

Mansfield Local Plan Site Allocation

Initial Screening of Potential Site Allocations

Mansfield District Council

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Quality information

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1. Introduction

Background

- 1.1 Mansfield District Council are currently updating their Local Plan (Regulation 18). Proposed changes to policies have been provided and assessed. At this stage of the planning, site allocations have not been selected, however all possible options have been identified and are considered in this document at an initial HRA screening stage to inform the housing and employment site selection process for the draft Local Plan. Once sites have been allocated, this report will be updated to focus on those sites and to undertake appropriate assessment as required.
- 1.2 The Habitats Regulations Assessment (HRA) of the Mansfield Local Plan (MLP) will determine if there are any realistic linking pathways present between a Habitats site (to used terminology in the National Planning Policy Framework; these are also called European sites although the UK is no longer part of the European Union) and the Local Plan and where Likely Significant Effects cannot be screened out, an analysis to inform Appropriate Assessment is undertaken to determine if adverse effects on the integrity of the Habitats sites will occur as a result of the Local Plan alone or in combination.
- 1.3 This report undertakes initial screening of the site options to identify potential pathways and make an initial assessment of site allocation options in respect of Likely Significant Effects on Habitats sites (Stage 1 of the HRA process). Habitats sites are Special Areas of Conservation (SAC), Special Protection Areas (SPA) and as a matter of government policy Ramsar sites. Proposed SACs (pSAC) and (pSPA) are also considered Habitats Sites for the purposes of an HRA.
- 1.4 The report also considers and assesses the proposed changes to the policies within the MLP as described in the review document “Mansfield District Local Plan Review 2033 – 2043 Consultation May 2025”.
- 1.5 Sherwood is a Possible Proposed SPA (ppSPA) in that it has never been proposed for formal designation although some stakeholder groups have advocated for its formal submission and designation, for more than a decade. The ppSPA has therefore been discussed in this report as a matter of good practice; however, it does not fall within the legal remit of HRA and there is no legal requirement to consider the impacts on the ppSPA.

Legislative Context

- 1.6 The UK left the European Union (EU) on 31 January 2020 under the terms set out in the European Union (Withdrawal Agreement) Act 2020 (“the Withdrawal Act”). While the UK is no longer a member of the EU, a requirement for Habitats Regulations Assessment will continue as set out in the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.
- 1.7 The HRA process applies the ‘Precautionary Principle’ to Habitats sites. Plans and projects can only be permitted having ascertained that there will be no adverse effect on the integrity of the Habitat (formally “European”) site(s) in question. To ascertain whether or not site integrity will be affected, an Appropriate Assessment should be undertaken of the Plan or project in question. Figure 1 below sets out the legislative basis for Appropriate Assessment, including Stage 1, Screening for Likely Significant Effects.
- 1.8 Plans and projects that are associated with potential adverse impacts on Habitats sites may still be permitted if there are no reasonable alternatives and there are Imperative Reasons of Overriding Public Interest (IROPI) as to why they should go ahead. In such cases, compensation would be necessary to ensure the overall integrity of the site network.

Conservation of Habitats and Species Regulations 2017 (as amended)

The Regulations state that:

“A competent authority, before deciding to ... give any consent, permission or other authorisation for, a plan or project which – (a) is likely to have a significant effect on a European site ... (either alone or in combination with other plans or project) must make an appropriate assessment of the implications of the plan or project in view of the site’s conservation objectives... The competent authority may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site”.

Figure 1: The legislative basis for Appropriate Assessment

- 1.9 Over time the phrase ‘Habitats Regulations Assessment’ (HRA) has come into wide currency to describe the overall process set out in the Regulations from screening through to IROPI. This has arisen in order to distinguish the process from the individual stage described in the law as an ‘Appropriate Assessment’. Appropriate Assessment is not undertaken within this report.
- 1.10 In spring 2018 the ‘Sweetman’ European Court of Justice ruling¹ clarified that ‘mitigation’ (i.e., measures that are specifically introduced to avoid or reduce a harmful effect on a Habitats site that would otherwise arise) should **not** be taken into account when forming a view on Likely Significant Effects. Mitigation should instead only be considered at the Appropriate Assessment stage. This HRA is cognisant of that ruling. Mitigation is not considered at this stage.

Habitats site scope of the project

- 1.11 There is no pre-defined guidance that dictates the physical scope of an HRA of a Plan document in all circumstances. Current guidance and good practice suggests that the following Habitats Sites should be included in the scope of an HRA assessment:
- All Habitats Sites within the boundary of the MLP;
 - Habitats Sites located within 10km of the District boundary; and
 - Habitats Sites located outside of the District boundary, or more than 10km from the District boundary, if shown to be linked to development in the MLP through a known ‘impact pathway’ (discussed below).
- 1.12 Generally, it is uncommon for development plans to have significant impacts on Habitats Sites situated more than 10km from areas of growth. For example, most core recreational catchments (except for some coastal sites) are under 10km in size and the average vehicle commuting distance of a UK resident is approximately 10km. However, there are exceptions, and it should be noted that the presence of a conceivable impact pathway linking a Plan to a Habitats Site does not mean that Likely Significant Effects (LSEs) will occur.
- 1.13 In particular, development impacts can extend beyond 10km, particularly where hydrological pathways and surface water catchments are involved, which is why the source-pathway-receptor concept is also used to help determine whether there are potential pathways connecting development to Habitats Sites. This takes site-specific sensitivities into account, including issues such as nutrient neutrality or water levels, quantity and flow.
- 1.14 Briefly defined, impact pathways are routes by which the implementation of a policy within a Local Plan document can lead to an effect upon a Habitats Site. An example of this would be new residential

¹ People Over Wind and Sweetman v Coillte Teoranta (C-323/17)

development resulting in an increased population and thus increased recreational pressure, which could affect Habitats Sites through, for example, disturbance of ground-nesting birds. Guidance from the Ministry of Housing, Communities and Local Government (MHCLG) states that the HRA should be 'proportionate to the geographical scope of the [plan policy]' and that 'an AA need not be done in any more detail, or using more resources, than is useful for its purpose'².

1.15 Habitats Sites discussed this HRA:

- Birklands and Bilhaugh Special Area of Conservation (SAC); and
- Sherwood possible potential Special Protection Area (ppSPA).

1.16 The distribution of the above Habitats Sites in relation to Mansfield District is shown in **Appendix A** and an introduction to the qualifying features (species and habitats), Conservation Objectives, and threats and pressures to the integrity of these Habitats Sites are set out in **Appendix B**.

Quality Assurance

- 1.17 This report was undertaken in line with AECOM's Integrated Management System (IMS). Our IMS places great emphasis on professionalism, technical excellence, quality, environmental and Health and Safety management. All staff members are committed to establishing and maintaining our certification to the international standards BS EN ISO 9001:2008 and 14001:2004 and BS OHSAS 18001:2007. In addition, our IMS requires careful selection and monitoring of the performance of all sub-consultants and contractors.
- 1.18 All AECOM Ecologists working on this project are members (at the appropriate level) of the Chartered Institute of Ecology and Environmental Management (CIEEM) and follow their code of professional conduct (CIEEM, 2025)

² MHCLG Guidance: Appropriate Assessment Available at: <https://www.gov.uk/guidance/appropriate-assessment> [Accessed 04/06/2025]

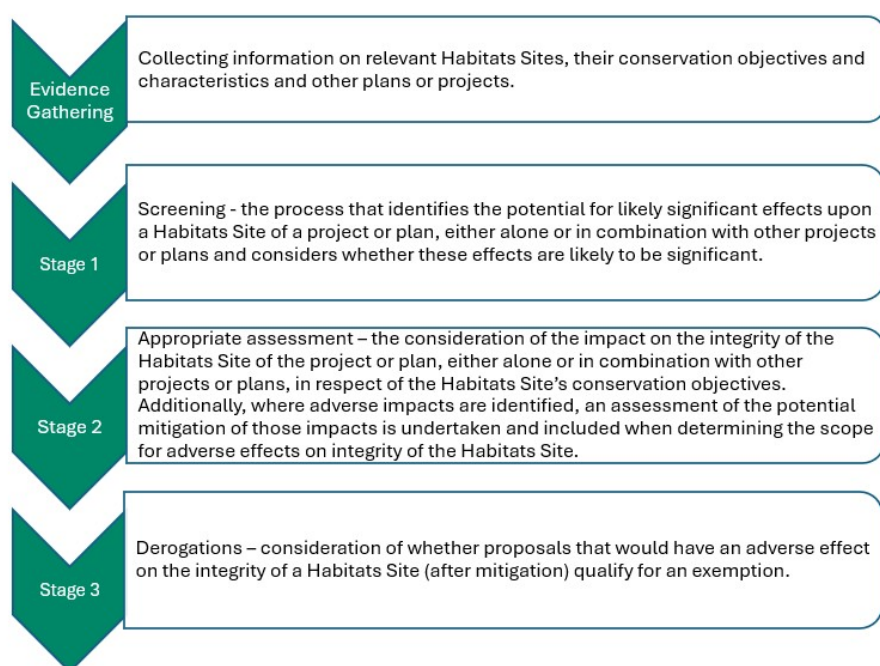
2. Methodology

Introduction

- 2.1 This section sets out the approach and methodology for undertaking the Habitats Regulations Assessment (HRA).

The Process of HRA

- 2.1 This initial report has been carried out with reference to the general EC guidance on HRA³ and in accordance with the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, and published guidance from relevant Government departments (referenced when used).



2.2

Plate 1. Three Stage Approach to Habitats Regulations Assessment⁴

- 2.3 Plate 1 above outlines the stages of HRA according to current Department for Environment, Food and Rural Affairs (DEFRA) guidance⁵. The stages are essentially iterative, being revisited as necessary in response to more detailed information, recommendations, and any relevant changes to the Plan until no significant adverse effects remain. This report relates only to HRA Stage 1: Screening.

³ European Commission (2001): Assessment of plans and projects significantly affecting Natura 2000 Sites: Methodological Guidance on the Provisions of Article 6(3) and 6(4) of the Habitats Directive.

