stage 2) of the HRA. The check for likely significant effects provides an initial test of the plan. It is undertaken to enable the plan maker as competent authority to do two things. Firstly, it narrows down and highlights those elements of the plan that may pose a risk to European sites. Secondly, where an option poses a risk but is a desired element of the plan, the screening exercise identifies where further assessment is necessary in order to determine the nature and magnitude of potential impacts on European sites and what could be done to avoid, cancel, reduce or eliminate those risks. Further assessment and evidence gathering after early screening may include, for example, the commissioning of additional survey work, modelling, researching scientific literature or setting out justifications in accordance with expert opinion.

What constitutes a likely significant effect?

- 3.3 Where the screening identifies risks that cannot be avoided with simple clarifications, corrections or instructions for project level HRA, a more detailed assessment is undertaken to gather more information about the likely significant effects and gives the necessary scrutiny to potential mitigation measures. This is the appropriate assessment stage of HRA.
- 3.4 A likely significant effect could be concluded on the basis of clear evidence of risk to the European site interest, or there could be a scientific and plausible justification for concluding that a risk is present, even in the absence of direct evidence. The latter is an example of the precautionary approach, which is embedded through the HRA process. The precautionary principle should be applied at all stages in the HRA process and follows the principles established in domestic and EU case law.

3.5 The screening in this report looks at policies prior to any avoidance/reduction/mitigation measures in line with People Over Wind²¹; mitigation can only be considered at Appropriate Assessment stage. People Over Wind clarified the need to carefully explain actions taken at each HRA stage, particularly at the screening for likely significant effects stage. The Judgment highlights the need for clear distinction between the stages of HRA, and good practice in recognising the function of each. The screening for likely significant effects stage should function as a screening or checking stage (regardless of avoidance, reduction/mitigation measures), to determine whether further assessment is required. Assessing the nature and extent of potential impacts on European site interest features, and the robustness of mitigation options, should be done at the appropriate assessment stage.

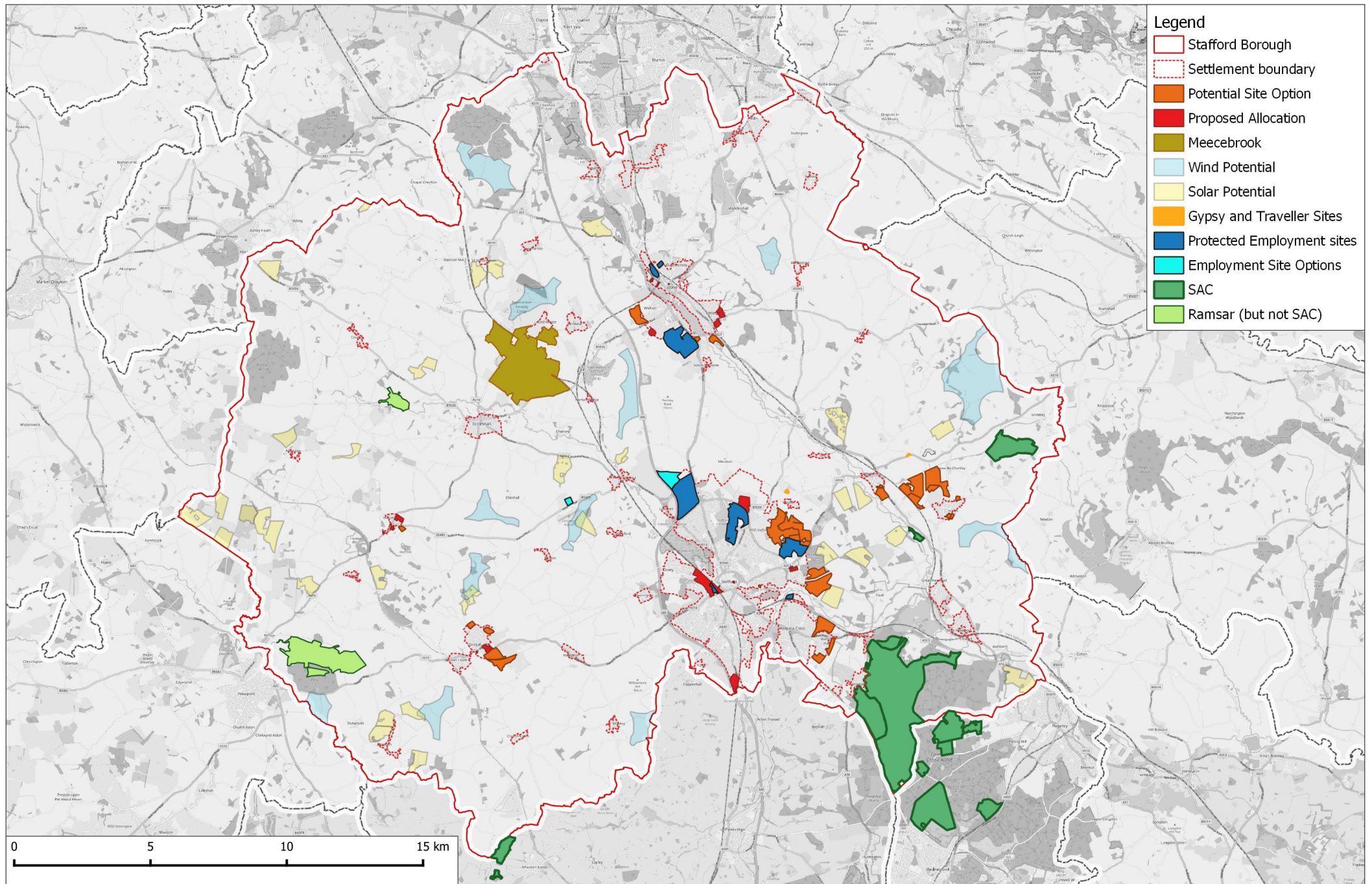
The screening

3.6 Map 4 shows the allocations within the Plan.

3.7 The screening for likely significant effects within Table 4 below provides the screening at this stage in the plan-making process. The screening covers the whole plan. Where risks are highlighted and there is a possibility of significant effects on European sites, further and more detailed appropriate assessment will be required. Inevitably there will be precaution in screening elements of the plan, as the purpose of screening for likely significant effects is to identify where there is either no possibility of an effect, or where there are uncertainties.

²¹ People Over Wind: European Court Case C-323/17 People Over Wind & Peter Sweetman v Coillte Teoranta 12 April 2018

Map 4: Allocations and other plan elements in relation to European sites



Stafford Borough Local Plan HRA

Table 4: Initial screening of the Outline Draft Plan for likely significant effects ('LSE') Orange shaded rows with bold text indicates policies that are screened in alone or in combination.

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
Vision & objectives	Overarching vision	Strategic text setting general aspirations. No LSE		
Spatial portrait of Stafford Borough	Description of the Borough	Administrative text. No LSE.		
Development strategy & climate change response				
POLICY 1. Development strategy	Sets strategy, including overall levels of growth and allocations.	Screened in. LSE.	LSE from the overall quantum of growth with respect to general urban effects (alone for Cannock Chase SAC), recreation (alone for Cannock Chase SAC), water issues (in-combination for Cannock Chase SAC, Pasturefield Salt Marsh SAC, Mottey Meadows SAC, West Midlands Meres and Mosses SAC, Midlands Meres and Mosses Phase 1 Ramsar, Midlands Meres and Mosses Phase 2 Ramsar) and air quality (in-combination for Cannock Chase SAC, Cannock Extension Canal SAC, Pasturefield Salt Marsh SAC, West Midlands Meres and Mosses SAC, Midlands Meres and Mosses Phase 1 and Phase 2 Ramsar).	Sets level of growth at 10,700 new homes and 80ha of employment land. Lists major sites, including Meecebrook Garden Community. Specific details are in policies assessed below.
Stafford settlement strategy	Sets out role of Stafford in meeting housing and growth.	General text and goals and not policy. Implications best		1,181 homes identified for Stafford (not including those allocated in the previous plan).

Stafford Borough Local Plan HRA

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
		assessed at relevant policies which are cross referenced in text.		Locations covered in Policies 9-12.
Stone settlement strategy	Sets out role of Stone in meeting housing and growth.	General text and goals and not policy. Implications best assessed at relevant policies which are cross referenced in text.		370 new homes identified for Stone (not including those allocated in the previous plan). Development locations identified in Policy 12
POLICY 2. Settlement hierarchy	Describes settlement hierarchy (5 tiers)	Policy listing general criteria. No LSE.		Policy simply identifies settlement hierarchy rather than specific levels of growth or development. Policies 1, 7, 8, 9, 10, 11 and 12 provide the specific details.
POLICY 3. Development in the open countryside – general principles	General principles for development in open countryside.	Policy listing general criteria. No LSE		
POLICY 4. Climate change development requirements	General principles relating to energy use.	Policy that cannot lead to development or other change. No LSE.		
POLICY 5. Green Belt	Protects Green Belt	Policy that cannot lead to development or other change. No LSE.		
POLICY 6. Neighbourhood plans	Policy provides clarity over status of policies in neighbourhood plans	Policy that cannot lead to development or other change. No LSE.		
Meecebrook Garden Community				
POLICY 7. Meecebrook site allocation	Allocation at Cold Meece for at least 3000 new homes and potential future development	Screened in. LSE.	LSE from the overall quantum of growth with respect to recreation (alone for Cannock Chase SAC), water issues (in-combination for	Allocation just clips the 15km zone of influence for Cannock Chase SAC and recreation impacts

Stafford Borough Local Plan HRA

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
	beyond the plan period for further 3000. 15ha employment land.		Cannock Chase SAC, Pasturefield Salt Marsh SAC, Motte Meadows SAC, West Midlands Meres and Mosses SAC, Midlands Meres and Mosses Phase 1 Ramsar, Midlands Meres and Mosses Phase 2 Ramsar) and air quality (in-combination for Cannock Chase SAC, Cannock Extension Canal SAC, Motte Meadows SAC, Pasturefield Salt Marsh SAC, West Midlands Meres and Mosses SAC, Midlands Meres and Mosses Phase 1 and Phase 2 Ramsar).	
POLICY 8. Masterplanning and design at Meecebrook	Requirement to ensure development at Meecebrook comes forward in line with the concept masterplan and design and development principles	Policy listing general criteria for testing proposals. No LSE		
Site allocation policies				
POLICY 9. North of Stafford	Allocation for 2,700 homes	Screened in. LSE.	LSE with respect to recreation (alone for Cannock Chase SAC), water issues (in-combination for Cannock Chase SAC, Pasturefield Salt Marsh SAC, Motte Meadows SAC, West Midlands Meres and Mosses SAC, Midlands Meres and Mosses Phase 1 Ramsar, Midlands Meres and Mosses Phase 2 Ramsar) and air quality (in-combination for Cannock Chase	Policy includes requirement for mitigation in relation to Cannock Chase SAC

Stafford Borough Local Plan HRA

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
			SAC, Cannock Extension Canal SAC, Motte Meadows SAC, Pasturefield Salt Marsh SAC, West Midlands Meres and Mosses SAC, Midlands Meres and Mosses Phase 1 and Phase 2 Ramsar).	
POLICY 10. West of Stafford	Allocations of 1,729 homes	Screened in. LSE.	LSE with respect to recreation (alone for Cannock Chase SAC), water issues (in-combination for Cannock Chase SAC, Pasturefield Salt Marsh SAC, Motte Meadows SAC, West Midlands Meres and Mosses SAC, Midlands Meres and Mosses Phase 1 Ramsar, Midlands Meres and Mosses Phase 2 Ramsar) and air quality (in-combination for Cannock Chase SAC, Cannock Extension Canal SAC, Motte Meadows SAC, Pasturefield Salt Marsh SAC, West Midlands Meres and Mosses SAC, Midlands Meres and Mosses Phase 1 and Phase 2 Ramsar).	Policy includes requirement for mitigation in relation to Cannock Chase SAC
POLICY 11. Stafford Station Gateway	Allocation for around 900 homes	Screened in. LSE.	LSE with respect to recreation (alone for Cannock Chase SAC), water issues (in-combination for Cannock Chase SAC, Pasturefield Salt Marsh SAC, Motte Meadows SAC, West Midlands Meres and Mosses SAC, Midlands Meres and Mosses Phase 1 Ramsar, Midlands	