⁴ DEFRA 2023 Guidance: Habitats regulations assessments: protecting a European site available at <https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site#how-to-carry-out-an-hra>

⁵ Ibid

HRA Stage One: (Screening for) Test of Likely Significant Effects

- 2.4 Following evidence gathering, the first stage of any Habitats Regulations Assessment is a Test of Likely Significant Effect (LSEs) - essentially a brief, high-level assessment to decide whether the full subsequent stage known as Appropriate Assessment is required. The essential question is:
- 2.5 “Is the plan, either alone or in combination with other relevant projects and plans, likely to result in a significant effect upon Habitats sites?”
- 2.6 The objective is to ‘screen out’ those plans and projects that can, without any detailed appraisal, be concluded to be unlikely to result in significant adverse effects upon Habitats sites, usually because there is no mechanism for an adverse interaction.
- 2.7 The LSEs screening is based on identification of the impact source, its pathway to receptors and an appraisal of the specific Habitat site receptors. These are normally designated features but also include habitats and species fundamental for designated features to achieve favourable conservation status (notably functionally linked habitats outside the Habitat site boundary).
- 2.8 In the Waddenzee case⁶, the European Court of Justice ruled on the interpretation of Article 6(3) of the Habitats Directive, including that:
- An effect should be considered ‘likely’, “if it cannot be excluded, on the basis of objective information, that it will have a significant effect on the site” (para 44);
 - An effect should be considered ‘significant’, “if it undermines the conservation objectives” (para 48); and
 - Where a plan or project has an effect on a site “but is not likely to undermine its conservation objectives, it cannot be considered likely to have a significant effect on the site concerned” (para 47).
- 2.9 The LSEs screening consists of two parts: Firstly, it should determine whether there are any policies that could result in negative impact pathways and secondly it establishes whether there are any Habitat sites that might be affected. It identifies Habitat sites that are most likely to be impacted by the Plan and the impact pathways that are most likely to require consideration.
- 2.10 It is important to note that LSEs screening must generally follow the precautionary principle as its main purpose is to determine whether the subsequent stage of AA (i.e., a more detailed investigation) is required.

The Geographic Scope

- 2.11 The Habitats sites included for assessment in this report and their approximate distance from the nearest site allocation in the MLP are listed in **Table 2-1**.

Table 2-1. Physical Scope of the HRA - Habitat Sites of Interest

Habitat Site	Distance to nearest allocation
Birklands and Bilhaugh SAC	Within 1 km of Local Plan Area
Sherwood possible potential Special Protection Area ppSPA	Within the Local Plan Area

⁶ Case C-127/0216

Confirming Other Plans and Projects That May Act 'In Combination'

- 2.12 It is a requirement of the Regulations that the impacts and effects of any land use plan being assessed are not considered in isolation but in combination with other plans and projects that may also be affecting the Habitat site(s) in question.
- 2.13 In considering the potential for combined regional housing development to impact on the identified Habitat sites the primary consideration is the impact of visitor numbers – i.e., recreational pressure and urbanisation, specifically with regard to Birklands & Bilhaugh SAC, given its role as a major recreational draw including Sherwood Forest National Nature Reserve. Recreational pressure is less of an issue for Sherwood ppSPA (although still relevant) with traffic-related air quality, construction disturbance and loss of habitat being more relevant.
- 2.14 When undertaking this part of the assessment it is essential to bear in mind the principal intention behind the legislation i.e., to ensure that those projects or plans (which in themselves have minor impacts) are not simply dismissed on that basis but are evaluated for any cumulative contribution they may make to an overall significant effect. In practice, in combination assessment is therefore of greatest relevance when the plan, policy or site allocation would otherwise be screened out because its individual contribution is inconsequential. The overall approach is to exclude the risk of there being unassessed likely significant effects in accordance with the precautionary principle. This was first established in the seminal Waddenzee⁷ case.
- 2.15 For the purposes of this HRA, AECOM have determined that the key plans with a potential for in-combination effects are the Local Plans of surrounding authorities.
- 2.16 It should be noted that, while the broad potential impacts of these plans will be considered, this document does not carry out a full HRA of these Plans and projects. Instead, it draws upon existing HRAs that have been carried out on the Plans and projects.

3. Background to Impact Pathways

- 3.1 In carrying out an HRA it is important to avoid confining oneself to effectively arbitrary boundaries (such as Local Authority or parish boundaries), but to use an understanding of the various ways in which Land Use Plans can impact Habitat sites to evaluate whether development is connected with Habitat sites, in some cases many kilometres distant. Briefly defined, impact pathways are routes by which a change in activity associated with a development can lead to an effect upon a Habitat site. As highlighted earlier, it is also important to bear in mind MHCLG guidance which states that the AA should be '*proportionate to the geographical scope of the [plan policy]*' and that '*an AA need not be done in any more detail, or using more resources, than is useful for its purpose*' (MHCLG, 2019, ⁸).

⁷ Waddenzee case (Case C-127/02, [2004] ECR-I 7405)

⁸ Ministry of Housing, Communities and Local Government. 2019. *Appropriate Assessment*. <https://www.gov.uk/guidance/appropriate-assessment#:~:text=an%20appropriate%20assessment%20must%20identify,boundaries%20of%20that%20site%20and>

- 3.2 Based upon data available in the Designated Sites View⁹ provided by Natural England (including pressures for the site and the current condition of the features), Natural England's Site Improvement Plans (SIPs), Supplementary Advice for Conservation Objectives and professional judgement, the impact pathways listed in **Table 3-1** require consideration when assessing site allocations in the MLP.

Table 3-1. Possible impact pathways

Habitat Site	Possible Impact Pathways
Birklands and Bilhaugh SAC	Public Access / Disturbance (Recreational Pressure) Air pollution: Impact of atmospheric nitrogen deposition Water quality Water quantity, level and flow
Sherwood ppSPA	Public Access / Disturbance (Recreational Pressure) Air pollution: Impact of atmospheric nitrogen deposition Loss of functionally linked habitat Direct loss of habitat Urbanisation Water quality Water quantity, level and flow

Background to Atmospheric Pollution

- 3.3 The main pollutants of concern for Habitats sites are oxides of nitrogen (NO_x), ammonia (NH₃) and Sulphur dioxide (SO₂) and are summarised in **Table 3-2**.

Table 3-2. Main sources and effects of air pollutants on habitats and species.

Pollutant	Source	Effects on habitats and species
Sulphur dioxide (SO ₂)	The main sources of SO₂ are electricity generation, and industrial and domestic fuel combustion. However, total SO₂ emissions in the UK have decreased substantially since the 1980's. Another origin of Sulphur dioxide is the shipping industry and high atmospheric concentrations of SO₂ have been documented in busy ports. In future years shipping is likely to become one of the most important contributors to SO₂ emissions in the UK.	Wet and dry deposition of SO₂ acidifies soils and freshwater and may alter the composition of plant and animal communities. The magnitude of effects depends on levels of deposition, the buffering capacity of soils and the sensitivity of impacted species. However, SO₂ background levels have fallen considerably since the 1970's and are now not regarded a threat to plant communities. For example, decreases in Sulphur dioxide concentrations have been linked to returning lichen species and improved tree health in London.

⁹ Available at <https://designatedsites.naturalengland.org.uk/>

Pollutant	Source	Effects on habitats and species
Acid deposition	Leads to acidification of soils and freshwater via atmospheric deposition of SO₂, NO_x, ammonia and hydrochloric acid. Acid deposition from rain has declined by 85% in the last 20 years, which most of this contributed by lower sulphate levels. Although future trends in Sulphur (S) emissions and subsequent deposition to terrestrial and aquatic ecosystems will continue to decline, increased N emissions may cancel out any gains produced by reduced S levels.	Gaseous precursors (e.g., SO₂) can cause direct damage to sensitive vegetation, such as lichen, upon deposition. Can affect habitats and species through both wet (acid rain) and dry deposition. The effects of acidification include lowering of soil pH, leaf chlorosis, reduced decomposition rates, and compromised reproduction in birds / plants. Not all sites are equally susceptible to acidification. This varies depending on soil type, bed rock geology, weathering rate and buffering capacity. For example, sites with an underlying geology of granite, gneiss and quartz rich rocks tend to be more susceptible.
Ammonia (NH ₃)	Ammonia is a reactive, soluble alkaline gas that is released following decomposition and volatilisation of animal wastes and from some chemical processes and vehicle exhausts. It is a naturally occurring trace gas, but ammonia concentrations are directly related to the distribution of livestock. Ammonia reacts with acid pollutants such as the products of SO₂ and NO_x emissions to produce fine ammonium (NH₄⁺) - containing aerosol. Due to its significantly longer lifetime, NH₄⁺ may be transferred much longer distances (and can therefore be a significant trans-boundary issue). While ammonia deposition may be estimated from its atmospheric concentration, the deposition rates are strongly influenced by meteorology and ecosystem type.	The negative effect of NH₄⁺ may occur via direct toxicity when uptake exceeds detoxification capacity and via N accumulation. Its main adverse effect is eutrophication, leading to species assemblages that are dominated by fast-growing and tall species. For example, a shift in dominance from heath species (lichens, mosses) to grasses is often seen. As emissions mostly occur at ground level in the rural environment and NH₃ is rapidly deposited, some of the most acute problems of NH₃ deposition are for small relict nature reserves located in intensive agricultural landscapes.
Nitrogen oxides (NO _x)	Nitrogen oxides are mostly produced in combustion processes. Half of NO_x emissions in the UK derive from motor vehicles, one quarter from power stations and the rest from other industrial and domestic combustion processes.	Direct toxicity effects of gaseous nitrates are likely to be important in areas close to the source (e.g. roadside verges). A critical level of NO_x for all vegetation types has been set to 30 ug/m³. Deposition of nitrogen compounds (nitrates (NO₃), nitrogen dioxide (NO₂) and nitric acid (HNO₃)) contributes to the total nitrogen deposition and may lead to both soil and freshwater acidification. In addition, NO_x contributes to the eutrophication of soils and water, altering the species composition of plant communities at the expense of sensitive species.
Nitrogen deposition	The pollutants that contribute to the total nitrogen deposition derive mainly from oxidized (e.g. NO_x) or reduced (e.g. NH₃) nitrogen emissions (described separately above). While oxidized nitrogen mainly originates from major conurbations or highways, reduced nitrogen mostly derives from farming practices.	All plants require nitrogen compounds to grow, but too much overall N is regarded as the major driver of biodiversity change globally. Species-rich plant communities with high proportions of slow-growing perennial species and bryophytes are most at risk from N eutrophication. This is because many semi-

Pollutant	Source	Effects on habitats and species
	The N pollutants together are a large contributor to acidification (see above).	natural plants cannot assimilate the surplus N as well as many graminoid (grass) species. N deposition can also increase the risk of damage from abiotic factors, e.g. drought and frost.
Ozone (O ₃)	A secondary pollutant generated by photochemical reactions involving NO _x , volatile organic compounds (VOCs) and sunlight. These precursors are mainly released by the combustion of fossil fuels (as discussed above). Increasing anthropogenic emissions of ozone precursors in the UK have led to an increased number of days when ozone levels rise above 40 parts per billion (ppb) ('episodes' or 'smog'). Reducing ozone pollution is believed to require action at international level to reduce levels of the precursors that form ozone.	Concentrations of O ₃ above 40 ppb can be toxic to both humans and wildlife and can affect buildings. High O ₃ concentrations are widely documented to cause damage to vegetation, including visible leaf damage, reduction in floral biomass, reduction in crop yield (e.g. cereal grains, tomato, potato), reduction in the number of flowers, decrease in forest production and altered species composition in semi-natural plant communities.