Stafford Borough Local Plan HRA

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
			<p>Meres and Mosses Phase 2 Ramsar) and air quality (in-combination for Cannock Chase SAC, Cannock Extension Canal SAC, Mottey Meadows SAC, Pasturefield Salt Marsh SAC, West Midlands Meres and Mosses SAC, Midlands Meres and Mosses Phase 1 and Phase 2 Ramsar).</p>	
<p>POLICY 12. Other housing and employment land allocations</p>	<p>Lists 17 allocations for housing and 2 sites for employment</p>	<p>Screened in. LSE.</p>	<p>LSE with respect to recreation (alone for Cannock Chase SAC), water issues (in-combination for Cannock Chase SAC, Pasturefield Salt Marsh SAC, Mottey Meadows SAC, West Midlands Meres and Mosses SAC, Midlands Meres and Mosses Phase 1 Ramsar, Midlands Meres and Mosses Phase 2 Ramsar) and air quality (in-combination for Cannock Chase SAC, Cannock Extension Canal SAC, Mottey Meadows SAC, Pasturefield Salt Marsh SAC, West Midlands Meres and Mosses SAC, Midlands Meres and Mosses Phase 1 and Phase 2 Ramsar).</p>	
<p>POLICY 13. Local green space</p>	<p>Identifies 19 local green space sites that will be protected from development</p>	<p>Policy that cannot lead to development or other change. No LSE.</p>		
<p>POLICY 14. Penk and Sow Countryside Enhancement Area</p>	<p>Policy conserving and enhancing areas for major nature</p>	<p>Policy or proposal that could not have any</p>		<p>Potential for site to play a role in deflecting access from</p>

Stafford Borough Local Plan HRA

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
	conservation and recreational resource.	conceivable adverse effect on a site. No LSE.		Cannock Chase but policy is not setting out mitigation and therefore not screened in
POLICY 15. Stone Countryside Enhancement Area	Policy conserving and enhancing areas for major nature conservation and recreational resource.	Policy or proposal that could not have any conceivable adverse effect on a site. No LSE.		
Economy policies				
POLICY 16. Protection of employment land	Protects employment land	Policy where the effects cannot undermine the conservation objectives of a European site. No LSE.		
POLICY 17. Recognised Industrial Estates	Identifies the locations in which employment uses will be supported in rural areas outside of settlement boundaries.	Policy where the effects cannot undermine the conservation objectives of a European site. No LSE.		
POLICY 18. Home working and small-scale employment uses	Supports home -working and support for small-scale offices and re-use of existing buildings for employment uses.	Policy where the effects cannot undermine the conservation objectives of a European site. No LSE.		
POLICY 19. Town centres and main town centre uses	Criteria relating to town centres, applying a town centre first approach including sequential and impact tests for main town centre uses	Policy listing general criteria for testing the acceptability of proposals. No LSE.		
POLICY 20. Agricultural and forestry development	Policy provides support for land based rural business	Policy listing general criteria for testing the		

Stafford Borough Local Plan HRA

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
		acceptability of proposals. No LSE.		
POLICY 21. Tourism development	Supports sustainable rural tourism development	Policy listing general criteria for testing the acceptability of proposals. No LSE.		
POLICY 22. Canals	Supports canal-based development according to various criteria	Policy listing general criteria for testing the acceptability of proposals. No LSE.		
Housing policies				
POLICY 23. Affordable housing	Sets affordable housing percentages	Policy that cannot lead to development or other change. No LSE.		
POLICY 24. Homes for life	Sets a range of standards relating to accessibility etc.	Policy listing general criteria for testing the acceptability of proposals. No LSE.		
POLICY 25. Rural exception sites	Criteria for rural exception sites	Policy listing general criteria for testing the acceptability of proposals. No LSE.		
POLICY 26. New rural dwellings	Describes categories of new dwellings that will be supported in the countryside	Policy listing general criteria for testing the acceptability of proposals. No LSE.		
POLICY 27. Replacement dwellings	Establishes the parameters for the replacement of existing dwellings	Policy listing general criteria for testing the acceptability of proposals. No LSE.		

Stafford Borough Local Plan HRA

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
POLICY 28. Extension of dwellings	General support for extensions and alterations to dwellings and relevant criteria	Policy listing general criteria for testing the acceptability of proposals. No LSE.		
POLICY 29. Residential subdivision and conversion	Applies to the conversion of buildings to residential use and the subdivision or conversion of existing dwellings, within settlement boundaries	Policy listing general criteria for testing the acceptability of proposals. No LSE.		
POLICY 30. Gypsy and traveller accommodation	Allocations at Hopton and near Weston and provides criteria for determining planning applications that come forward on non-allocated sites	Screened in. LSE	LSE with respect to recreation (alone for Cannock Chase SAC), water issues (in-combination for Cannock Chase SAC, Pasturefield Salt Marsh SAC, Motte Meadows SAC, West Midlands Meres and Mosses SAC, Midlands Meres and Mosses Phase 1 Ramsar, Midlands Meres and Mosses Phase 2 Ramsar) and air quality air quality (in-combination for Cannock Chase SAC, Cannock Extension Canal SAC, Motte Meadows SAC, Pasturefield Salt Marsh SAC, West Midlands Meres and Mosses SAC, Midlands Meres and Mosses Phase 1 and Phase 2 Ramsar).	No evidence that allocations for gypsy and traveller accommodation should be treated differently to residential growth in terms of recreation, water or air quality.
POLICY 31. Housing mix and density	Identifies the mix of different dwelling sizes and densities	Policy listing general criteria for testing the acceptability of proposals. No LSE.		

Stafford Borough Local Plan HRA

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
POLICY 32. Residential amenity	Protects residential amenity of both existing and new dwellings from a range of impacts	Policy listing general criteria for testing the acceptability of proposals. No LSE.		
POLICY 33. Extension to the curtilage of a dwelling	Restricts proposals to extend curtilage unless particular criteria apply	Policy listing general criteria for testing the acceptability of proposals. No LSE.		
Design and infrastructure policies				
POLICY 34. Urban design general principles	Sets out general principles relating to urban design	Policy listing general criteria for testing the acceptability of proposals. No LSE.		
POLICY 35. Architectural design	Sets out general principles relating to design	Policy listing general criteria for testing the acceptability of proposals. No LSE.		
POLICY 36. Landscaping design	Sets out general principles relating to landscaping	Policy listing general criteria for testing the acceptability of proposals. No LSE.		
POLICY 37. Infrastructure to support new development	Ensures necessary infrastructure can come forward where required, covering education, health, transport, flood and water management, green infrastructure and public realm and their ongoing maintenance, biodiversity mitigation and digital infrastructure	Policy that cannot lead to development or other change. No LSE.		

Stafford Borough Local Plan HRA

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
POLICY 38. Electronic communications	Provides support for electronic communications infrastructure in line with national policy	Policy listing general criteria for testing the acceptability of proposals. No LSE.		
POLICY 39. Protecting community facilities	Protective policy relating to community facilities covered by this policy are public houses, libraries, play areas, places of worship, local food shops, community halls and community centres, meeting places, indoor and outdoor sports facilities, and cultural buildings	Policy that cannot lead to development or other change. No LSE.		
POLICY 40. Renewable and low carbon energy	Policy map shows areas where proposals will be supported and policy includes general criteria	Policy or proposal that could not have any conceivable adverse effect on a site. No LSE.		Areas shown on policy map cannot impact any SPA birds in terms of flight lines.
Environment policies				
POLICY 41. Historic environment	Strategy for the conservation and enjoyment of the historic environment	General plan wide environmental protection/site safeguarding/threshold policy. No LSE		
POLICY 42. Flood risk	Minimises flood risk in new development	Policy that cannot lead to development or other change. No LSE.		
POLICY 43. Sustainable drainage	Requirements relating to sustainable drainage systems (SUDS)	Policy listing general criteria for testing the acceptability of proposals. No LSE.		

Stafford Borough Local Plan HRA

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
POLICY 44. Landscapes	Policy conserving and enhancing scenic and visual quality and tranquillity	General plan wide environmental protection/site safeguarding/threshold policy. No LSE		
POLICY 45. Cannock Chase Area of Outstanding Natural Beauty (AONB)	Conserves and enhances the landscape and scenic beauty of Cannock Chase Area of Outstanding Natural Beauty (AONB)	General plan wide environmental protection/site safeguarding/threshold policy. No LSE		
POLICY 46. Green and blue infrastructure network	Protects, enhances and extends the green and blue infrastructure network	General plan wide environmental protection/site safeguarding/threshold policy. No LSE		Potential for policy to play a role in deflecting access from Cannock Chase but policy is not setting out mitigation and therefore not screened in
POLICY 47. Biodiversity	Provides protection for biodiversity covering European sites, SSSIs, Local Wildlife Sites and Biodiversity Net Gain	General plan wide environmental protection/site safeguarding/threshold policy. No LSE		Includes general text relating to the Habitats Regulations, but this is not specific to European sites and is not a bespoke policy intended to avoid or reduce harmful effects on a European site. As such does not need to be screened in.
POLICY 48. Special Areas of Conservation (SAC)	Protective policy relating to SACs and including the mitigation requirements for Cannock Chase SAC	Bespoke area, site or case specific policy intended to reduce harmful effects on a European site. Screened in.	Screened in as avoidance and mitigation measures address general urban effects (LSE alone for Cannock Chase SAC) and recreation (alone for Cannock Chase SAC).	Following the ruling in People over Wind this policy cannot be taken into account in any screening decision and must therefore be screened in for further consideration at appropriate assessment.

Stafford Borough Local Plan HRA

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
POLICY 49. Trees	Policy seeks to retain or ensure the replacement of existing trees, hedgerows and woodlands of value within the borough	General plan wide environmental protection/site safeguarding/threshold policy. No LSE		
POLICY 50. Pollution	Policy gives local effect to national policy on ensuring that the effects of development on health, living conditions and the natural environment are acceptable	General plan wide environmental protection/site safeguarding/threshold policy. No LSE		
POLICY 51. Air quality	Policy gives effect to national policy and guidance on the role of the planning system in addressing air quality problems	General plan wide environmental protection/site safeguarding/threshold policy. No LSE		Policy relates to impacts on human health and supporting text makes clear impacts to European sites are covered under separate policy
Connections policies				
POLICY 52. Transport	General policy relating to minimising the need to travel.	Policy that cannot lead to development or other change. No LSE.		Policy refers to general need to mitigation impacts of transport however this is not a bespoke policy intended to avoid or reduce harmful effects on a European site. As such does not need to be screened in.
POLICY 53. Parking and electric vehicle charging point standards	Sets standards relating to parking and charging points	Policy listing general criteria for testing the acceptability of proposals. No LSE.		
Appendices	Provide a range of additional information including various	Administrative text and supplementary detail		

Stafford Borough Local Plan HRA

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
	standards cross referenced in policy	linked to policy. No LSE.		

Screening conclusions

- 3.8 The initial screening of the outline draft plan has identified a number of risks in terms of general urban effects, recreation, hydrological impacts and air quality.
- 3.9 Likely significant effects from general urban effects are identified for Cannock Chase SAC alone with respect to the overall quantum of growth (Policy 1); bespoke avoidance measures to address these issues are included in Policy 48.
- 3.10 Likely significant effects are identified for recreation impacts for Cannock Chase SAC with respect to the overall quantum of growth (Policy 1) alone and allocation policies (the residential allocations in Policies 9 – 12, and the gypsy and traveller accommodation allocated in policy 30) alone; bespoke avoidance measures to address these issues are included in Policy 48. Recreation risks can be screened out for Motte Meadows as there are no allocations or settlement boundaries in close proximity (the site is very rural), and the nearest settlement within Stafford Borough (Church Eaton) is over 3km away.
- 3.11 Likely significant effects are identified for water issues with respect to Cannock Chase SAC, Pasturefield Salt Marsh SAC, Motte Meadows SAC, West Midlands Meres and Mosses SAC, Midlands Meres and Mosses Phase 1 Ramsar, Midlands Meres and Mosses Phase 2 Ramsar) with respect to the overall quantum of growth (Policy 1) in-combination and allocation policies (the residential allocations in Policies 9 – 12, and the gypsy and traveller accommodation allocated in policy 30) in-combination.
- 3.12 Likely significant effects are identified for air quality with respect to in-combination effects of increased traffic arising from the overall quantum of growth (Policy 1) and allocation policies (the residential allocations in Policies 9 – 12, and the gypsy and traveller accommodation allocated in policy 30) for the following sites, all of which are within 10km of the Borough boundary and have relevant roads within 200m Cannock Chase SAC, Cannock Extension Canal SAC, Motte Meadows SAC, Pasturefield Salt Marsh SAC, West Midlands Meres and Mosses SAC, Midlands Meres and Mosses Phase 1 and Phase 2 Ramsar.
- 3.13 It is too early to undertake a full appropriate assessment as key pieces of evidence are still to be collated. Following the initial screening, topics for appropriate assessment are highlighted to advise on the scope of the appropriate assessment and inform the evidence that will need to be gathered as the Plan progresses. These topics will be assessed in detail within the appropriate assessment at the next iteration of the Plan, when more detail and evidence are available.

4. Appropriate assessment topic: Urban effects

Relevant policies from initial LSE screening

- 4.1 Likely significant effects from urban effects relate to residential growth in close proximity of Cannock Chase SAC. Relevant policies from the initial screening, where impacts were identified alone, were:
- Policy 1, Development strategy
- 4.2 In addition, Policy 48 Special Areas of Conservation (SAC) in point B sets out mitigation requirements relating to urban effects (and recreation) whereby development that is deemed to have an impact will not be permitted within 400m of the SAC. This policy is therefore also screened in for assessment.

Introduction

- 4.3 Urban effects relate to issues where development is in close proximity to the European site boundary and is an umbrella term relating to impacts such as light, noise, cat predation, fly tipping, increased fire risk, spread of invasive species (e.g. from gardens and garden waste) and vandalism. Where housing is directly adjacent to sites, access can occur directly from gardens and informal access points. Use will spill over from adjacent gardens and adjacent green space next to urban areas is often subject to a range of activities and issues that are not necessarily compatible with nature conservation. We treat urban effects separately from recreation as urban effects are specific to where housing is in close proximity and can require different mitigation approaches.

Urban effects and Cannock Chase SAC

- 4.4 The Planning Evidence Based Report 'PEBR' (Liley & Panter, 2020) produced by the SAC Partnership sets out future mitigation requirements for Cannock Chase and reviews issues relating to urban effects and Cannock Chase²². This highlights high visit rates to Cannock Chase SAC by people living in direct proximity to the SAC and considers the issues with very frequent regular use spilling over from people's homes. Other urban effects specific to Cannock Chase include dumping of garden waste, fly tipping, spread of non-native species, vandalism and increased fire incidence.

²² See paras 7.8-7.12 in the PEBR

- 4.5 Underhill-Day (2005) provides a review of urban effects on heathlands and this summarises a range of evidence clearly highlighting that sites in more urban environments have greater pressure for fires, trampling, pollution and enrichment. He also highlights how local residents can make habitat management more complex and challenging to implement as, for example, there can be local opposition to tree felling (a necessary part of heathland restoration) and the introduction of grazing by people whose houses overlook the site.
- 4.6 Increased fire incidence is a particular concern given climate change and the increasing trend for extended hot, dry conditions. The greater incidence of fires on more urban heaths (i.e. those with more housing around them) is well established. For example, Kirby and Tantram (1999) reviewed data on fire incidence on heaths and clearly demonstrated that fire incidence was significantly related to the amount of housing around the heath (within 500m). They state that “ *the only evident geographic pattern [in fire incidence] is that the sites with the highest incidence of fires per hectare are those located within or near to developed areas*”. Similarly, analysis of heath fire incidence and the amount of development surrounding SSSIs (Liley et al., 2007) showed that there were significant correlations between fire incidence and housing, with the strongest correlation being the amount of housing within 500m. The close proximity of houses and people means risks can come from camp fires, barbeques, discarded cigarettes and even sparks from garden bonfires.

Risks from the plan

- 4.7 Likely significant effects are therefore clearly triggered by any development that might come forward in close proximity to the SAC boundary. Development in large allocations such as Meecebrook is focussed well away from the SAC boundary, but windfall housing could come forward within settlements such as Brocton and Milford (where the settlement boundaries abut the SAC boundary) or other areas in close proximity to the SAC. Brocton and Milford are defined as smaller settlements within the settlement hierarchy and therefore the levels of growth provided for within the Plan are low. Given low levels of growth and the landscape protection afforded by the AONB, risks in the absence of mitigation are potentially low.

Mitigation within the Plan

- 4.8 Mitigation measures are included in the Plan within Policy 48 which sets a restriction on development that is deemed to have an impact as set out within the PEBR report within 400m of Cannock Chase SAC. Types of development are set

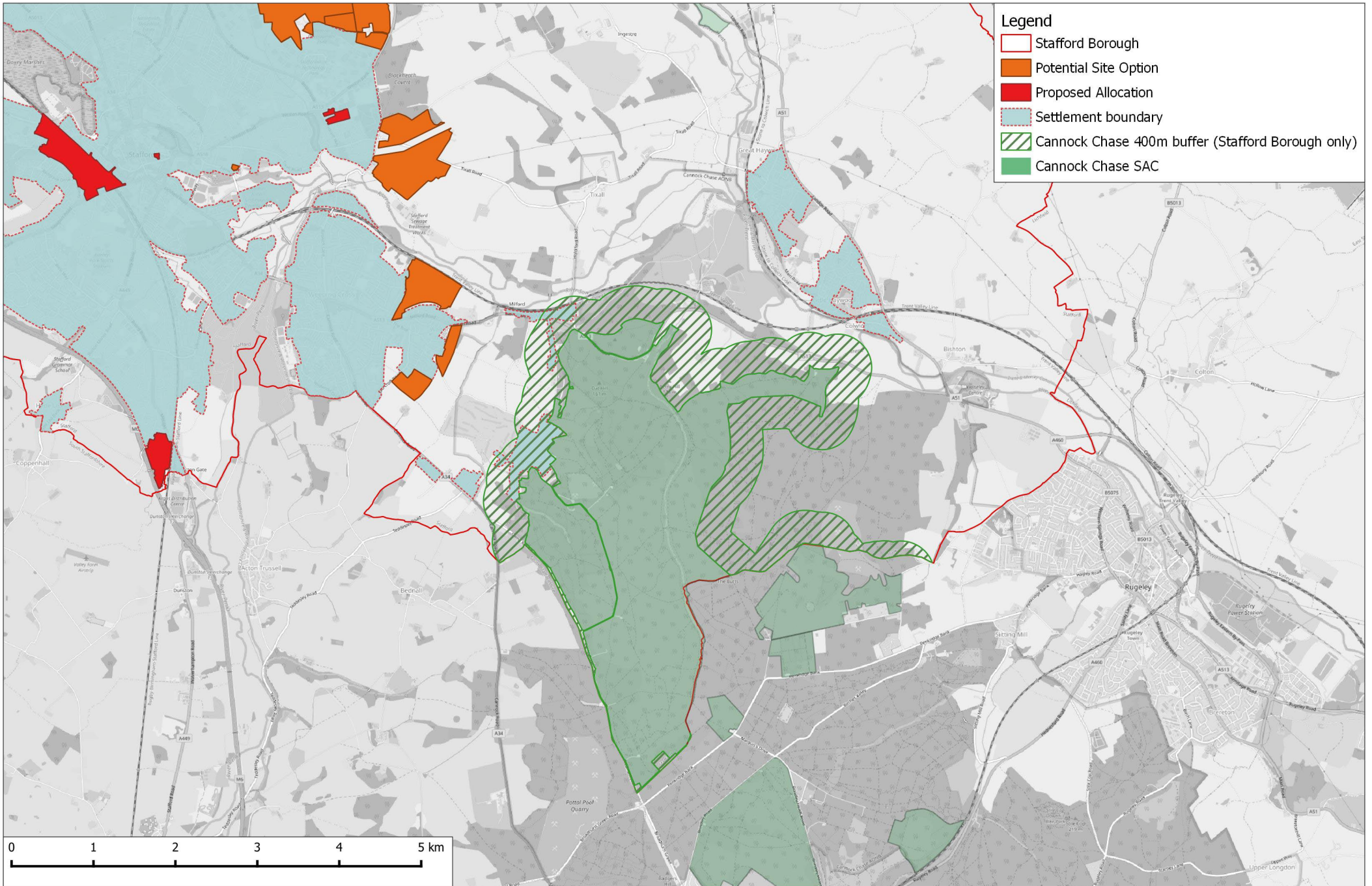
out within section 4 of the PEBR and include use classes C1 to C4, and cover residential, tourist, retirement dwellings, houses in multiple occupation, gypsy and traveller accommodation and student accommodation.

- 4.9 The 400m zone is shown in Map 5. It can be seen that Brocton and Milford settlement boundaries are mostly (but not entirely) covered by the 400m buffer and all the allocations are well outside the buffer.
- 4.10 The use of a 400m exclusion zone has been incorporated into a range of local authority plans where heathland SPA or SAC sites are present, and as such it is an established policy approach. It has been applied by other local authorities in relation to Cannock Chase SAC (e.g. Cannock Chase Council Local Plan²³) and is also established around the Dorset Heaths, the Thames Basin Heaths, the East Devon Pebblebed Heaths and Ashdown Forest. While some of these sites are SPAs, many are SAC or the policy applies to both SPA and SAC sites, and the approach is not solely to provide mitigation for ground nesting birds (e.g. from cat predation). There are also examples of other buffers being used to protect against urban effects, for example there is a 500m zone established for the Chilterns Beechwoods SAC in Dacorum and also for Burnham Beeches SAC.
- 4.11 In the case of Cannock Chase, 400m will ensure that new development is set back from the SAC boundary and is far enough back that it is a 6 minute or so walk to reach the edge of the SAC, even if there is a direct route. This is a robust policy approach that will create a buffer around the SAC and ensure urban pressures are eliminated. As such there is no need for in-combination assessment and adverse effects on integrity can be ruled out, alone or in-combination.

²³ See para 4.89 of Cannock Chase Local Plan

https://www.cannockchasedc.gov.uk/sites/default/files/local_plan_part_1_09.04.14_low_res.pdf

Map 5: 400m buffer around Cannock Chase SAC



Key findings: urban effects

Urban effects relate to issues where development is in close proximity to the European site boundary and is an umbrella term relating to impacts such as light, noise, cat predation, fly tipping, increased fire risk, spread of invasive species (e.g. from gardens and garden waste) and vandalism.

Policy 48 includes the provision of a 400m zone for Cannock Chase SAC within which new development will be restricted. This will eliminate risks from urban effects as it ensures development is set back from the boundary. The approach will also reduce risks relating to recreation (covered as a separate appropriate assessment topic). This is a robust policy approach that will create a buffer around the SAC and ensure urban pressures are eliminated. As such there is no need for in-combination assessment and adverse effects on integrity can be ruled out, alone or in-combination.

5. Appropriate assessment topic: Recreation

Relevant policies from initial LSE screening

- 5.1 Likely significant effects from recreation relate to residential growth within 15km of Cannock Chase SAC. Relevant policies from the initial screening, where impacts were identified alone, were:
- Policy 1, Development strategy
 - Policy 7, Meecebrook site allocation
 - Policy 9, North of Stafford
 - Policy 10, West of Stafford
 - Policy 11, Stafford Station Gateway
 - Policy 12, Other housing and employment land allocations
 - Policy 30, Gypsy and traveller accommodation
- 5.2 In addition, Policy 48, Special Areas of Conservation (SAC) sets out mitigation measures to address recreation impacts, including the 15km zone of influence and need to secure mitigation.

Cannock Chase SAC

- 5.3 Cannock Chase SAC is an area of lowland heathland of around 1,244ha which lies entirely within the Cannock Chase Area of Outstanding Natural Beauty (AONB). Situated on a high sandstone plateau with deeply incised valleys, the site is comprised of acidic soils that support a range of heathland, valley mire, ancient woodland and scrub types. It is designated as an SAC for the following qualifying features:
- Northern Atlantic wet heaths with *Erica tetralix* (Wet heathland with cross-leaved heath);
 - European dry heaths
- 5.4 The valley mire/wet heath communities are rare, threatened vegetation types, being some of the most floristically rich and representative examples of their type in central England. Within Cannock Chase they are found in the stream valley systems, and around pools and depressions.
- 5.5 The area of lowland dry heathland at Cannock Chase is the most extensive in the Midlands. Its special interest also reflects an unusual floristic character, intermediate between heathlands of northern and upland England and Wales, and those of southern counties. The hybrid bilberry *Vaccinium intermedium* has its main UK stronghold at Cannock Chase. The hot, dry soil conditions found in bare ground

in early successional habitats across the dry heathland is important for invertebrates such as mining bees, ants and wasps.