Source: Information summarised from the Air Pollution Information System (<http://www.apis.ac.uk/>)

- 3.4 SO₂ emissions are overwhelmingly influenced by the output of power stations and industrial processes that require the combustion of coal and oil. As such, it is unlikely that material increases in SO₂ emissions will be associated with the MLP. NH₃ emissions are dominated by agriculture, with some chemical processes also making notable contributions.
- 3.5 NH₃ can have a directly toxic effect upon vegetation, particularly at close distances to the source such as near road verges¹⁰. NO_x can also be toxic at high concentrations (far above the annual average Critical Level) but generally only in the presence of elevated SO₂ which is very rare in the UK.
- 3.6 NO_x emissions, however, are dominated by the output of vehicle exhausts (more than half of all emissions). Within a 'typical' housing development, by far the largest contribution to NO_x (92%) will be made by the associated road traffic. Other sources, although relevant, are of minor importance (8%) in comparison¹¹. Emissions of NO_x could therefore be reasonably expected to increase as a result of greater vehicle use due to the MLP. High levels of NO_x and NH₃ are likely to increase the total N deposition to soils, potentially leading to deleterious knock-on effects in resident ecosystems. Increases in nitrogen deposition from the atmosphere can, if sufficiently great, enhance soil fertility and lead to eutrophication. This often has adverse effects on community composition and the quality of semi-natural, nitrogen-limited terrestrial and aquatic habitats^{12, 13}.
- 3.7 According to the World Health Organisation, the critical NO_x concentration (critical threshold) for the protection of vegetation is 30 µgm⁻³. In addition, ecological studies have determined 'Critical Loads'

¹⁰ http://www.apis.ac.uk/overview/pollutants/overview_NOx.htm.

¹¹ Proportions calculated based upon data presented in Dore CJ et al. 2005. UK Emissions of Air Pollutants 1970 – 2003. UK National Atmospheric Emissions Inventory. <http://www.airquality.co.uk/archive/index.php>

¹² Wolseley, P. A.; James, P. W.; Theobald, M. R.; Sutton, M. A. **2006**. Detecting changes in epiphytic lichen communities at sites affected by atmospheric ammonia from agricultural sources. *Lichenologist* 38: 161-176

¹³ Dijk, N. **2011**. Dry deposition of ammonia gas drives species change faster than wet deposition of ammonium ions: evidence from a long-term field manipulation *Global Change Biology* 17: 3589-3607

(CLs)¹⁴ of atmospheric N deposition (that is, NO_x combined with ammonia NH₃) for key habitats within Habitats sites.

- 3.8 According to the Department of Transport's Transport Analysis Guidance, "Beyond 200m, the contribution of vehicle emissions from the roadside to local pollution levels *is not significant*"¹⁵ (see Figure 2).

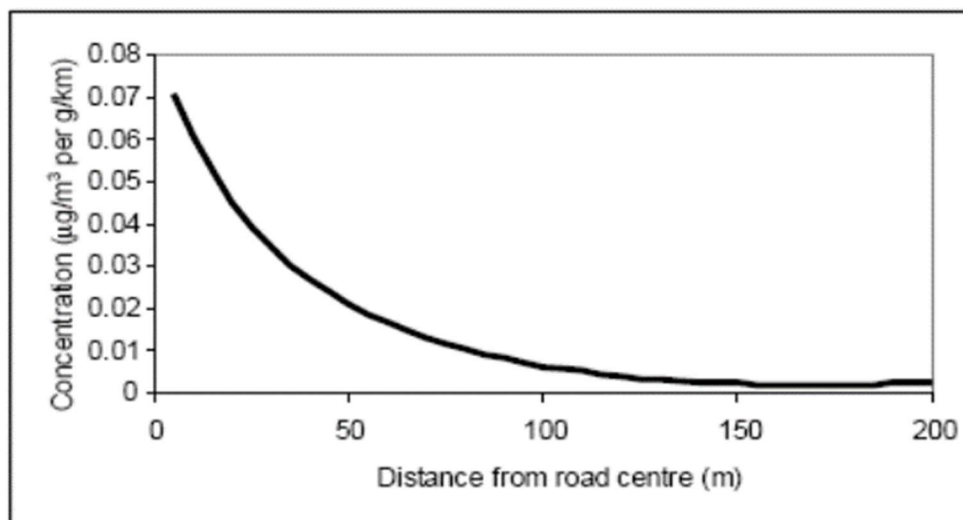


Figure 2: Traffic contribution to concentrations of pollutants at different distances from a road¹⁶

Background to Direct Loss of Habitat

- 3.9 Most Habitats sites have been geographically defined to encompass the key features that are necessary for coherence of their structure and function, and the support of their qualifying features. Loss of land within a Habitats site therefore has the potential to either directly remove qualifying features (habitats) or to indirectly impact qualifying features (species) which rely on those habitats.
- 3.10 Generally speaking, development does not happen within the boundary of a Habitats site due to the potential impact on the site. However, in this instance the protections afforded to Habitats Sites are not in place for the ppSPA. The Sherwood ppSPA is being reviewed as a Habitats Site within this report and current site allocations do include land within the zone defined for the ppSPA.

Background to Loss of Functionally Linked Habitat

- 3.11 While most Habitats sites have been geographically defined to encompass the key features that are necessary for coherence of their structure and function, and the support of their qualifying features, this is not necessarily the case. A diverse array of qualifying species including birds, bats and amphibians are not always confined to the boundary of designated sites.
- 3.12 For example, the highly mobile nature of both wader and waterfowl species implies that areas of habitat of crucial importance to the integrity of their populations lie outside the physical limits of Habitats sites. Despite not being part of the formal designation, these habitats are integral to the maintenance of the

¹⁴ The critical load is the rate of deposition beyond which research indicates that adverse effects can reasonably be expected to occur

¹⁵ www.webtag.org.uk/archive/feb04/pdf/feb04-333.pdf

¹⁶ Source available at: www.dft.gov.uk/ha/standards/dmrb/vol11/section3/ha20707.pdf

structure and function of the designated site, for example by encompassing important foraging grounds. Therefore, land use plans that may affect such functionally linked habitat require further assessment.

- 3.13 There is now an abundance of authoritative examples of HRA cases on plans affecting bird populations, where Natural England recognised the potential importance of functionally linked habitat. For example, bird surveys in relation to a previous HRA established that approximately 25% of the golden plover population in the Somerset Levels and Moors SPA were affected while on functionally linked land, and this required the inclusion of mitigation measures in the relevant plan policy wording. Another important case study originates from the Mersey Estuary SPA / Ramsar, where adjacently located functionally linked land had a peak survey count of 108% of the 5 year mean peak population of golden plover. This finding led to considerable amendments in the planning proposal to ensure that the site integrity was not adversely affected.
- 3.14 The identification of an area as functionally linked habitat is not always a straightforward process. The importance of non-designated land parcels may not be apparent and thus might require the analysis of existing data sources (e.g. Bird Atlases or data from records centres) to be firmly established. In some instances, data may not be available at all, requiring further survey work.
- 3.15 An area may be considered as functionally linked if:
- It is of a type likely to be used by a receptor (for example, a bird species) such as grazing salt marsh;
 - The area is within the usual foraging range of the bird species in question (as measured from the habitats site);
 - There is sufficient habitat that the area is of value (the further a species travels to an area, the more energy is expended and therefore there must be the possibility of recovering the energy spent to be considered useful);
 - The area conforms to other characteristics required by the receptor species, for example, clear line of site to avoid predation; and
 - There is insufficient equivalent habitat closer to the Habitats site in question.

Background to Recreational Pressure

- 3.16 There is growing concern over the cumulative impacts of recreation on key nature conservation sites in the UK, as most sites must fulfil Conservation Objectives while also providing recreational opportunity. Various studies have provided compelling links between increases in housing development and access levels¹⁷, and resulting impacts in Habitat sites^{18 19}.
- 3.17 Recreational use of a site has the potential to:
- Cause disturbance to sensitive species such as ground-nesting birds and wintering wildfowl;
 - Prevent appropriate management or exacerbate existing management difficulties;
 - Cause damage through erosion, trampling and fragmentation; and

¹⁷ Weitowitz D.C., Panter C., Hoskin R. & Liley D. 2019. The effect of urban development on visitor numbers to nearby protected nature conservation sites. *Journal of Urban Ecology* 5. <https://doi.org/10.1093/jue/juz019>

¹⁸ Liley D, Clarke R.T., Mallord J.W., Bullock J.M. (2006a). The effect of urban development and human disturbance on the distribution and abundance of nightjars on the Thames Basin and Dorset Heaths. Natural England / Footprint Ecology.

¹⁹ Liley D., Clarke R.T., Underhill-Day J., Tyldesley D.T. (2006b). Evidence to support the appropriate Assessment of development plans and projects in south-east Dorset. Footprint Ecology / Dorset County Council.

- Cause eutrophication due to dog fouling.
- 3.18 Different types of Habitat sites (e.g., heathland, freshwater, chalk grassland) have a range of vulnerabilities and are sensitive to different types of recreational pressures. Studies across a range of species have shown that the effects from recreation can be complex.

Bird Disturbance

- 3.19 Disturbance effects can have negative impacts on qualifying birds in various ways, with reduced chick provisioning and increased nest predation due to adults being flushed from the nest and deterred from returning. A literature review on the effects of human disturbance on breeding birds found that 36 out of 40 studies reported reduced breeding success due to disturbance²⁰. The main reasons given for the reduction in breeding success were nest abandonment and increased predation of eggs or young. Studies of other species have shown that birds nest at lower densities in disturbed areas, particularly when there is weekday as well as weekend pressure²¹. Recreational disturbance effects on ground-nesting birds are particularly severe, with many studies concluding that urban sites support lower densities of key species, such as stone curlew (*Numenius Arquata*) and nightjar (*Caprimulgus europaeus*)^{22 23}.
- 3.20 Direct evidence for bird disturbance has been collected in many field studies. For example, observations of bird disturbance were undertaken by Footprint Ecology in North Kent in 2010 / 2011. The study focused on recreational disturbance to wintering waterfowl on intertidal habitats along the North Kent shoreline, stretching between Gravesend and Whitstable, and encompassing three SPAs. From 1,400 events (records of visitors in the bird survey areas) occurring within 200m of the birds, 3,248 species-specific observations were noted, which included no response (74% of observations), major flight (13%), minor flight (5%), short evasive walks away from the stimulus (5%) and alertness (3%).
- 3.21 In heathland sites in Dorset, dog walking accounted for 55% of all major flight observations, with a further 15% attributed to walkers without dogs. After controlling for distance, major flights were more likely to occur when activities took place on the intertidal zone (compared to water-based or onshore events), when dogs were present, and a higher number of dogs were present in visitor groups. One study found that there was a significant negative correlation between the degree of urban development and the number of nightjar territories in Dorset heathland sites, but no such impacts were found for woodlark (*Lullula arborea*) and Dartford warbler (*Curruca undata*)²⁴.
- 3.22 A long-term (10 year) study on nightjar habitat in the Sherwood Forest area compared a heavily visited area (containing a café, shops, an adventure ropes course and 28.3 km of walking and cycling tracks) with a more lightly visited area (containing no amenities and only 3.3km of tracks). The study found that overall, nightjar density was significantly lower and there were significantly fewer breeding pairs in the heavily disturbed habitat compared with the less disturbed habitat, although, average breeding success per pair, in terms of eggs and fledglings produced, was not significantly different between the two sections (heavily visited and lightly visited) across years, either because of different behavioural tolerance levels to disturbance or through confounding effects due to population density. The study concluded that, while

²⁰ Hockin D.M., Oundsted M., Gorman D., Hill V. & Barker M.A. (1992). Examination of the effects of disturbance on birds with reference to its importance in ecological assessments. *Journal of Environmental Management* **36**: 253-286.