Impacts of recreation

5.6 There are a range of current pressures and threats on the SAC (see the SIP for details) and one area of particular concern relates to increased visitor pressure and the cumulative impacts of recreation. Impacts from recreation on the nature conservation interest are summarised in a range of sources (Liley et al., 2009; White et al., 2012) and include:

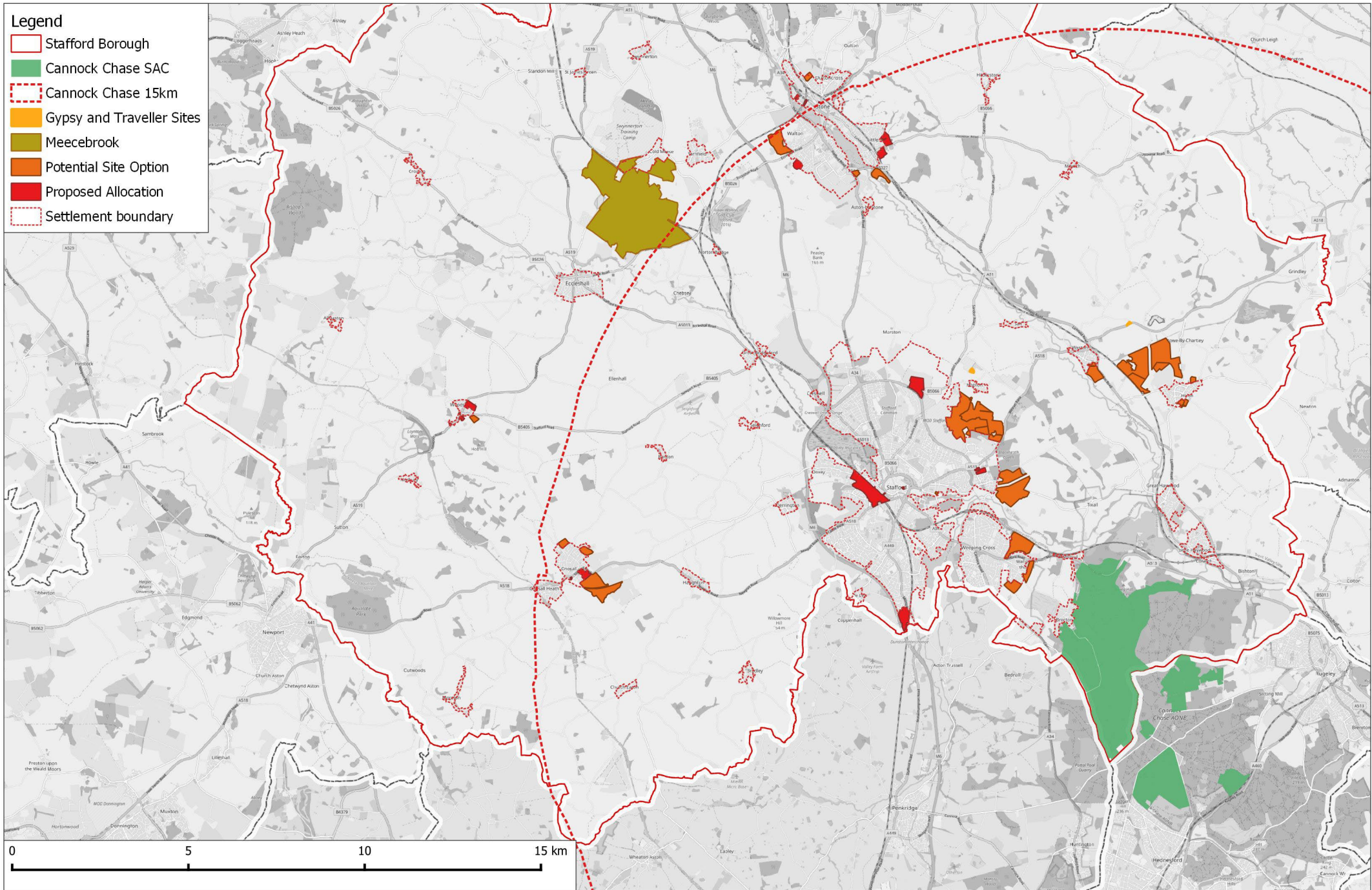
- Disturbance to wildlife;
- Trampling, leading to path widening, vegetation wear, erosion & soil compaction;
- Trampling of invertebrate nest sites;
- Fragmentation of habitats from new desire lines & paths;
- Damage to tree roots where paths pass close to veteran trees;
- Increased risk of wild fire;
- Eutrophication (dog fouling);
- Spread of disease (Phytophthora);
- Contamination (e.g. dogs in water courses, litter)
- Vandalism;
- Challenges to achieving necessary management (e.g. grazing, spraying, scrub clearance)
- Resources drawn away from conservation management to deal with recreation.

5.7 Visitor surveys (Liley, 2012; Liley & Lake, 2012; Panter & Liley, 2019) show the main activities as dog walking, walking (without a dog), cycling/mountain biking and jogging. Data derived from the 2010/11 Visitor survey showed that visitors to Cannock Chase appeared to originate from a wider area than those for many similar sites across the UK, with half of all visitors living within 8km of the SAC and 75% within 15km. The range of the 75th percentile was used to establish a 'Zone of Influence' for assessment of impacts of new housing development, encompassing land within the boundary of seven different Local Planning Authorities.

Levels of growth and scale of change linked to the Plan

- 5.8 As of 2020, postcode data indicates that there were around 61,615 residential delivery points in the whole of Stafford Borough. Around 48,587 (i.e. 79%) of these were within 15km of Cannock Chase SAC. Looking more widely, within the entire 15km zone there were 231,266 delivery points, indicating that residential properties within Stafford Borough account for around 21% of the housing within the 15km zone of influence.
- 5.9 Policy 1, the development strategy, sets provision for 10,700 new homes (535 per year 2020-2040). 5,925 homes have already been committed and 1,120 are completed, with a further 5,535 new allocations/supply sources that comprise:
- Windfall (750 homes, 6%);
 - Stafford (1,181 homes, 59%);
 - Stone (370 homes, 7%);
 - Meecebrook (3000 homes, 24%);
 - Larger settlements (234 homes, 4%).
- 5.10 The 15km zone is shown on Map 5. It can be seen that it encompasses the whole of Stafford town, most of the allocations at Stone and part of Meecebrook. The level of housing growth potentially provided for within the Plan within 15km of Cannock Chase SAC is around 2500. This is very approximate as there is uncertainty around the level of windfall and the amount of growth at Meecebrook that would be within the 15km. This potentially means something around an increase of 1% in the amount of housing within 15km of Cannock Chase SAC, as of 2020. Assuming recreation use to be proportionate to the amount of housing growth this would therefore suggest an increase in visitor use of around 1% from Stafford Borough alone as a result of the Plan.

Map 6: Cannock Chase 15km



The Cannock SAC Partnership

- 5.11 In response to the evidence of significant impact to Cannock Chase SAC linked to increasing recreational pressures, the Cannock Chase SAC Partnership (composed of 6 Local Planning Authorities, Staffordshire County Council, Natural England, and a number of key stakeholders) was formalized under a Memorandum of Understanding (MOU) in 2016. As Competent Authorities, local planning authorities have to ensure that policies in their Local Plans for new development does not lead to harm to the SAC. As such the SAC Partnership brings the planning authorities together, with other key stakeholders, to fulfil their duties to the SAC through a collaborative and coordinated approach. The MOU ran for 5 years (i.e. to 2021) after which it has been reviewed.
- 5.12 A suite of Strategic Access Management and Monitoring Measures ('SAMMM') were identified which would be funded through financial contributions from new housing developments within 8km of the SAC (the zone within which most frequent visitors originated).
- 5.13 In 2017 the Cannock Chase SAC stage 1 planning evidence base review was undertaken (Hoskin & Liley, 2017) to act as a 'health check' upon the SAMMM, to review the current situation, check if the SAMMM was still fit for purpose, and act as a platform for further work going forward. The 2017 review concluded that, in the short term, the SAMMM remained fit for purpose, with the scale of works within it sufficient to mitigate the current level and rate of housing growth within the zone of influence. However, it was recognised that in the medium to long term the SAMMM (if not reviewed and expanded) was unlikely to remain a robust approach to the mitigation of growing visitor impact due to a number of factors greatly increasing the scale and rate at which housing development was likely to grow within the zone of influence.

2021 Review

- 5.14 Since the 2017 review, a further evidence base review has been undertaken – the Planning Evidence Base Review (PEBR). This identifies that the 15km zone is still appropriate and is supported by more recent visitor survey data (Panter & Liley, 2019).
- 5.15 Using data from surrounding local authorities, pooled by the SAC Partnership, the review sets out the potential future housing growth around the SAC through to 2040. This indicates a likely scale of growth of around 14% within 0 – 15km of the SAC, with a total of 42,529 new houses anticipated. While these figures are necessarily indicative they do relate to all local authority boundaries that clip the

15km and therefore provide an indication of the scale of the in-combination effects of growth across authority boundaries.

- 5.16 In light of this growth, the review sets out the necessary mitigation required and draws in particular on the detailed implementation plans (relating to car-parking and to site-users) which were commissioned by the SAC Partnership. The review summarises the costs and sets out the mitigation measures necessary, providing the detail to allow adverse effects on integrity to be ruled out for in-combination effects of recreation on Cannock Chase SAC.
- 5.17 The PEBR also discusses Suitable Alternative Natural Greenspace ‘SANGs’. SANGs were suggested as a potential approach for mitigation for recreation impacts in the original Cannock Chase visitor impact mitigation strategy work (J. Underhill-Day & Liley, 2012). SANGs have however not been taken forward to date, due to the concerns that Cannock Chase has a particular draw that is hard to replicate, and because SANGs are often costly. The strategic mitigation approach at Cannock Chase is, however, relatively unique among heathland mitigation schemes in the relative focus on SAMMMs type approaches.
- 5.18 The PEBR identifies that there is potentially a role for SANGs, and should high levels of growth continue around Cannock Chase, securing options for greenspace and effectively utilising the range of countryside access opportunities should be explored in more detail.
- 5.19 With adequate mitigation – as identified in the PEBR – secured in plan policy and the levels of growth fitting with those contained within the PEBR it should be straight-forward to undertake the appropriate assessment at later stages of Plan making. The established strategic approach, agreed across the partnership, means that it should be possible to rule out adverse effects alone or in-combination for later versions of the Plan.

Key findings: Recreation

Cannock Chase SAC

Recreation impacts have long been recognised at Cannock Chase SAC and include trampling, erosion, dog fouling, spread of disease and increased risk of fire.

A strategic approach to mitigation is long established, including a zone of influence of 15km and a series of mitigation measures already implemented and further measures scheduled. The strategic approach has been reviewed and updated, as set out in the Planning Evidence Base Review (PEBR) and addresses the levels of growth in all relevant local plans.

With adequate mitigation in place and secured in plan policy it should be straight-forward to undertake the appropriate assessment at later stages of Plan making. The established strategic approach, agreed across the partnership, means that it should be possible to rule out adverse effects alone or in-combination for later versions of the Plan.

6. Appropriate assessment topic: Hydrological issues

Relevant policies from initial LSE screening

6.1 Likely significant effects are identified for water issues with respect to Motte Meadows SAC, West Midlands Meres and Mosses SAC, Midlands Meres and Mosses Phase 1 Ramsar, Midlands Meres and Mosses Phase 2 Ramsar with respect to the following policies, in-combination.

- Policy 1, Development strategy
- Policy 7, Meecebrook site allocation
- Policy 9, North of Stafford
- Policy 10, West of Stafford
- Policy 11, Stafford Station Gateway
- Policy 12, Other housing and employment land allocations
- Policy 30, Gypsy and traveller accommodation.

Hydrological issues and European sites potentially at risk

6.2 Run-off outflow from sewage treatments and overflows from septic tanks and poorly installed washing machines can result in increased nutrient loads and contamination of water courses. This can have consequences for European sites which contain wetland or aquatic features, as the pollution may affect the ability of the site to support the given interest.

6.3 Furthermore, abstraction and land management can influence water flow and quantity, resulting in reduced water availability at certain periods or changes in the flow. This can exacerbate issues relating to water quality.

6.4 These impact pathways can be specific to particular parts of European sites or particular development locations and are also relevant to the overall quantum of development.

6.5 The Council area lies entirely within the Upper Humber area administered by Severn Trent Water which is responsible for water supply and disposal. Decisions are informed by a range of studies including the River Basin Management Plans (RBMPs), Water Resource Management Plans (WRMPs), Drought Plans, Water Cycle Studies and Drainage and Wastewater Management plans (DWMPs) as appropriate.

6.6 Where relevant, these are subjected to HRA which explore the potential impact not only on 'water dependent' European sites as indicated in the Water Framework Directive but also take account of 'non-water dependent' sites to account for

unintended consequences. European sites considered to be at risk in the Upper Humber screened in for assessment in this HRA of the Local Plan (see Table 3) comprise the following:

- Cannock Chase SAC,
- Motte Meadows SAC,
- Pasturefields Salt Marsh SAC,
- the (Chartley Moss component of the) West Midlands Mosses SAC and Midland Meres and Mosses Phase 1 Ramsar site, and
- the (Aqualate Mere and Cop Mere components of the) Midland Meres and Mosses Phase 2 Ramsar site

Water resources

- 6.7 It is the role of the Environment Agency to make sure that abstraction is sustainable and does not damage the environment.
- 6.8 Water abstraction is managed through a licensing system originally introduced by the Water Resources Act 1963. The Environment Agency is the competent authority for the Water Framework Directive, and it oversees the publication of RBMPs. These plans set out how the management of water bodies will be undertaken, the roles of relevant bodies and the steps undertaken to ensure environmental targets are met.
- 6.9 The first RBMPs were produced in 2009 and then updated in 2015. In the more recent second cycle river basin management plans, the Environment Agency has committed to ensure abstraction licensing strategies and actions fully incorporate all environmental objectives and align with river basin management plans. The Agency will assess all licence applications and only issue licences that adequately protect and improve the environment; where necessary each should be subject to an individual HRA. The Agency will only grant replacement licences where the abstraction is environmentally sustainable, and abstractors can demonstrate they have a continued need for the water, and it will be used efficiently. In addition, for existing licences, the Agency will prioritise actions to protect and improve European sites and address the most seriously damaging abstractions during this plan period. All abstractors in surface water and groundwater bodies where serious damage is occurring or could occur without action should expect that their licences will be constrained over the next 6 years.
- 6.10 The current RBMP for the Stafford Borough Council Area was produced in 2015 and was accompanied by an HRA. Overall, this found '...the range of potential mitigation options available allow a conclusion that the RBMP is not likely to have

any significant effects on any European sites, alone or in combination with other plans or projects.'

- 6.11 This took account of predicted growth in the area and, therefore, it can be concluded that in terms of the RBMP, adverse effects on the integrity of the European sites at risk can be ruled out alone or in-combination.
- 6.12 In stating this, it is acknowledged the HRA was completed prior to the People Over Wind decision when, unlike after the Court's ruling, the benefits of mitigation were allowed to be considered at the screening stage. However, it is considered there are no reasons to suggest that its outcomes cannot be relied upon to inform this Local Plan.
- 6.13 RBMPs are reviewed periodically, and the current 2015 edition will remain in force until a replacement is adopted; a report on the consultation exercise for its emerging replacement is due later in 2022. The Council should take full account of the outcomes as they are expected to emerge during the strategic planning process and adapt the Local Plan as necessary.
- 6.14 Severn Trent Water's current WRMP was published in 2019. This too was accompanied by an HRA. Taking account of predicted growth, climate change and water supply and demand forecasts, amongst others, this found that unless measures were taken, a significant deficit would develop between supply and demand over the medium term. Actions proposed included a range of 'demand-side' (e.g. leakage reduction and promoting water efficiency amongst its customers) and 'supply-side' interventions (e.g. reducing abstraction, improving the flexibility of the network and land management). With these interventions in place, the WRMP indicates there is sufficient surplus of water with no need to increase abstraction beyond that provided for by existing licences.
- 6.15 The HRA found that the demand management solutions typically comprised small-scale and temporary activities largely concentrated in the urban environment far distant from any European site, and that impacts would be confined to the point of delivery. Consequently, likely significant effects alone or in-combination could be ruled out. Similarly, supply-side solutions were found to not result in likely significant effects on any European site. Whilst there was one exception to the latter, this was located in North Nottinghamshire far beyond the influence of the Local Plan allowing likely significant effects to be ruled out.
- 6.16 These predictions take into account abstraction licence changes and renewals, including information provided by the Environment Agency on actions that companies need to undertake to contribute towards meeting environmental

obligations, including any required changes to abstraction licences. Consequently, there are no reasons to suggest that its outcomes cannot be relied upon to inform this Local Plan.

- 6.17 Therefore, it can be concluded that in terms of the WRMP, adverse effects on the integrity of the European sites at risk can be ruled out alone or in-combination.
- 6.18 However, given the reliance of the WRMP on interventions to reduce water consumption, it would be reasonable and appropriate for the Local Plan to emphasise the need for future development to incorporate water-saving measures, in accordance with Severn Trent Water advice.
- 6.19 The current Drought Plan was published in 2022. This is also accompanied by an HRA though at the time of writing this was not available. Only one identified site for increased abstraction lies in proximity to the Stafford Borough Council area, the River Churnet. Although Severn Trent Water appear to retain the potential to apply for additional sources, it is understood each would need to be accompanied by a bespoke HRA if considered necessary.
- 6.20 However, without access to the HRA, the impact on European sites potentially at risk is unknown and therefore the next iteration of the Local Plan should take full account of the Drought Plan HRA. As the water company and Environment Agency will represent the most suitable competent authorities to assess the Drought Plan, its findings can and should be adopted by the Local Plan and its HRA.

Water quality

- 6.21 Wastewater or sewage can be very damaging to water bodies as it can contain large amounts of nutrients (such as phosphorus and nitrates), ammonia, bacteria, harmful chemicals and other damaging substances. Issues arise where sewage treatment technology to adequately reduce levels of phosphorus and harmful chemicals is not in place, where leakages occur from privately owned septic tanks and, in wet weather, storm overflows can discharge untreated sewage. Poorly installed domestic washing machines and even washing cars at home can, in places, also add to the pollution load. Outcomes can include increased turbidity, algal blooms, reduced dissolved oxygen and an overall increase in the nutrient status of receiving waterbodies. Simply, increases in housing increases pressure on the sewage network and the volume of wastewater.
- 6.22 The pollution of inland and coastal waters has received greater recognition in recent years and the significance of such potential impacts and the need to mitigate has been given emphasis by Natural England's demands that new development affecting vulnerable water bodies must achieve 'nutrient neutrality',

i.e. avoid any net increase in nitrate and phosphate pollution. Whilst this relates primarily to the disposal of foul water, run-off from hard surfaces can also be a factor. This reflects contemporary case law (the Dutch case) which makes clear that where water quality targets of European sites are not being met, further inputs of pollutants should not be allowed.

- 6.23 For the avoidance of doubt, none of the European sites potentially at risk are currently subject to these measures, but a range of other statutory and policy drivers still apply.
- 6.24 The RBMP provide the framework for protecting and enhancing the water environment. The relevant plan for the Upper Humber sets out statutory objectives for protected areas and a programme of measures to achieve those objectives.
- 6.25 Severn Trent Water provides wastewater treatment for new development which it typically delivers by ensuring there is adequate capacity or headroom within the wastewater treatment system.
- 6.26 Whilst it should be expected that all existing wastewater treatment works that lie within the catchment of these European sites operate within their licensed conditions and that all have capacity to accommodate predicted levels of growth, this is not known to the Council for certain. On the other hand, licenses for all wastewater treatment works and any changes to these would have been subjected to project-level HRAs and would not be permitted to operate if adverse effects could not be ruled out.
- 6.27 Furthermore, Severn Trent Water has recently prepared its first Drainage and Wastewater Management Plan (DWMP). These high-level documents provide the basis for integrated long-term planning relating to drainage, flooding and protection of the environment.
- 6.28 The DWMP acknowledges the potential for harm and as one of its strategic outcomes aims to 'Deliver sewer overflow improvements to remove harm in 100% of Defra outlined priority areas [e.g. European sites] within our region [by 2045].'
- 6.29 This will be accompanied by a Strategic Environmental Assessment (SEA). Consultation is currently underway and will conclude in the near future. As the DWMP lacks concrete proposals the SEA will effectively scope the work required before funding is determined in the next Price Review in 2024 (PR24).
- 6.30 Feedback from both the DWMP and SEA will inform production of the final DWMP by the end of March 2023. Funding will be applied for, but this will only be known

in December 2024. It is then intended to undertake an HRA on the final, more detailed proposals.

- 6.31 This compromises how the Council will capture and use the emerging information. As the water company and Environment Agency will represent the most suitable competent authorities to assess the DWMP, once produced its findings can and should be adopted by the Local Plan and its HRA. The Local Plan may however be complete before the DWMP and its HRA are finalised. However, it seems clear that the Council should liaise closely with Severn Trent so that the SEA at least forms the evolution of the Local Plan and any necessary policy wording is incorporated to deal with any uncertainty.

European site objectives and threats

- 6.32 Relevant details of each of the European sites listed above are described below.

Midland Meres and Mosses Phase 2 Ramsar

- 6.33 Aqualate Mere and Cop Mere are two of the eighteen components of the Midland Meres and Mosses Phase 2 Ramsar site, listed for its range of wetland habitats notably its extensive open water and reedswamp communities, wet woodland and fen pasture. As it is not designated as a SAC or classified as an SPA it lacks formal conservation objectives and a Site Improvement Plan (SIP) but given that the qualifying features are largely dependent on a favourable hydrological regime, both Meres can be considered vulnerable to declines in water quality and availability.

Cannock Chase SAC

- 6.34 Cannock Chase SAC supports the most extensive lowland heathland in the Midlands. Natural England's 'supplementary advice' complements the high level objectives and state the following:

'Restore the overall extent, quality and function of any supporting features within the local landscape which provide a critical functional connection with the site',

'Restore surface water and/or ground water quality and quantity to a standard which provides the necessary conditions to support and restore the ... wet heath feature', and

'Restore the natural hydrological regime at the catchment level to provide the conditions necessary to sustain the ... wet heath feature within the site'.

- 6.35 Furthermore, the SIP identifies 'drainage' and 'hydrological changes' as important pressures on this site.

Chartley Moss

6.36 Chartley Moss is one of the four components of the West Midland Mosses SAC and one of the eighteen components of the Midland Meres and Mosses Phase 1 Ramsar site, listed for its basin fen and mire habitats and, notably, its associated transition mire and quaking bog (or schwingmoor) communities.

6.37 Natural England's 'supplementary advice' complements the high level objectives and state the following:

'At a site, unit and/or catchment level restore natural hydrological processes to provide the conditions necessary to sustain the [basin mire] feature and associated species', and

'Restore the surface water and groundwater supplies supporting the hydrology of the component sites of the SAC to a natural, low nutrient status'.

6.38 Furthermore, the SIP identifies 'water pollution' and 'hydrological changes' as the two primary pressures affecting this site.

Mottey Meadows SAC

6.39 Mottey Meadows is designated on account of the Lowland hay meadow community. Natural England's 'supplementary advice' complements the high level objectives and state the following:

'Restore water quality and quantity to a standard which provides the necessary conditions to support the [lowland hay meadow qualifying] feature'.

'Restore a hydrological regime which provides a consistently near surface water table ...'

'Restore a hydrological regime which provides a cumulative duration of annual surface flooding ...'

'At a site, unit and/or catchment level (as necessary) restore natural hydrological processes to provide the necessary conditions to support the [lowland hay meadow qualifying] feature'

6.40 Furthermore, the SIP identifies 'water pollution' as the primary pressure or threat followed immediately by 'hydrological changes' and 'water abstraction'.