²¹ Van der Zande A.N., Berkhuisen J.C., van Letesteyn H.C., ter Keurs W.J. & Poppelaars A.J. (1984). Impact of outdoor recreation on the density of a number of breeding bird species in woods adjacent to urban residential areas. *Biological Conservation* **30**: 1-39.

²² Clarke R.T., Liley D., Sharp J.M. & Green R.E. (2013). Building development and roads: Implications for the distribution of stone curlews across the Brecks. *PLOS ONE*. <https://doi:10.1371/journal.pone.0072984>.

²³ Liley D. & Clarke R.T. (2003). The impact of urban development and human disturbance on the numbers of nightjar *Caprimulgus europaeus* on heathlands in Dorset, England. *Biological Conservation* **114**: 219-230.

²⁴ Liley D. & Clarke R.T. (2002). Urban development adjacent to heathland sites in Dorset: The effect on the density and settlement patterns of Annex I bird species. English Nature Research Reports, No 463. English Nature, Peterborough. 33pp.

male birds were largely unaffected, females more actively avoid settling in heavily disturbed areas. The report concluded that managing access patterns by the public to heathland areas during critical nesting periods could reduce the effects of disturbance. Previous studies have suggested that the control of dogs and restriction of access to dog walkers would be particularly important considerations. The research also reported a recent model that predicted that the extent to which visitors spread out across a site may have a greater negative impact on populations of ground-nesting birds than simple visitor numbers. The research concluded that creating an increased number of potential nest sites for female nightjars (i.e. habitat areas) may also help reduce the effects of recreational disturbance, particularly if they are in areas where human access can be managed to keep disturbance levels low²⁵.

- 3.23 However, bird disturbance studies need to be treated with care. For instance, the magnitude of disturbance is not necessarily correlated with the impact of disturbance, i.e., the most easily disturbed species are not necessarily those that will suffer the greatest impacts. For example, it has been shown in some cases, that the most easily disturbed birds simply move to alternative feeding sites, while others remain (likely due to an absence of suitable alternative foraging areas) and thus suffer greater population-level impacts²⁶. A recent literature review undertaken for the RSPB²⁷ also urges caution when extrapolating the results of disturbance studies because responses differ between species and may be impacted by local environmental conditions. This should be considered when predicting the potential impacts of future recreational pressure on Habitat sites.
- 3.24 It should also be emphasised that recreational use is not necessarily a problem. Many Habitat sites are also National Nature Reserves or nature reserves managed by Wildlife Trusts and the RSPB. At these sites, access is encouraged, and resources are deployed to ensure that recreational use is managed appropriately. Bird abundances in many of these sites remain stable or, in some cases, are increasing despite high visitor numbers.

Trampling Damage

- 3.25 Most terrestrial habitats (including heathland, grassland and woodland) can be affected by trampling and other mechanical damage, which dislodges individual plants, leads to soil compaction and erosion. A general effect of trampling on vegetation is reduced species and structural diversity, since only dominant and tolerant plant species persist²⁸. However, many parameters (e.g. vegetation type, recreational activity, weather, and ground conditions) can have marked impacts on the degree of trampling damage. The following provides a brief overview of the impacts of trampling associated with different recreational activities in different habitats:
- A study on experimental trampling of different heathland types under varying weather conditions in Brittany (France) showed that dry heath was more resistant to trampling damage than wet heath²⁹. Equally, both heathland habitats showed greater resilience to trampling under dry than wet conditions.

²⁵ Lowe, A., A. C. Rogers, and K. L. Durrant. 2014. Effect of human disturbance on long-term habitat use and breeding success of the European Nightjar, *Caprimulgus europaeus*. *Avian Conservation and Ecology* 9(2): 6. <http://dx.doi.org/10.5751/ACE-00690-090206>

²⁶ Gill et al. (2001). Why behavioural responses may not reflect the population consequences of human disturbance. *Biological Conservation* 97: 265-268.

²⁷ Woodfield & Langston. (2004). Literature review on the impact on bird population of disturbance due to human access on foot. *RSPB Research Report* No. 9.

²⁸ Santoro R. et.al. (2012). Effects of Trampling Limitation on Coastal Dune Plant Communities. *Environmental Management* DOI 10.1007/s00267-012-9809-6.

²⁹ Gallet S. & Roze F. (2002). Long-term effects of trampling on Atlantic heathland in Brittany (France): Influence of vegetation type, season and weather conditions. *Biological Conservation* 103: 267-275.

- Wilson & Seney³⁰ examined the degree of track erosion caused by hikers, motorcyclists, horse riders and cyclists in 108 plots along tracks in the Gallatin National Forest, Montana. Although the results proved difficult to interpret, it was concluded that horses and hikers disturbed more sediment on wet tracks, and therefore caused more erosion, than motorcycles and bicycles.
 - Cole et al³¹ conducted experimental off-track trampling in 18 closed forest, dwarf scrub and meadow & grassland communities (each trampled between 0 – 500 times) over five mountain regions in the US. Vegetation cover was assessed two weeks and one year after trampling, and a negative correlation with trampling intensity was discovered. This relationship was weaker after one year than two weeks, indicating some vegetation recovery. Differences in plant morphology was found to explain more variation in response than soil and topographic factors. Low-growing, mat-forming grasses regained their cover best after two weeks and were considered most resistant to trampling, while tall forbs (non-woody vascular plants other than grasses, sedges, rushes and ferns) were considered least resistant. The cover of hemicryptophytes and geophytes (plants with buds below the soil surface) was heavily reduced after two weeks but had recovered well after one year and as such these were considered most resilient to trampling. Chamaephytes (plants with buds above the soil surface) were considered least tolerant to regular trampling disturbance.
 - Cole³² conducted a follow-up study (across four vegetation types) in which shoe type (trainers or walking boots) and trampling weight were varied. Although immediate damage was greater with walking boots, there was no significant difference after one year. Heavier trampers caused a greater reduction in vegetation height than lighter trampers, but there was no differential impact on vegetation cover.
 - Cole & Spildie³³ experimentally compared the effects of off-track trampling by hikers and horse riders (at two intensities – 25 and 150 passes) in two woodland vegetation types (one with an erect forb understorey and one with a low shrub understorey). Generally, it was shown that higher trampling intensities caused greater levels of disturbance. Horse trampling resulted in a larger reduction in vegetation cover than hiking. While the forb-dominated vegetation suffered greater disturbance impacts, it recovered rapidly.
- 3.26 In heathland sites, trampling damage can affect the value of a site to wildlife. For example, heavy use of sandy tracks loosens and continuously disturbs sand particles, reducing the habitat's suitability for invertebrates³⁴. Species that burrow into flat surfaces such as the centres of paths, are likely to be particularly vulnerable, as the loose sediment can no longer maintain their burrow. In some instances, nature conservation bodies and local authorities resort to hardening paths to prevent further erosion. However, this is concomitant with the loss of habitat used by wildlife, such as sand lizards (*Lacerta agilis*) and burrowing invertebrates.

³⁰ Wilson, J.P. & J.P. Seney. (1994). Erosional impact of hikers, horses, motorcycles and off-road bicycles on mountain trails in Montana. *Mountain Research and Development* **14**:77-88.

³¹ Cole, D.N. (1995a). Experimental trampling of vegetation. I. Relationship between trampling intensity and vegetation response. *Journal of Applied Ecology* **32**: 203-214

Cole, D.N. (1995b). Experimental trampling of vegetation. II. Predictors of resistance and resilience. *Journal of Applied Ecology* **32**: 215-224

³² Cole, D.N. (1995c). Recreational trampling experiments: effects of trampler weight and shoe type. Research Note INT-RN-425. U.S. Forest Service, Intermountain Research Station, Utah.

³³ Cole, D.N., Spildie, D.R. (1998). Hiker, horse and llama trampling effects on native vegetation in Montana, USA. *Journal of Environmental Management* **53**: 61-71

³⁴ Taylor K., Anderson P., Liley D. & Underhill-Day J.C. (2006). Promoting positive access management to sites of nature conservation value: A guide to good practice. English Nature / Countryside Agency, Peterborough and Cheltenham.

Nutrient Enrichment

- 3.27 A major concern for nutrient-poor terrestrial habitats such as dune systems is nutrient enrichment associated with dog fouling, which has been addressed in various reviews (e.g.,³⁵). It is estimated that dogs will defecate within 10 minutes of starting a walk and therefore most nutrient enrichment arising from dog faeces will occur within 400m of a site entrance. In contrast, dogs will urinate at frequent intervals during a walk, resulting in a spread-out distribution of urine. For example, in Burnham Beeches National Nature Reserve it is estimated that 30,000 litres of urine and 60 tonnes of dog faeces are deposited annually³⁶. While there is little information on the chemical constituents of dog faeces, nitrogen is one of the main components³⁷. Nutrient levels are the major determinant of plant community composition and the effect of dog defecation in sensitive habitats is comparable to a high-level application of fertiliser, potentially resulting in the shift to plant communities that are more typical of improved grasslands.
- 3.28 A recent study has published further compelling evidence on the relative impact of nitrogen (N) and phosphorus (P) deposition arising from dogs. Using 487 direct-count censuses from four peri-urban forests and nature reserves, the modelling data suggested that canine fertilisation rates amount to 11 kg N and 5 kg P per hectare per year respectively³⁸. These amounts are significant when compared to atmospheric nitrogen deposition rates and the offsetting achievable through traditional habitat management techniques (e.g. cutting and removal of hay). The nitrogen deposition by dogs is particularly significant given the nitrogen Critical Load (CL) of 10-20 kg N/ha/yr provided for European dry heath and Northern Atlantic wet heath (qualifying feature of the Dorset Heaths SAC) on the Air Pollution Information System (APIS). This implies that the minimum CL of a site may be exceeded by N nitrogen deposition from dogs alone, before atmospheric sources are considered. Nutrient availability is the major determinant of plant community composition and the effect of dog defecation in sensitive habitats is comparable to a high-level application of fertiliser, potentially resulting in a shift towards plant communities that are more typical of improved grasslands.

Summary

- 3.29 Where increased recreational use is predicted to cause adverse impacts on a site, avoidance and mitigation should be considered. Avoidance of recreational impacts at Habitat sites involves locating new residential development further away (where possible). Strategic plans, such as Local Plans provide the mechanism for this. Where avoidance of impacts is not possible, mitigation will usually involve a mix of access management, habitat management and provision of alternative recreational space.

Background to Urbanisation

- 3.30 The natural environment is complex; most plants and wildlife rely on either a particular habitat type (e.g. broadleaved woodland, heathland) or a particular combination of habitats (habitat mosaic) to thrive. In addition to habitat type, habitat conditions and structure (e.g. south facing slope, dead standing wood, patches of bare soil, or areas of scrub adjacent to open areas of heathland etc.) are important factors for survival. Smaller organisms' (e.g. insects and fungi) immediate requirements are often on a more localised scale, for example a single tree, whereas other wildlife like birds may need vast areas for foraging in a single night.

³⁵ Taylor K., Anderson P., Taylor R.P., Longden K. & Fisher P. (2005). Dogs, access and nature conservation. English Nature Research Report, Peterborough.

³⁶ Barnard A. (2003). Getting the facts – Dog walking and visitor number surveys at Burnham Beeches and their implications for the management process. *Countryside Recreation* 11:16-19.

³⁷ Taylor K., Anderson P., Liley D. & Underhill-Day J.C. (2006). Promoting positive access management to sites of nature conservation value: A guide to good practice. English Nature / Countryside Agency, Peterborough and Cheltenham.

³⁸ De Frenne P., Cougnon M., Janssens G.P.J. & Vangansbeke P. (2022). Nutrient fertilization by dogs in peri-urban ecosystems. *Ecological Solutions and Evidence* 3, <https://doi.org/10.1002/2688-8319.12128>

- 3.31 Wildlife needs to be able to move around in order to find food and suitable places to live, breed and raise young; it must also be able to move in order to survive changes in the environment, for example disturbances caused by climate change or development. Movement is also important for the exchanging of genes, the building blocks for diversity and survival. Without this, generations of wildlife may become weaker and lack the ability to thrive.
- 3.32 Urbanisation essentially involves development encroaching on open spaces to such an extent that there is a regular background level of impact (whether recreational activity, cat predation, fly tipping of garden waste and other activities) due to the very close proximity of large amounts of housing. This can have a negative effect on wildlife causing them to retreat further into the body of a site and abandon the edge habitats, or impacting on their breeding success.
- 3.33 For the purposes of this assessment 'urbanisation' is used to refer to all potential impact pathways that stem from the close proximity new development other than those considered elsewhere in this report e.g. lighting, noise, cat predation, fly tipping, inadvertent arson and other pathways.

Background to Water Quality

- 3.34 The quality of the water that feeds Habitats sites is an important determinant of the nature of their habitats and the species they support. Poor water quality can have a range of environmental impacts:
- At high levels, toxic chemicals and metals can result in immediate death of aquatic life, and can have detrimental effects even at lower levels, including increased vulnerability to disease and changes in wildlife behaviour.
 - Eutrophication, the enrichment of plant nutrients in water, increases plant growth and consequently results in oxygen depletion. Algal blooms, which commonly result from eutrophication, increase turbidity and decrease light penetration. The decomposition of organic wastes that often accompanies eutrophication deoxygenates water further, augmenting the oxygen depleting effects of eutrophication. In the marine environment, nitrogen is the limiting plant nutrient, and so eutrophication is associated with discharges containing available nitrogen.
 - Some pesticides, industrial chemicals, and components of sewage effluent are suspected to interfere with the functioning of the endocrine system, possibly having negative effects on the reproduction and development of aquatic life.
- 3.35 The main risk associated with the Uttlesford Local Plan is the discharge of treated sewage effluent from Wastewater Treatment Works (WwTWs) serving the Plan area. This could increase the nutrient concentrations in the water feeding Habitats Sites that are hydrologically linked to waterbodies that receive treated wastewater.

Background to Water Quantity, Level and Flow

- 3.36 The water level, its flow rates and the mixing conditions are important determinants of the condition of Habitats sites and their qualifying features. Hydrological processes are critical in influencing habitat characteristics in wetlands, terrestrial systems that have hydrological associations (e.g. wet heath) and coastal waters, including current velocity, water depth, dissolved oxygen levels, salinity and water temperature. In turn these parameters determine the short- and long-term viability of plant and animal species, as well as overall ecosystem composition.
- 3.37 A highly cited review paper summarised the ecological effects of reduced flow in rivers and connected water-dependent ecosystems. Droughts (ranging in their magnitude from flow reduction to a complete loss of surface water) have both direct and indirect effects on dependent floral and faunal communities. For example, the unique nature of wetlands combines shallow water and conditions that are ideal for the growth of organisms at the basal level of food webs, which feed many species of birds, mammals, fish and amphibians.

- 3.38 Maintaining a steady water supply is of critical importance for many hydrologically dependent SPAs, SACs and Ramsars. For example, in many freshwater bodies and wetlands the hydrological regime is essential for sustaining a variety of foraging habitats for SPA / Ramsar waterfowl species. However, different species vary in their requirements for specific water levels. Splash and / or shallow flooding is required to provide suitable feeding areas and roosting sites for ducks and waders. In contrast, deeper flooding is essential to provide foraging and loafing habitats for Bewick's swans and whooper swans.
- 3.39 Wetland habitats rely on hydrological connections with other surface waters, such as rivers, streams and lakes. A constant supply of water is fundamental to maintaining the ecological integrity of sites. However, while the natural fluctuation of water levels within narrow limits is desirable, excess or too little water supply might cause the water level to be outside of the required range of qualifying birds, invertebrate or plant species. This might lead to the loss of the structure and functioning of wetland habitats. There are two mechanisms through which urban development might negatively affect the water level in Habitats Sites:
- The supply of new housing with potable water will require increased abstraction of water from surface water and groundwater bodies. Depending on the level of water stress in the geographic region, this may reduce the water levels in Habitats Sites sharing the same catchment.
 - The proliferation of impermeable surfaces in urban areas increases the volume and speed of surface water runoff. As traditional drainage systems often cannot cope with the volume of stormwater, sewer overflows are designed to discharge excess water directly into watercourses. Often this pluvial flooding results in downstream inundation of watercourses and the potential flooding of wetland habitats.

4. Test of Likely Significant Effects

Introduction

- 4.1 When seeking to identify relevant Habitat sites, consideration has been given primarily to identified impact pathways and the source-pathway-receptor approach, rather than adopting purely a 'zones'-based approach. The source-pathway-receptor approach is a standard tool in environmental assessment. In order for an effect to occur, all three elements of this mechanism must be in place, whereas the absence of one or more of the elements means there is no possibility for an effect. Furthermore, even where an impact is predicted to occur, it may not result in significant effects (i.e., those which undermine the Conservation Objectives of a Habitat site).
- 4.2 The likely zone of impact (also referred to as the likely Zone of Influence, Zol) of a plan or project is the geographic extent over which significant ecological effects are likely to occur. The Zol of a plan or project will vary depending on the specifics of a particular proposal and must be determined on a case-by-case basis with reference to a variety of criteria, including:
- the nature, size / scale and location of the plan;
 - the connectivity between the plan and Habitat sites, for example through hydrological connections or because of the natural movement of qualifying species;
 - the sensitivity of ecological features under consideration; and,
 - the potential for in-combination effects.

Approach to Mansfield Local Plan Allocation Screening

- 4.3 An assessment of every policy in the adopted MLP was made in the HRA of that Local Plan. This report has therefore screened the proposed changes in policies with reference to that original HRA, to identify any possible changes to screening outcomes from the previous MLP. Unsurprisingly, the policies for which changes may result in likely significant effects are those which allocate and seek to achieve housing and employment growth. The following policies (where there are possible/confirmed changes to site allocations) have the potential to cause Likely Significant Effects (See Appendix C for details):
- H1 Sites allocated for housing development;
 - H2 Committed housing sites;
 - H8 Accommodation for Gypsies Travelers and Travelling Showpeople;
 - E2 Sites allocated as new employment areas
- 4.4 In addition to changes to policies, this report screens possible site allocations (which are pertinent to the policies above) for potential impacts on the identified Habitats sites. Details of all site possible allocations provided to AECOM can be found in Appendix C, **Table 5-3**.
- 4.5 Possible allocations are not assessed in this report where planning assent has already been granted.
- 4.6 The ppSPA is discussed in this report as a matter of good practice, even though it does not fall within the legal remit of HRA and there is thus no legal requirement to consider the impacts on the ppSPA in the Local Plan HRA.
- 4.7 The qualifying features of the SAC, and the proposed qualifying features of the SPA, which are assessed for potential impacts are:
- SAC: Old acidophilous oak woods with *Quercus robur* on sandy plains. (Dry oak-dominated woodland)
 - ppSPA: Woodlark (*Lullula arborea*); and
 - ppSPA: Nightjar (*Caprimulgus europaeus*);

Atmospheric Pollution (Nitrogen Deposition)

- 4.8 In general, the only types of industrial and commercial development proposed in the MLP fall within the definition of:
- Class E: Commercial, Business and Service (offices, research and development of products and processes, light industry appropriate in a residential area). This covers uses which can be carried out in any residential area without detriment to the amenity of the area by reason of noise, vibration, smells, fumes, smoke, soot ash, dust or grit.
 - B2: General Industrial Use (for industrial process other than one falling within class B1, excluding incineration purposes, chemical treatment or landfill or hazardous waste) and
 - B8: Storage or distribution.
- 4.9 For the most part, such uses do not involve significantly harmful emissions of atmospheric pollutants, other than those associated with vehicle exhausts and (to a small extent) central heating boilers. As such, it is normal practice when undertaking a HRA of a local plan to focus upon the most likely source of emissions: transport exhaust emissions. (The types of commercial development considered can be confirmed once a new version of the MLP is available). Any minerals and waste-related industry (which can be associated with significant emissions) will be covered, not by the Mansfield District Local Plan, but

by the Minerals and Waste Plans for Nottinghamshire, under the remit of Nottinghamshire County Council. In the event that an application was submitted for an industrial proposal that fell within the classification of B2 or *sui generis* which covers waste disposal installations (e.g. incineration) and had significant potential emissions, it would be covered by the Environment Agency and Mansfield District Council environmental permitting processes, which would ensure no adverse effect on any Habitats sites. No such applications are expected within Mansfield district at time of writing. Any impacts from existing or proposed developments outside the district are addressed below.