Pasturefield Salt Marsh SAC

6.41 Lying in the floodplain of the River Trent, the site is designated as a remnant of the once more extensive saltmarshes fed by naturally saline springs and described as the only known remaining example in the UK of a natural spring with inland

saltmarsh vegetation. Natural England's 'supplementary advice' complements the high-level objectives and state the following:

'Ensure the salinity of spring water is at a level appropriate for supporting salt marsh vegetation',

'Ensure water quality is maintained or restored as necessary to a standard which provides the necessary conditions to support the [saltmarsh qualifying] feature',

'Restore water table levels and the spring flow regime during the year at levels consistent with maintaining the [saltmarsh qualifying] feature'.

- 6.42 In contrast, the SIP does not identify any issues affecting the qualifying features of this SAC but does describe it as '... one of only two known extant brine marshes in the country.'

Conclusion

- 6.43 Importantly, a target to 'restore' rather than to 'maintain' (see conservation objectives above) reflects that existing hydrological thresholds are already being exceeded. In turn, this highlights the greater challenge of achieving the conservation objectives.
- 6.44 Despite this, the outcomes of the RBMP and WRMP HRAs provides confidence that adverse effects on the integrity of the European sites potentially at risk from hydrological issues (ie water resources and water quality) can be avoided. However, given the stage of the Local Plan, any reliance on these would be misplaced until the outcomes of the emerging strategic assessments of the Drought Plan and DWMP become clear.
- 6.45 Should emerging analysis carried out for the WRMP and DWMP indicate that adverse effects on the integrity of these European sites cannot be avoided, mitigation, typically in the form of increased capacity and capability, often provided by new infrastructure, may be required. Severn Trent Water has a legal duty to provide this, but it can take time to implement. Should these circumstances arise, the Local Plan could benefit from a policy requiring the phasing of development so that headroom and capacity are maintained at all times. On the other hand, should adverse effects be ruled out such measures may not be required.
- 6.46 However, until these results are made clear, adverse effects on the integrity of the European sites at risk cannot be ruled out. Liaison with Severn Trent Water, Natural England and the Environment Agency is required to assess the scale of any

issues and identify any mitigation measures that might need to be incorporated into the next iteration of the Local Plan.

Key findings: Hydrological issues

Hydrological issues relate to both water quality and water availability. Confidence can be drawn from the outcome of the HRAs for the RBMP and WRMP that adverse effects on the integrity of any European sites potentially at risk from hydrological issues (ie water resources and water quality) can be ruled out.

However, at this stage in the Local Plan, reliance on these would be misplaced until the outputs of the SEA and HRA for the Drought Plan and the SEA for the DWMP are available.

Until these have been subject to scrutiny, adverse effects on the integrity of all the (Aqualate Mere component of the) Midland Meres and Mosses Phase 2 Ramsar site, Cannock Chase SAC, the (Chartley Moss component of the) Midland Meres and Mosses Phase 1 Ramsar site/West Midland Mosses SAC, Motte Meadows SAC and Pasturefields Salt Marsh SAC cannot be ruled out.

Liaison with Severn Trent Water, the Environment Agency and Natural England is required to assess the scale of any issues and identify any mitigation measures, if necessary, before the next iteration of the Local Plan and further updates of this HRA.

7. Appropriate assessment topic: Air Quality

7.1 Likely significant effects were identified for air quality with respect to in - combination effects of increased traffic for the following sites, all of which are within 10km of the Borough boundary and have relevant roads within 200m of Cannock Chase SAC, Cannock Extension Canal SAC, Motte Meadows SAC, Pasturefield Salt Marsh SAC, West Midlands Meres and Mosses SAC (Chartley Moss SSSI), Midlands Meres and Mosses Phase 1 Ramsar (Chartley Moss) and Midlands Meres and Mosses Phase 2 Ramsar (Aqualate Mere and Cop Mere). The following policies were screened -in, each in-combination:

- Policy 1, Development strategy
- Policy 7, Meecebrook site allocation
- Policy 9, North of Stafford
- Policy 10, West of Stafford
- Policy 11, Stafford Station Gateway
- Policy 12, Other housing and employment land allocations
- Policy 30, Gypsy and traveller accommodation

Air pollution from roads

7.2 Development is typically associated with increased traffic and emissions which can increase the airborne concentration of nitrogen oxides (NO_x) and ammonia (NH₃), and the subsequent rate of nitrogen deposition from the atmosphere. This can lead to the nutrient enrichment and acidification of soils, encouraging more tolerant ruderal species at the expense of sensitive plant, lower plant and invertebrate communities. In high concentrations, ammonia can result in direct toxic effects on vegetation, a factor which may also be true of NO_x. Larger animals, such as small mammals and birds are considered immune to direct effects but can be vulnerable to change in their supporting habitats. Furthermore, it can exacerbate the effects of other factors such as climate change or pathogens, for example.

7.3 Established air pollution assessment tools indicate that levels of nitrogen deposition typically fall quickly over the first few metres from the roadside before gradually levelling out; beyond 200m, they become difficult to distinguish from background levels. In other words, impacts at 10m, 50m or 200m can be very different from those at the roadside.

7.4 Reflecting this, Natural England provides screening criteria to assess the impact of air pollution on European sites (Natural England, 2018) Essentially, this provides a stepwise process that first explores whether any European sites lie within 200 m of

a busy road that is anticipated to carry increased traffic, prior to determining whether vulnerable qualifying features live within the affected area. If they do, detailed traffic analysis is required to determine if the level of traffic is anticipated to exceed a standard threshold of 1,000 Annual Average Daily Traffic (flows) (AADT) for all vehicles or 200 Heavy Duty Vehicles (HDVs). If these thresholds are exceeded, air quality analysis is required.

- 7.5 Specific impacts are assessed by calculating the relative contribution of the local plan (and, bearing in mind the Wealden decision, in-combination with other plans or projects) in relation to the relevant critical levels for NO_x and ammonia, and the critical loads for nitrogen deposition.
- 7.6 The critical level for NO_x is 30 µg m⁻³. It is a precautionary threshold below which there is confidence that adverse effects on vegetation communities will not arise. The critical level for ammonia is set at 3 µg m⁻³ unless bryophytes or lichens form part of the qualifying features in which case it falls to 1 µg m⁻³ (as in the case of Chartley Moss and Cannock Chase). The critical loads for nitrogen deposition are specific to each individual feature or habitat and are expressed in kilograms of nitrogen per hectare per year (or kgNha⁻¹yr⁻¹). These are presented as a range of values, e.g. 5-10 kgNha⁻¹yr⁻¹, (as at Chartley Moss) and, as a precautionary approach, only the lowest values in the range are typically used. Critical levels and loads are drawn from the Air Pollution Information Service (or APIS)²⁴.
- 7.7 Drawing on best practice (Holman et al., 2019) where existing background levels of these pollutants fall below the relevant critical levels or loads, emissions are considered to avoid harm where the contribution of the local plan (alone and in-combination) would not exceed the same thresholds. However, this is rare in lowland England. Indeed, where background levels already exceed these thresholds, it is considered that adverse effects will be avoided only if the increase is less than 1% of the critical levels or loads. The 1% threshold has been widely adopted in established guidance as, in practice, it is barely discernible from natural background fluctuations. Set at two orders of magnitude below the critical level or load, this threshold is considered suitably precautionary. Furthermore, whilst exceedance of the 1% threshold means that adverse effects cannot be ruled out, it does not necessarily mean that harm would arise.
- 7.8 It can be seen, therefore, that the additional contributions that might arise from increased traffic are only likely to be significant where a European site lies within

²⁴ Air Pollution Information Service available at <https://www.apis.ac.uk/>

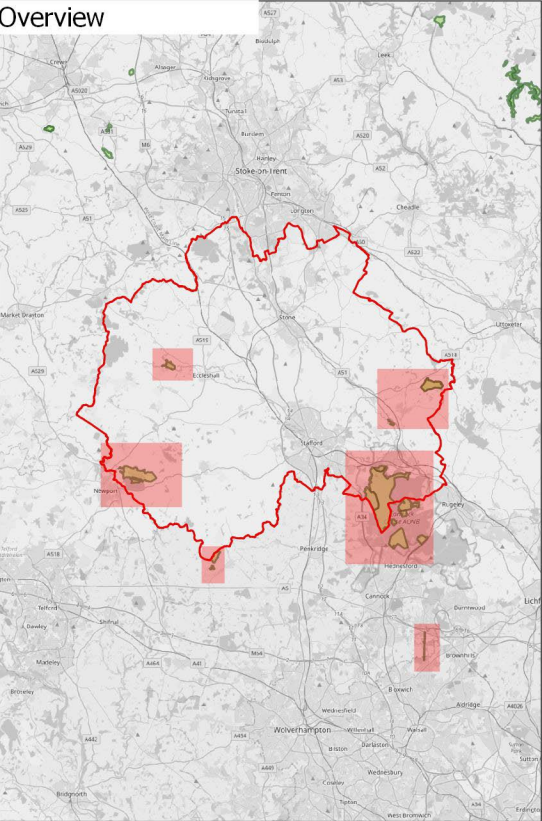
200m of a road which is expected to experience a marked increase in traffic, and where a feature is known to be sensitive to such effects.

European site objectives, relevant roads and threats

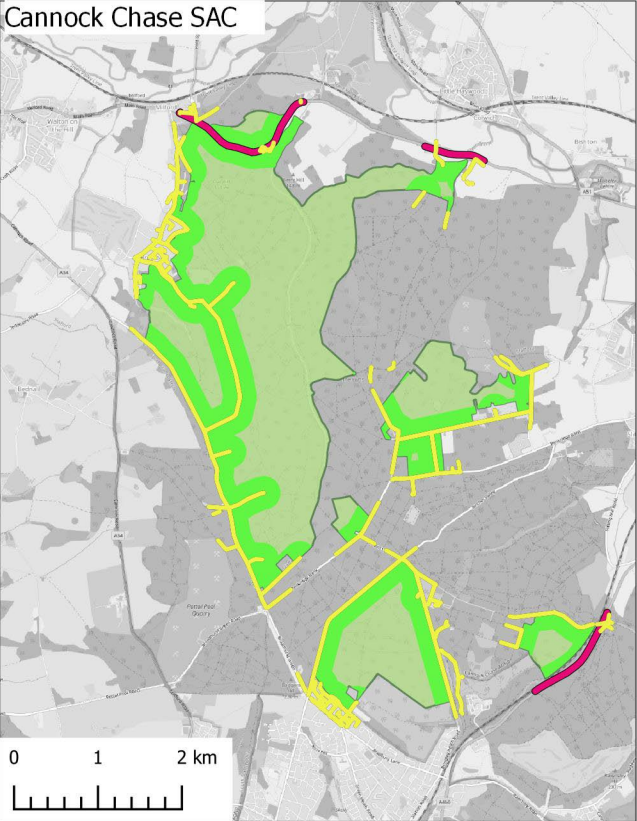
- 7.9 Map 7 shows the roads within 200m of European sites. The brighter green shading indicates parts of the European site that are within 200m of any road.
- 7.10 Cannock Chase has 2 different A roads within 200m: the A460 in the south and A513 in north. The A513 bisects part of the SAC with around 1.3km of its length directly adjacent to the SAC. Around 1.3km of the A460 lies within 200m, here the road is 70-115m from the SAC, with woodland and a railway line separating the two. There are also numerous minor roads around the SAC, including Chase Road which bisects the SAC.
- 7.11 Pasturefield Salt Marsh SAC has the A51 running along the north-eastern edge for around 1km, mostly around 100m distance from the SAC (with pasture and a canal in between).
- 7.12 Cannock Chase Extension Canal SAC is about 9.5km from the very southern tip of the Borough and has the A5 just to north (A5 here dualled), and then the B4154 runs parallel and crosses the canal. The distance of the SAC from the Borough (Chapman & Kite, 2021 suggest that the consideration of impacts of traffic from local plans should extend to a maximum of 10km from the plan boundary) would suggest that risks from the Plan are likely to be relatively low.
- 7.13 Chartley Moss (West Midlands Mosses SAC/Midlands Mere and Mosses Phase 1 Ramsar) has just 170m of the A518 within 200m and at it's closest the SAC is around 180m away, with the very northern tip of the site within 200m of a major road.
- 7.14 Mottey Meadows SAC, Aqualate Mere and Cop Mere only have minor, local roads within 200m.