- 4.10 Given this, it is considered that there is little prospect of an industrial development with significant atmospheric emissions being associated with the Local Plan. Additionally, the inbuilt safeguards in the Environment Agency and Mansfield District Council Environmental Health permitting processes create further safeguards to ensure that no adverse effect on the integrity of any Habitats sites would arise.
- 4.11 There is a standard method for assessing the impacts of road traffic on Habitats sites that is used by Natural England³⁹. This involves:
- Considering the probable in combination change in vehicle flows, as a result of new development, on any roads within 200m of the Habitats site is likely to exceed 1,000 Annual Average Daily Traffic (i.e. average vehicle movements per day) or 200 Heavy Duty Vehicles per day;
 - Considering whether the contribution of a given plan (such as the Mansfield Local Plan) to that additional traffic would be essentially nominal (as case law has established that if the contribution of a given Local Plan is 'very small indeed' it can be legitimately excluded from further assessment);
 - Considering whether the habitat and species that might be affected would be likely to be affected by an increase in nitrogen deposition, ammonia concentrations and NOx concentrations; and
 - If so, then air quality calculations can be undertaken to determine if the change in nitrogen oxide (NOx) concentration, ammonia concentration, or nitrogen deposition rate will exceed relevant thresholds (critical level/load).
- 4.12 If the change in vehicle flows due to the proposed increase in development during the Local Plan period is expected to be nominal, it is reasonable to conclude that the Local Plan's impact (and its contribution to any in combination effects) can be considered essentially neutral.

Birklands and Bilhaugh SAC

- 4.13 In accordance with Natural England Guidance NEA001⁴⁰ a 200m buffer around the SAC was used to identify the potential area that could be affected by nitrogen deposition from road traffic. No such roads were identified within Mansfield District. There are also no new road infrastructure projects planned during the Local Plan's period that would be within 200m of the SAC.
- 4.14 The only road within 200m of the SAC is Swinecote Road (B6034) located in the town of Edwinstowe in Newark and Sherwood District. This is unlikely to be a commuter route for traffic arising from Mansfield since it does not link any significant work destinations with any settlements in Mansfield. Trips arising from Mansfield are thus most likely to be recreational visitors to the Sherwood Forest visitor centre, but they are very unlikely to be sufficiently numerous for average daily flows to increase by more than a nominal

³⁹

<https://publications.naturalengland.org.uk/publication/4720542048845824#:~:text=This%20internal%20operational%20Guidance%20Note%20describes%20how%20Natural,air%20which%20are%20capable%20of%20affecting%20European%20Sites.>

⁴⁰ Available at <https://publications.naturalengland.org.uk/file/5431868963160064> [Accessed 04/06/2025]

²⁸ Habitats Regulations assessment of the Newark and Sherwood Publication Amended Core Strategy: Appropriate Assessment (June 2018).

extent. As such, the B6034 is very unlikely to experience a significant change in flows as a result of the Mansfield District Local Plan. Air quality considerations therefore do not need to be taken further for the SAC.

- 4.15 The Birklands and Bilhaugh SAC is therefore screened out for Appropriate Assessment for the impact pathway Atmospheric Pollution.

Sherwood ppSPA

- 4.16 **Table 4-1** summarises the existing roads that fall within 200m of the ppSPA, within, and adjacent to, Mansfield District.

Table 4-1 Sections of existing road that lie within 200m of Sherwood ppSPA

Section of road	Relevance to the ppSPA
The A60 at Harlow and Thieves Woods	The A60 is one of the most frequently used roads in Mansfield District with local and county level traffic. It lies within 200m of areas of woodland within the ppSPA. The potential for impacts on those parts of the ppSPA that are primarily woodland and plantation are discussed below this table.
The A617 MARR at Rainworth Heath SSSI	The A617 is one of the most frequently used roads in Mansfield District with local and county level traffic. It lies within 200m of areas of woodland within the ppSPA, immediately to the east of Mansfield district in the vicinity of Rainworth Heath SSSI. The potential for impacts on those parts of the ppSPA that are primarily woodland and plantation are discussed below this table.
Jubilee Way South north of and west of Ransomwood Business Park / Ratcher Hill Quarry	Jubilee Way South is situated within 200m of a part of the ppSPA which was a working quarry until 2016. In the future, this area has plans to implement nature conservation improvements, including heathland habitat creation. Despite being contained within the ppSPA therefore, the zone within 200m of Jubilee Way South does not constitute nesting or foraging habitat for nightjar or woodlark. Although there are plans to restore this area to heathland in the future there is no way of knowing whether the restored area will be used by nesting nightjar or woodlark and the presence of a road within 200m will not prevent the heathland restoration (there are many areas of functional heathland within 200m of roads across the country).
Eakring Road at Sherwood Forest Golf Course SSSI / restored Mansfield Colliery	Eakring Road carries very little traffic as it only leads to a small area of development (approximately 50 houses), the restored Mansfield Colliery (now green space and has no official car park facilities), Mansfield Rugby Club, and the Sherwood Forest Golf Course which is also a SSSI.
Crown Farm Way	Crown Farm Way currently serves the Crown Farm Industrial estate and also links Pump Hollow Road/Violet Hill (A6117) with Clipstone Road East. The Mansfield Transport Study (Stage 2) predicts significant increases in traffic flows along Crown Farm Way, in relation to planned development. According to MAGIC there is no heathland within 200m of the roadside. Moreover, the policy for allocation H1a (Clipstone Road East), which is to be accessed from Crown Farm Way, sets out requirements towards contributions towards the improvement of bus stops within the vicinity of the site, to improve the uptake of sustainable transport. These help to address impacts from traffic flows.
Newlands Road	Currently serves existing residential development, and thus as only local traffic. Allocation H1a (Clipstone Road East) is located to the north of this road but access is planned from Clipstone Road and Crown Farm Way. No likely significant increases in

traffic; moreover, according to MAGIC there is no heathland within 200m of the roadside.

The A6191 (Southwell Road) north of Sherwood Oaks Business Park	There are areas of woodland within the ppSPA within 200m of this road at Ransomwood Business Park. Potential effects on woodland are therefore discussed in the paragraph below this table.
The A6075 at Peafield Plantation, between Mansfield Woodhouse and Warsop	The A6075 (Mansfield Woodhouse to Warsop) and A6075 (Warsop to Edwinstowe) are used mainly for local travel.
The A6075 between Warsop and Kings Clipstone past Windmill Plantation / Birklands West and Ollerton Corner	There are areas of woodland within the ppSPA within 200m of these roads. Potential effects on woodland are therefore discussed in the paragraph below this table.
The B6035 between Warsop and Edwinstowe past Windmill Plantation / Birklands West and Ollerton Corner	

4.17 In summary, therefore, there are areas of ppSPA heathland within 200m of some of the above roads, but these are narrow disturbed belts that would be unsuitable for nesting nightjar or woodlark and/or lie beyond the principal zone within which NO_x and ammonia due to the road will be concentrated. Neither nightjar or woodlark has highly specialised prey requirements, eating a wide range of insects; as such the evidence indicates that they forage in a wide range of habitats including heathland, early-stage plantation, deciduous woodland, rough pasture, arable land and grassland margins; wherever they can obtain a supply of insects (and seeds in the case of woodlark) of sufficient size. As such, the value of habitat for foraging will not be affected by the presence of any road within 200m. For this reason, the impact assessments for nightjar and woodlark have focussed on their nesting habitat, for which they do have very precise requirements.

4.18 The following site allocations may result in increased traffic on roads within 200m of the ppSPA are therefore screened in for Appropriate Assessment for the impact pathway of Atmospheric Pollution.

- All sites when considered in combination, since it is the general increase in traffic on the road network that is relevant to air quality impacts on specific road links

4.19 The following sites are highlighted in Table 4-2 as:

- They are large developments (100 dwellings or more) and the closest major road to the development passes within 200m of the ppSPA,
- they are employment locations and lie within the ppSPA, and
- do not already have planning permission

Table 4-2 Sites highlighted as of possible high impact (traffic) on the Sherwood pSPA

Road	Sites
A617	Ref 27c (economic), Ref 38 (economic), Ref 40 (economic), Ref 59 (economic), Ref 132, Ref 143 (economic), Ref 150 (economic), Ref 151 (economic), Ref 179 (economic), Ref 191 (economic), Ref 275,

Eakring Ref 76
Road

A6075 Ref 50, Ref 187

- 4.20 It is noted that in the HRA of the previous MLP these effects were dismissed following appropriate assessment. Whereas it is possible a similar conclusion will be drawn when appropriate assessment this cannot be confirmed at this stage without a full assessment of the site options.

Direct Loss of Habitat

Sherwood ppSPA

- 4.21 Any development within the boundary of a Habitats site must, by definition, lead to a direct loss of habitat. However, not all habitat within the boundary of a Habitats site are necessarily functionally relevant to the interest features of that site. For example, the Sherwood ppSPA boundary contains industrial and post-industrial habitat such as former and active quarries, which are unlikely to provide habitat for woodlark and nightjar, at least not until they are restored.
- 4.22 Some of the site allocations identified as options for the MLP include the ppSPA within their footprint (fully or partially).
- 4.23 The following site allocations include land within the boundary of the ppSPA are therefore screened in for Appropriate Assessment for Direct Habitat Loss:
- *Ref 40 (0.75, bare earth/ hard standing)*
 - Ref 76 (46Ha, largely greenfield)
 - *Ref 143 (2.77Ha, land between two existing industrial areas)*
 - Ref 150 (4.8Ha, includes woodland and bare ground)
 - *Ref 151 (0.22Ha, hard standing)*
 - Ref 218 (2Ha, greenfield)
- 4.24 It is noted that although a full assessment has not yet been completed, the sites identified above in *italics* have low suitability as habitat for the likely qualifying species of the ppSPA.

Loss of Functionally Linked Habitat

Sherwood ppSPA

- 4.25 Natural England define the Impact Risk Zone for Group 4 birds⁴¹ (Ground nesting heathland species, breeding nightjar & Stone Curlew) as 2km. The Impact Risk Zones (IRZ) are defined in this document for Potential Impact Distance and for Functionally Linked Land where no other Zone of Influence has been defined.
- 4.26 This IRZ can therefore be used to define sites which need to be screened in for LSEs initially for later assessment of the current nature of the land occupied by the site and its suitability as functionally linked habitat.

⁴¹ Natural England (2019) Impact Risk Zones Guidance Summary Sites of Special Scientific interest Notified for Birds

4.27 Heathland, acid grassland and managed plantation are preferred habitats for nesting woodlark and nightjar. Neither nightjar or woodlark has highly specialised prey requirements, eating a wide range of insects; as such the evidence indicates that they forage in a wide range of habitats including heathland, early-stage plantation, deciduous woodland, rough pasture, arable land and grassland margins; wherever they can obtain a supply of insects (and seeds in the case of woodlark) of sufficient size. There is therefore much less pressure on foraging habitat for these species, as opposed to nesting habitat. As such, the impact assessments for nightjar and woodlark have focussed on their nesting habitat, for which they do have very precise requirements.