Map 7: Roads and European sites

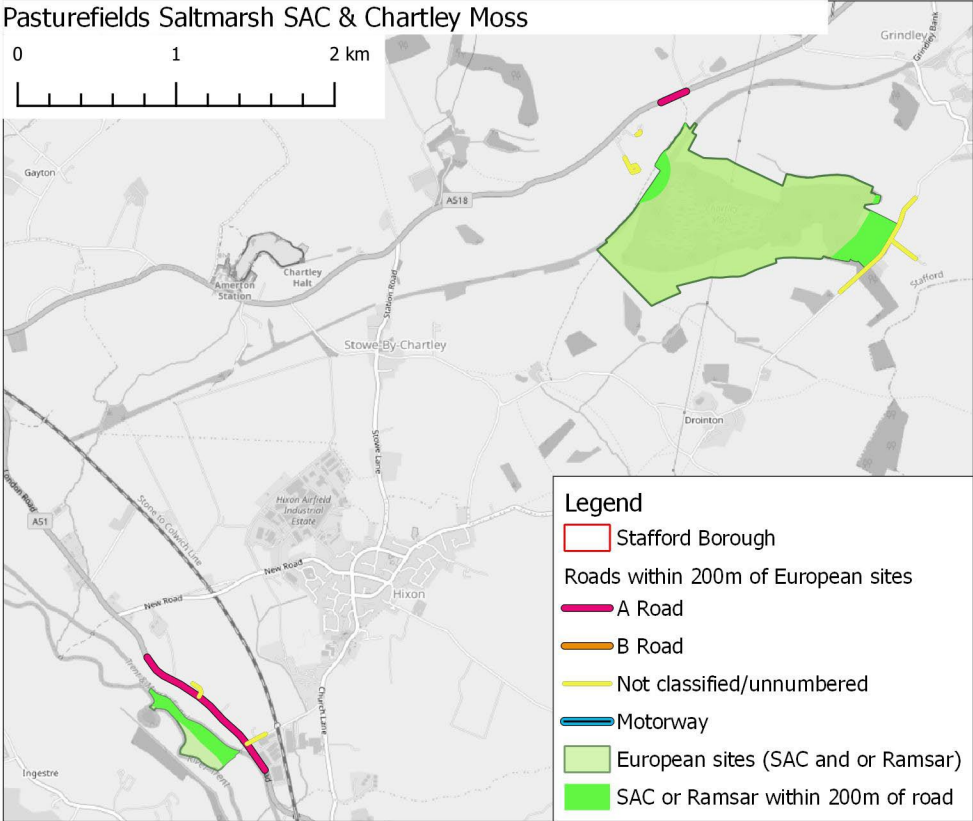
Overview



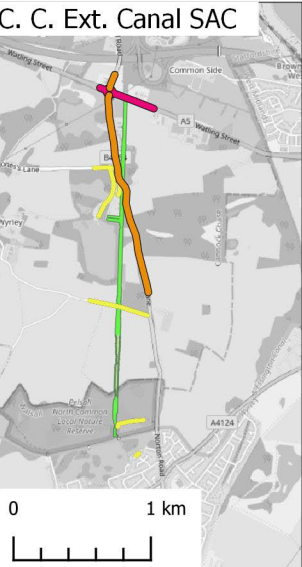
Cannock Chase SAC



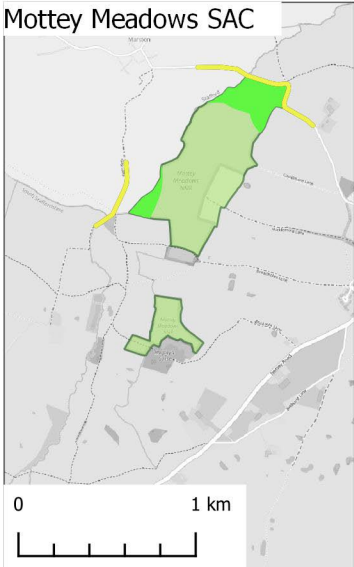
Pasturefields Saltmarsh SAC & Chartley Moss



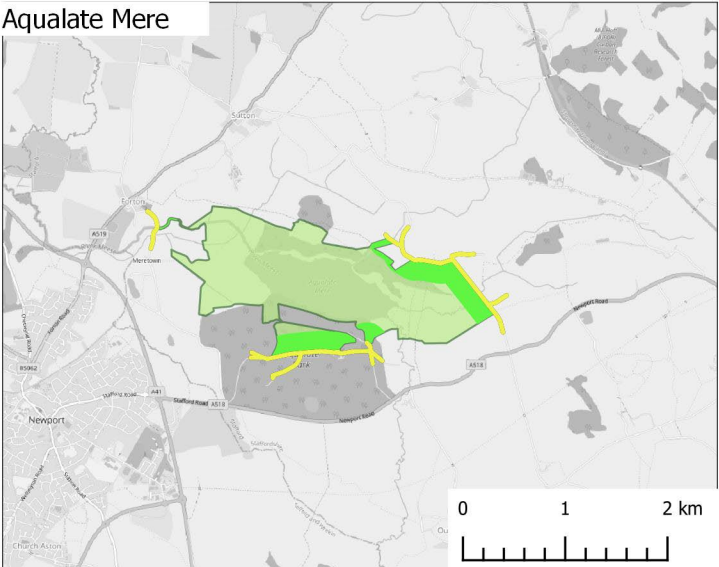
C. C. Ext. Canal SAC



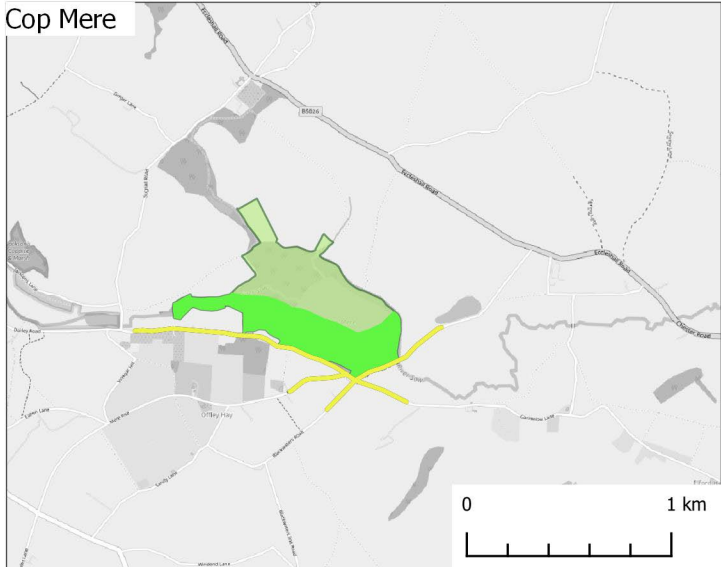
Mottey Meadows SAC



Aqualate Mere



Cop Mere



- 7.15 For the SAC sites, Natural England’s supplementary conservation advice and site improvement plans provide additional information on air quality.

Cannock Chase SAC

- 7.16 Cannock Chase SAC supports the most extensive lowland heathland in the Midlands . Natural England’s ‘supplementary advice’ complements the high level objectives and state s the following:

‘Restore the concentrations and deposition of air pollutants to at or below the site - relevant Critical Load or Level values given for the [wet and dry heath qualifying features] ...’

- 7.17 Furthermore, the SIP identifies ‘air pollution: impact of atmospheric nitrogen deposition’ as an important pressure on this site.

Cannock Extension Canal SAC

- 7.18 This canal is designated as an SAC as it supports a very large population of floating water -plantain set amongst a diverse aquatic flora and invertebrate fauna, a reflection of the high water quality . Natural England’s ‘supplementary advice’ complements the high-level objectives and state s the following:

‘Restore as necessary the concentrations and deposition of air pollutants to at or below the site-relevant Critical Load or Level values given for the [floating water-plantain qualifying feature] ...’

- 7.19 Furthermore, the SIP identifies ‘air pollution: impact of atmospheric nitrogen deposition’ as an important pressure on this site.

Chartley Moss

- 7.20 Chartley Moss is one of four components of the West Midland Mosses SAC and one of the eighteen components of the Midland Meres and Mosses Phase 1 Ramsar site, listed for its basin fen and mire habitats and, notably, its associated transition mire and quaking bog (or schwingmoor) communities.

- 7.21 Natural England’s ‘supplementary advice’ complements the high level objectives and state the following:

‘Restore as necessary the concentrations and deposition of air pollutants to at or below the site-relevant Critical Load or Level values given for the Transition mires and quaking bogs qualifying feature] ...’

- 7.22 Furthermore, the SIP identifies ‘air pollution: impact of atmospheric nitrogen deposition’ as one of the primary pressures affecting this site.

Pasturefields Salt Marsh SAC

- 7.23 Lying in the floodplain of the River Trent, the site is designated as a remnant of the once more extensive saltmarshes fed by naturally saline springs and described as the only known remaining example in the UK of a natural spring with inland saltmarsh vegetation. Natural England’s ‘supplementary advice’ complements the high level objectives and state the following:

‘Maintain the concentrations and deposition of air pollutants within the site -relevant Critical Load or Level values given for the inland salt meadow qualifying feature]’ .’.

- 7.24 In contrast, the SIP does not identify any issues affecting the qualifying features of this SAC but does describe it as ‘... one of only two known extant brine marshes in the country. Inland salt meadows are a ‘priority feature’ which restricts compensation only to where matters of human health and safety are at risk’.

Mottey Meadows SAC

- 7.25 This SAC contains a floristically -diverse mesotrophic grassland where traditional late hay cutting and aftermath grazing has been perpetuated, largely unaffected by modern agricultural practices. The site is important because of its large size, variety of grassland community types and presence of rare species. Furthermore, it contains an extensive example of an alluvial flood meadow.
- 7.26 Natural England’s ‘supplementary advice’ sets a restore target for air pollution and includes text that highlights that according to the APIS website, ‘ *the SAC is currently exceeding the Critical Load/Level thresholds for ammonia and nitrogen. The website measures Mottey against the neutral grassland threshold. It should be noted that MG4 is wet grassland with affinities and ecohydrological characteristics of fen and mire. At Mottey this is evident in the occurrence of vegetation that has affinities to M22 and M24. Rich fen is given a threshold of 1530kg N/ha/yr, which would suggest the risk for exceedance is higher than suggested by treating the SAC as neutral grassland.*
- 7.27 The SIP does not identify air pollution as a current risk or threat.

Conclusion

- 7.28 Importantly, a target to ‘restore’ rather than to ‘maintain’ (see conservation objectives above) reflects that existing background concentrations and/or rates of deposition already exceed critical levels or loads, respectively. In turn, this highlights the greater challenge of achieving the conservation objectives.
- 7.29 Should the HRA be unable to rule out adverse effects on the integrity of the site, mitigation will be required. This could take the form of the reduction of other sources of airborne pollution, speed restrictions, improvements to junctions, improvements in public transport, reductions in the size of certain allocations to reduce traffic or, more unusually, the removal of an allocation altogether.
- 7.30 Given the context provided above, in order to obtain the evidence to assess air pollution, traffic studies will be required for those roads within 200m of the European sites listed. Where this identifies increases in traffic of greater than 1,000 AADT for all traffic or 200 AADT for HDVs amongst a range of other criteria, air quality analysis is required to predict the impact on NO_x, ammonia and nitrogen deposition. Where this exceeds 1% of the critical level or lowest critical load, it may not be possible to rule out adverse effects on the integrity of the site
- 7.31 It is the overall effect of the levels of growth in the Plan in-combination (e.g. with growth in neighbouring authorities) that need to be understood and assessed strategically, ensuring adequate mitigation is in place where required.
- 7.32 Traffic data are therefore needed to complete the HRA. These need to show current traffic flows (Average Annual Daily Traffic ‘AADT’ for all traffic and for Heavy Duty Vehicles ‘HDVs’) and flows at the end of the Plan period (with and without development across the Plan and other Local Plans), for each of the roads within 200m of the European sites. If these data show increases of more than 1,000 AADT or 200 HGV, then air quality assessment may be required to determine the level of pollutant deposition likely to occur at the SACs and then ecological assessment would also be needed to understand the sensitivity of the habitats within 200m of the roads to this level of deposition. Without these data is not currently possible to rule out adverse effects on the integrity of the relevant European sites.
- 7.33 Traffic data are being collected by a partnership of local authorities. The partnership has commissioned separate work to determine likely traffic growth on

key roads within 200m of 8 different European sites²⁵ as a result of the proposed site allocations in the various local plans, alone and in-combination. Where the determined traffic growth could result in a possible significant impact to a European site the atmospheric deposition of Nitrogen (via increased NOx and NH3) and potential for increased acidification (arising from Nitrogen in combination with Sulphur Dioxide, SO2) will be modelled; alone and in-combination. Should the deposition of atmospheric pollutants exceed site-specific critical levels a full assessment of likely impacts upon the integrity of the European Site can then be undertaken. Where it is concluded that adoption of the Local Plan/s would result in a significant impact upon the integrity of one of more European sites, methods of delivering and securing proportionate mitigation will be outlined which can form the bases of a future strategic mitigation scheme. The results will be necessary to inform the next iteration of the Plan and accompanying HRA.

Key findings: Air Quality

Increased road traffic has the potential to impact air quality and is relevant where there are major roads within 200m of European sites. For Cannock Chase SAC, Cannock Extension Canal SAC, Mottey Meadows SAC, Pasturefields Salt Marsh SAC, (the Chartley Moss component of the) Midland Meres and Mosses Phase 1 Ramsar site/West Midland Mosses SAC and (the Aqualate Mere and Cope Mere components of the) Midland Meres and Mosses Phase 2 Ramsar. it is necessary to first understand the potential increase in traffic likely as a result of the plan (including the in-combination effects with other relevant plans and projects). Where increases are above particular thresholds then air quality modelling will be required. At present, the Council does not have the evidence to assess the impact for any increase in traffic generated by the emerging Local Plan and such evidence will be required before adverse effects on the integrity cannot be ruled out.

Traffic data are being collected by a partnership of local authorities. The results will be necessary to inform the next iteration of the Plan and accompanying HRA.

²⁵ Cannock Chase SAC, Pasturefields Salt Marsh SAC, West Midlands Mosses SAC, Midlands Meres and Mosses Ramsar Site, Midlands Meres and Mosses Phase 2 Ramsar Site, Mottey Meadows SAC, Cannock Extension Canal SAC and Fens Pools SAC

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Appendix 1: Conservation Objectives

As required by the Directives, ‘Conservation Objectives’ have been established by Natural England, which should define the required ecologically robust state for each European site interest feature. All sites should be meeting their conservation objectives. When being fully met, each site will be adequately contributing to the overall favourable conservation status of the species or habitat interest feature across its natural range. Where conservation objectives are not being met at a site level, and the interest feature is therefore not contributing to overall favourable conservation status of the species or habitat, plans should be in place for adequate restoration.

In 2012, Natural England issued a set of generic European site Conservation Objectives, which should be applied to each interest feature of each European site. The list of generic Conservation Objectives for each European site includes an overarching objective, followed by a list of attributes that are essential for the achievement of the overarching objective. Whilst the generic objectives are standardised, they are to be applied to each interest feature of each European site, and the application and achievement of those objectives will therefore be site specific and dependant on the nature and characteristics of the site.

For SPAs, the overarching objective is to:

‘Avoid the deterioration of the habitats of qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive.’

- This is achieved by, subject to natural change, maintaining and restoring:
- The extent and distribution of the habitats of the qualifying features.
- The structure and function of the habitats of the qualifying features.
- The supporting processes on which the habitats of the qualifying features rely.
- The populations of the qualifying features.
- The distribution of the qualifying features within the site.

For SACs, the overarching objective is to:

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

This is achieved by, subject to natural change, maintaining and restoring:

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

Conservation objectives inform any HRA of a plan or project, by identifying what the interest features for the site should be achieving, and what impacts may be significant for the site in terms of undermining the site's ability to meet its conservation objectives. Site specific supplementary advice highlights the importance of typical species, processes or ecological characteristics that are critical to the interest features of the site. Within the supplementary advice these are normally referred to as 'attributes' and can refer to a range of ecological characteristics such as population number, extent of habitat or a supporting process such as hydrology. Each attribute has a 'target' for the required condition of the attribute.

In Appendix 2 the hyper-links cross reference to the relevant conservation objectives page (on the Natural England website) for all the relevant European sites.

Appendix 2: Summary of European Sites

Summary of European sites and their interest features. Links in the site column relate to the conservation objectives for each site or (in the case of the Ramsar sites) the relevant page with the information sheet on the Natural England website. # in the interest features column denotes an interest feature for which the UK has a special responsibility. Descriptions are drawn from the description in the relevant site improvement plans.

Site	Interest features	Pressures and threats from relevant SIP	Description
Cannock Chase SAC	H4010 Northern Atlantic wet heaths with <i>Erica tetralix</i> H4030 European dry heaths	Undergrazing, drainage, hydrological changes, disease, air pollution (risk of atmospheric nitrogen deposition), wildfire/arson, invasive species.	Cannock Chase is a large, diverse area of semi-natural vegetation comprising the most extensive area of lowland heathland in the Midlands with alder woodland, oak wood pasture and valley mires. The character of the vegetation is intermediate between the upland or northern heaths of England and Wales and those of southern counties. It is home to breeding Nightjar, Woodlark, occasionally Dartford warbler and a diverse invertebrate fauna.
Cannock Extension Canal SAC	S1831 <i>Luronium natans</i> : Floating water -plantain	Water pollution, invasive species, air pollution (risk of atmospheric nitrogen deposition).	Cannock Extension Canal SAC supports the largest known population of Floating Water -plantain <i>Luronium natans</i> in Staffordshire. Floating water -plantain is a rare, small white -flowered water plant only found in Europe. In the UK it is considered a nationally scarce plant. It is found in Wales, and central England, growing in lakes,
Motte Meadows SAC	H6510 Lowland hay meadows (<i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i>)	Water pollution, hydrological change, water abstraction, change in land management.	This site is an outstanding floristically -diverse mesotrophic grassland where traditional late hay cutting and aftermath grazing has been perpetuated, largely unaffected by

Site	Interest features	Pressures and threats from relevant SIP	Description
			modern agricultural practices. The site is important because of its large size, variety of grassland community types and presence of rare species. Furthermore it contains an extensive example of an alluvial flood meadow.
Pasturefields Salt Marsh SAC	H1340# Inland salt meadows	None	Pasturefields Salt Marsh SAC is in the River Trent floodplain and is one of only two known extant brine marshes in the country. This extremely rare habitat contains a number of halophytic plants and is locally important for breeding waders including snipe, redshank and lapwing.
Peak District Dales SAC	H4030 European dry heaths H6130 Calaminarian grasslands of the <i>Violetalia calaminariae</i> H6210# Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuca Brometalia</i>) H7230 Alkaline fens H8120 Calcareous and calcshist screes of the montane to alpine levels (<i>Thlaspietea rotundifolii</i>) H8210 Calcareous rocky slopes with chasmophytic vegetation H9180# <i>Tilio-Acerion</i> forests of slopes, screes and ravines S1092 <i>Austropotamobius pallipes</i> : White-clawed (or Atlantic stream) crayfish	Inappropriate scrub control, fertiliser use, water pollution, inappropriate weirs, dams and other structures, overgrazing, undergrazing, inappropriate water levels, disease, invasive species, climate change, air pollution, vehicles, forestry and woodland management, direct impact from 3 rd party, feature location/extent/condition unknown, public access/disturbance .	The Peak District Dales SAC comprises thirteen separate dales, supporting ten interest features regarded as rare or threatened in a European context. The greatest in extent are the ash woodlands and the calcareous grasslands, and the relationship and balance between these features is reflected in the diversity of species and habitats found across the dales. Lead rakes and screes support important and specialised grassland communities, and crevices within rock outcrops support rare fern communities. Where the calcareous grassland is overlain by more acidic soils, acid grassland and heath has developed and springs and flushes support important and localised alkaline fen communities. Rivers dissect

Site	Interest features	Pressures and threats from relevant SIP	Description
	S1096 <i>Lampetra planeri</i> : Brook lamprey S1163 <i>Cottus gobio</i> : Bullhead		several of the dales and these support species of European importance such as bullhead.
River Mease SAC	H3260 Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation S1092 <i>Austropotamobius pallipes</i> : White-clawed (or Atlantic stream) crayfish S1149 <i>Cobitis taenia</i> : Spined loach S1163 <i>Cottus gobio</i> : Bullhead S1355 <i>Lutra lutra</i> : Otter	Water pollution, drainage, inappropriate weirs, dams and other structures, invasive species, siltation, water abstraction.	The River Mease is representative of a relatively un-modified clay lowland river which supports nationally significant populations of Spined Loach <i>Cobitis taenia</i> and Bullhead <i>Cottus gobio</i> , both of which are of International importance. Other interest features include freshwater White-clawed Crayfish <i>Austropotamoius pallipes</i> and Otter <i>Lutra lutra</i> , both have restricted distribution within the East Midlands.
South Pennine Moors SAC	H4010 Northern Atlantic wet heaths with <i>Erica tetralix</i> H4030 European dry heaths H7130# Blanket bogs H7140 Transition mires and quaking bogs H91A0 Old sessile oak woods with Ilex and Blechnum in the British Isles	Hydrological changes, managed rotational burning, low breeding success/poor recruitment, inappropriate management practices, public access/disturbance, air pollution, wildfire/arson, vehicles, overgrazing, forestry and woodland management, changes in species distributions, disease, undergrazing, invasive species, planning permission: general	This site covers the key moorland blocks of the Southern Pennines from Ilkley Moor in the north to the Peak District in the south. The moorlands are on a rolling dissected plateau formed from rocks of Millstone Grit at altitudes of between 300m – 600m and a high point of over 630m at Kinder Scout. The greater part of the gritstone is overlain by blanket peat with the coarse gravelly mineral soils and shales occurring only on the lower slopes.
West Midlands Mosses SAC (note this SAC is comprised of four SSSIs, of which Chartley Moss SSSI is	H3160 Natural dystrophic lakes and ponds (note this habitat is not present at Chartley Moss) H7140 Transition mires and quaking bogs	Water pollution, hydrological change, air pollution (risk of atmospheric nitrogen deposition), inappropriate scrub control, game management (pheasant rearing), forestry and woodland management, habitat fragmentation.	The West Midlands Mosses comprises four sites: Clarepool Moss, Abbots Moss, Chartley Moss and Wybunbury Moss. These support large basin mires which have developed as quaking bogs, known as Schwingmoors, together with a variety of associated hollows and

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Site	Interest features	Pressures and threats from relevant SIP	Description
the only one within the Borough)			pools showing various types and stages of mire development. This complexity of habitats gives rise to a diverse assemblage of associated plants and invertebrates of national significance.
Chartley Moss also lies within the Midlands Meres and Mosses Phase I Ramsar	Open water transition fen ('mere'), lowland raised bog ('moss') and associated habitats Wetland invertebrate assemblage Wetland plant assemblage	See West Midlands Meres and Mosses SAC	See West Midlands Meres and Mosses SAC
Aqualate Mere SSSI and Cop Mere SSSI lie within the Midland Meres and Mosses Phase 2 Ramsar	Open water transition fen ('mere'), lowland raised bog ('moss') and associated habitats Wetland invertebrate assemblage Wetland plant assemblage		A series of 18 sites made up of nutrient-rich open water bodies (meres) with fringing habitats of reed swamp, fen, carr and damp pasture, and peatlands. The landscape features developed in depressions in the glacial drift left by receding ice sheets. The wide range of habitats supports nationally important flora and fauna.
Peak District Moors (South Pennine Moors Phase 1)	A222(B) <i>Asio flammeus</i> . Short-eared owl A098(B) <i>Falco columbarius</i> . Merlin A140(B) <i>Pluvialis apricaria</i> : European golden plover	Hydrological changes, managed rotational burning, low breeding success/poor recruitment, inappropriate management practices, public access/disturbance, air pollution, wildfire/arson, vehicles, overgrazing, forestry and woodland management, changes in species distributions, disease, undergrazing, invasive species, planning permission: general	This site covers the key moorland blocks of the Southern Pennines from Ilkley Moor in the north to the Peak District in the south. The moorlands are on a rolling dissected plateau formed from rocks of Millstone Grit at altitudes of between 300m – 600m and a high point of over 630m at Kinder Scout. The greater part of the gritstone is overlain by blanket peat with the coarse gravelly mine ral soils and shales occurring only on the lower slopes.