4.28 The following site allocations (without planning permission) are within the IRZ for the species of the ppSPA are therefore screened in for Appropriate Assessment for Loss of Functionally Linked Land.

• Ref 5	• Ref 65	• Ref 191
• Ref 8	• Ref 71a	• Ref 193
• Ref 9	• Ref 71c	• Ref 208
• Ref 11	• Ref 72	• Ref 219
• Ref 21	• Ref 73	• Ref 224
• Ref 39a	• Ref 76	• Ref 225
• Ref 39b	• Ref 106	• Ref 244
• Ref 41	• Ref 112	• Ref 246
• Ref 43	• Ref 116	• Ref 248
• Ref 45	• Ref 122	• Ref 249
• Ref 48	• Ref 125	• Ref 250
• Ref 49	• Ref 129	• Ref 251
• Ref 50	• Ref 130	• Ref 263
• Ref 53	• Ref 142	• Ref 265
• Ref 55	• Ref 145	• Ref 274
• Ref 56	• Ref 146	• Ref 287
• Ref 61	• Ref 171	• Ref 291
• Ref 62	• Ref 187	
• Ref 63	• Ref 188	

4.29 It is noted that although a full assessment has not been completed, the sites identified above are predominantly to the west of the ppSPA in urban areas. Given the availability of suitable land for the likely qualifying species to the west and south of the allocations it is unlikely that these sites would be functionally linked to the ppSPA.

4.30 There are no proposed sites on Heathland⁴².

4.31 There are no proposed sites on lowland acid grassland⁴³.

Recreational Pressure

Birklands and Bilhaugh SAC

4.32 A Footprint Ecology Report⁴⁴ assessed the zone of influence for recreational pressure on the SAC as 8.9km defined by the straight line distance from home to interview location within the SAC of walkers and dog walkers carrying out a day visit from home (and who visit at least once a month). Within that 8.9km one of influence the report notes that there will be a differential effect relating to distance, such that new development closer to the SAC/NNR is likely to result in proportionally greater impact. Housing development within this zone is considered as having a potential LSE on the Habitats Sites.

4.33 The following site allocations (which do not already have planning permission) are within 8.9km of the SAC and are therefore screened in for Appropriate Assessment for Recreational Pressure.

4.34 There are no Sites within 2km of the SAC

4.35 Sites within 2km to 4km of the SAC

- | | | | |
|------------------|-----------|-----------|-----------|
| • Ref 205 | • Ref 208 | • Ref 210 | • Ref 244 |
| • Ref 246 | • Ref 287 | | |

4.36 Sites within 4km to 6km of the SAC

- | | | | |
|-----------------|-----------|-----------|-----------------|
| • Ref 45 | • Ref 49 | • Ref 50 | • Ref 56 |
| • Ref 112 | • Ref 122 | • Ref 187 | • Ref 188 |
| • Ref 193 | • Ref 206 | • Ref 207 | • Ref 219 |
| • Ref 245 | • Ref 248 | • Ref 269 | |

4.37 Sites within 6km and 8.9km of the SAC.

- | | | | |
|-----------|-----------|-----------|-----------|
| • Ref 8 | • Ref 46 | • Ref 47 | • Ref 48 |
| • Ref 53 | • Ref 55 | • Ref 62 | • Ref 64 |
| • Ref 65 | • Ref 72 | • Ref 116 | • Ref 118 |
| • Ref 125 | • Ref 191 | • Ref 221 | • Ref 223 |
| • Ref 224 | • Ref 225 | • Ref 226 | • Ref 227 |

⁴² <https://magic.defra.gov.uk/MagicMap.html>

⁴³ ibid

⁴⁴ Sauders, P., Lake, S. and Liley, D. "Birklands & Bilhaugh SAC Recreational Impact Report" Available at <https://www.newark-sherwooddc.gov.uk/media/nsdc-redesign/documents-and-images/your-council/planning-policy/local-development-framework/amended-allocations-and-development-management-dpd/ENV-4-Final-Birklands-&-Bilhaugh-SAC-RIA.pdf> Accessed [16/05/2025]

- | | | | |
|-----------|-----------|-----------|-----------|
| • Ref 228 | • Ref 229 | • Ref 230 | • Ref 231 |
| • Ref 232 | • Ref 233 | • Ref 234 | • Ref 235 |
| • Ref 236 | • Ref 247 | • Ref 249 | • Ref 250 |
| • Ref 251 | • Ref 252 | • Ref 263 | • Ref 265 |
| • Ref 286 | • Ref 290 | • Ref 291 | |

4.38 It is noted that in the MLP HRA that the relocation of the visitor centre (already identified and being taken forward) outside of the SAC could entirely avoid an unsustainable increase in visitors that might otherwise occur during the plan period.

Sherwood ppSPA

4.39 A Footprint Ecology Report⁴⁵ assessed the zone of influence for recreational pressure on the Birklands and Bilhaugh SAC as 8.9km. The ppSPA includes this SAC and other areas of the ppSPA are of similar habitat type with similar interest to visitors from a recreational pressure point of view. It is reasonable therefore to maintain the 8.9 km zone of influence for housing development as having a potential LSE on the Habitats Sites.

4.40 All site allocations are within 8.9km of the ppSPA and are therefore screened in for Appropriate Assessment for Recreational Pressure:

- All sites

4.41 Some allocations will have a higher impact on the ppSPA than others from a recreational disturbance perspective, those that are within 2km (reasonable walking distance) and have an allocation of 100 dwellings or more are likely to have a higher impact than other sites. These are listed below (where planning permission has not already been granted):

- | | | | |
|------------------|-----------|-----------|-----------------|
| • Ref 27a | • Ref 31 | • Ref 36 | • Ref 49 |
| • Ref 50 | • Ref 51 | • Ref 53 | • Ref 55 |
| • Ref 56 | • Ref 67 | • Ref 73 | • Ref 76 |
| • Ref 153 | • Ref 171 | • Ref 187 | • Ref 188 |
| • Ref 191 | • Ref 208 | | |

4.42 It is noted that in the MLP HRA that there was sufficient policy framework in place to enable a proportionate response to the protection of the nightjar and woodlark habitats in the ppSPA.

⁴⁵ Sauders, P., Lake, S. and Liley, D. "Birklands & Bilhaugh SAC Recreational Impact Report" Available at <https://www.newark-sherwooddc.gov.uk/media/nsdc-redesign/documents-and-images/your-council/planning-policy/local-development-framework/amended-allocations-and-development-management-dpd/ENV-4-Final-Birklands-&-Bilhaugh-SAC-RIA.pdf> Accessed [16/05/2025]

Urbanisation

Sherwood ppSPA

- 4.43 Cat predation on qualifying species has the potential to impact the qualifying species of the ppSPA, particularly the ground nesting woodlark.
- 4.44 A footprint Ecology Review of Literature⁴⁶ indicated hunting ranges could be over 3km from the home of a domestic cat (one study) although other studies (six of) indicated hunting ranges which were typically smaller than this.
- 4.45 A precautionary distance of 3km has been used to screen sites for LSE's as a result of this pathway.
- 4.46 It is AECOMs view that this 3km buffer is sufficient for other potential impacts of urbanisation, for example, lighting, sound and fly tipping impacts.
- 4.47 The following site allocations are within 3km of the ppSPA and are therefore screened in for Appropriate Assessment for Urbanisation:

• Ref 8	• Ref 115	• Ref 191	• Ref 246
• Ref 44	• Ref 116	• Ref 193	• Ref 248
• Ref 45	• Ref 117	• Ref 205	• Ref 249
• Ref 48	• Ref 121	• Ref 206	• Ref 250
• Ref 49	• Ref 122	• Ref 207	• Ref 251
• Ref 50	• Ref 125	• Ref 208	• Ref 252
• Ref 51	• Ref 136	• Ref 209	• Ref 263
• Ref 53	• Ref 139	• Ref 210	• Ref 265
• Ref 55	• Ref 141	• Ref 218	• Ref 269
• Ref 56	• Ref 142	• Ref 219	• Ref 271
• Ref 61	• Ref 143	• Ref 221	• Ref 272
• Ref 62	• Ref 145	• Ref 223	• Ref 273
• Ref 63	• Ref 146	• Ref 224	• Ref 274
• Ref 65	• Ref 149	• Ref 225	• Ref 275
• Ref 67	• Ref 150	• Ref 226	• Ref 276
• Ref 69	• Ref 151	• Ref 227	• Ref 277

⁴⁶ Floydd, L. & Underhill-Day, J. "A literature review on the effects of pet cats on nearby protected wildlife sites" Available at: <https://www.footprint-ecology.co.uk/reports/Floyd,%20L%20and%20Underhill-Day,%20J%20C%20-%202013%20-%20A%20literature%20review%20on%20the%20effects%20of%20pet%20cats%20on%20.pdf> [Accessed 16/05/2025]

- | | | | |
|-----------|-----------|-----------|-----------|
| • Ref 71a | • Ref 161 | • Ref 228 | • Ref 27c |
| • Ref 71c | • Ref 169 | • Ref 229 | • Ref 286 |
| • Ref 72 | • Ref 171 | • Ref 230 | • Ref 287 |
| • Ref 83 | • Ref 172 | • Ref 231 | • Ref 290 |
| • Ref 91 | • Ref 173 | • Ref 232 | • Ref 291 |
| • Ref 100 | • Ref 174 | • Ref 234 | • Ref 298 |
| • Ref 106 | • Ref 185 | • Ref 243 | • Ref 300 |
| • Ref 109 | • Ref 187 | • Ref 244 | • Ref 317 |
| • Ref 112 | • Ref 188 | • Ref 245 | • Ref 246 |

4.48 Natural England's view is that the effect of cats is very difficult to address for sites very close to an SPA, very close is defined as within 400m. Sites screened in for cat predation, which is of high importance for the ppSPA in this narrower range (where planning permission has not already been granted) are:

- | | | | |
|----------------|------------------|------------------|-----------------|
| • Ref 9 | • Ref 71a | • Ref 71c | • Ref 76 |
| • Ref 116 | • Ref 187 | • Ref 191 | • Ref 291 |

Water Quality

- 4.49 The Severn Trent Drainage and Wastewater Management Plan (DWMP)⁴⁷ sets out the plan for wastewater management in the region which includes the catchment for these Habitats sites. It is the responsibility of the water companies to meet the needs of the area without adverse effect. The DWMP must be subject to HRA and cannot be adopted with adverse effects on the integrity of Habitats sites unless subsequent derogation tests can be passed. Subsequent Environmental Agency permitting processes also ensure adherence to the requirement to prevent detrimental impact on Habitats sites.
- 4.50 Moreover, in 2023 Natural England published detailed information on Habitats sites that were suffering from detrimental nutrient inputs and thus required a 'nutrient neutrality' approach to consenting new development. There are no catchments or Habitats sites identified in that list within a 10km radius of the Mansfield District.
- 4.51 Developers are required to ensure that there is no adverse impact on water quality (pollution) from construction works.
- 4.52 The Birklands and Bilhaugh SAC and Sherwood ppSPA are therefore screened out from Appropriate Assessment for the impact pathway Water Quality.

⁴⁷ Available at <https://www.severntrent.com/content/dam/stw-plc/about-us/drainage-and-wastewater-management-plan/ST-DWMP-L1-Non-Technical-Report-DRAFT-JUN22.pdf> [Accessed 19/05/2025]

Water Quantity, Level and Flow

Birklands and Bilhaugh SAC

- 4.53 The habitats within the SAC are not specifically reliant on water for their biological functioning as there is little to no open water on the site. These habitats are however vulnerable to stress if groundwater levels are significantly altered, especially in relation to veteran trees.
- 4.54 The SAC is located within the following catchments and may therefore be affected by development in these catchment areas:
- Idle River
- 4.55 The following site allocations are located within these catchments and may result in increased water abstraction. They are therefore screened in for Appropriate Assessment for the impact pathway of Water Quantity, Level and Flow.
- All sites
- 4.56 It is noted that in the HRA of the previous MLP these effects were dismissed following appropriate assessment. Whereas it is possible a similar conclusion will be drawn when appropriate assessment this cannot be confirmed at this stage without a full assessment of the site options.

Sherwood ppSPA

- 4.57 The majority of the Sherwood ppSPA is underlain by the Sherwood Sandstone Aquifer. Generally speaking, lowland dry heathland habitats are not affected by fluctuations in ground water supply. Nightjars sometimes forage over wetland areas (and many other types of habitat) but are not dependent on them.
- 4.58 The ppSPA is located within the following catchments and may therefore be affected by development in these catchment areas:
- Erewash River
 - Nottingham Urban
 - Nottinghamshire South A
 - Idle River
- 4.59 The following site allocations are located within these catchments and may result in increased water abstraction. They are therefore screened in for Appropriate Assessment for the impact pathway of Water Quantity, Level and Flow.
- All sites

It is noted that in the HRA of the previous MLP these effects were dismissed following appropriate assessment. Whereas it is possible a similar conclusion will be drawn when appropriate assessment this cannot be confirmed at this stage without a full assessment of the site options.

5. Summary

- 5.1 **Table 5-1** summarises the allocations which have been screened in for Appropriate Assessment for each impact pathway. Appropriate Assessment is not included in this report and will be undertaken once allocations for inclusion in the Regulation 18 Local Plan have been confirmed.

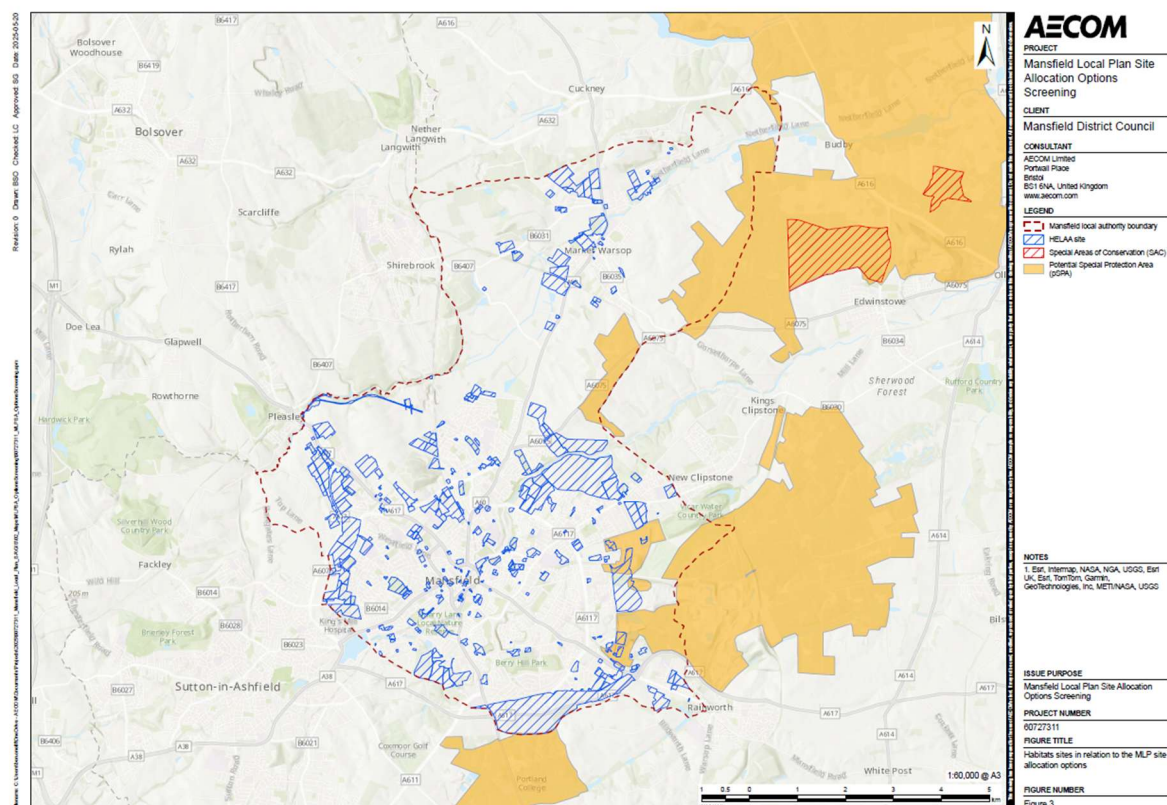
Table 5-1. Results of initial screening of site allocations.

Pathway	Allocations screened in for ppSPA	Allocations screened in for SAC
Atmospheric Pollution	• All sites	This pathway is screened out for appropriate assessment for the SAC
Direct Loss of Habitat	• Ref 139 • Ref 143 • Ref 150 • Ref 151	This pathway is screened out for appropriate assessment for the SAC
Loss of Functionally Linked Habitats	• 62 sites	This pathway is screened out for appropriate assessment for the SAC
Recreational Pressure	• All sites	• 87 sites
Urbanisation	• 100 sites	This pathway is screened out for appropriate assessment for the SAC
Water Quality	This pathway is screened out for appropriate assessment for the ppSAC	This pathway is screened out for appropriate assessment for the SAC
Water Quantity, Level and Flow	All sites	All sites

- 5.2 Site allocations were screened in for appropriate assessment as described in Table 5-1. Sites screened in at Task 1 of the HRA process do not necessarily result in a conclusion of adverse effects to the integrity of the Habitats sites once mitigation is taken into consideration. The pathways which have been screened in for appropriate assessment in this report were also screened in at the same stage of the HRA process for the current MLP, however they were dismissed at the appropriate assessment stage.
- 5.3 Further review of the allocations cannot be completed without a full draft of the Regulation 18 MLP so no further conclusions can be drawn at this stage. Changes to conclusions reached in the previous HRA may occur as a result of:
- Changes to policies, especially those which previously afforded environmental protection;
 - A significant change in the overall number of new dwellings to be built; and
 - A significant change in the balance of locations for new development.
- 5.4 The ppSPA has been discussed in this report as a matter of good practice, however it does not fall within the legal remit of HRA and there is no legal requirement to consider the impacts on the ppSPA.

Appendix A Figures

Figure 3 Habitats sites in relation to the MLP site allocation options



Appendix B Background to Habitat Sites

Birklands and Bilhaugh Special Area of Conservation

Introduction

This site is a remnant of the historic Sherwood Forest on freely-draining, acidic, sandy soils and contains the best remaining examples of oak-birch woodland in Nottinghamshire. Birklands and Bilhaugh is notable for its rich invertebrate fauna, particularly spiders, and for a diverse fungal assemblage, including *Grifoa sulphurea* and *Fistulina hepatica*. The oak population consists of approximately equal numbers of the pedunculate oak *Quercus robur* and the sessile oak *Q. petraea* covering a wide range of size and age, including an exceptional population of ancient standing oaks. Although birch (mainly *Betula verrucosa*) forms groves between the oaks the canopy is, over large areas, still rather open allowing a dense bracken field layer to develop. A wide variety of fungi are present. Within the woodland occur glades of acid grassland dominated by the tussock-forming wavy-hair grass *Deschampsia flexuosa* and which contain such characteristic herbs as heath bedstraw *Galium saxatile* and tormentil *Potentilla erecta*.

Conservation Objectives⁴⁸

With regard to the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change;

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

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

Qualifying Features⁴⁹

With regard to the SPA, the site is designated under article 4.2 of the EC Directive 79/409 as it hosts the following habitats listed in Annex I:

- Old acidophilous oak woods with *Quercus robur* on sandy plains. (Dry oak-dominated woodland)

⁴⁸ <https://publications.naturalengland.org.uk/file/6070092765069312> [Accessed 31/03/2025]

⁴⁹ <https://publications.naturalengland.org.uk/file/6409897625255936> [Accessed 13/0/2025]

Environmental Vulnerabilities

With regards to the Site Improvement Plan for Birklands and Bilhaugh⁵⁰, the following are listed as environmental vulnerabilities:

- Public Access/Disturbance;
- Planning permission: general;
- Change in land management ;
- Physical modification;
- Air Pollution: impact of atmospheric nitrogen deposition;
- Disease; and
- Invasive species.

Sherwood Possible Proposed SPA

Introduction

A portion of the Sherwood Forest area is currently being considered as a possible potential Special Protection Area, with regard to birds of European importance (nightjar and woodlark) that this area supports. It is referred in this document as a ppSPA. Based on 2004-2006 survey results, the Sherwood Area contains greater than 1% of the UK's population of each of these species. That has been reaffirmed by more recent data; for example, the 2016 Sherwood Forest nightjar survey recorded 88 nightjar territories, while data cited by RSPB indicates approximately 70 pairs. Irrespective of the figure used this is between 1% and 2% of the UK population of approximately 4,600 churring males. Percentage is a first step (Stage 1) towards considering if an area qualifies as an SPA or potential SPA (pSPA). This information is currently being assessed along-side a UK-wide review programme led by Defra. The full SPA selection process has yet to be formally implemented and the formal UK Review of the existing suite of sites for nightjar and woodlark is pending. Accordingly, the Review Panel (JNCC) has not yet formed a view on whether a site within the Sherwood Forest region is one of the 'most suitable territories' for these species and therefore has not so far provided any advice to the Secretary of State on the selection of any SPA in the Sherwood Forest Area.

If the area were to be formally proposed as a potential Special Protection Area (pSPA), meaning it is on its way to becoming a formally classified SPA, plans and projects would have to be subject by law to the provisions under the Conservation of Habitats and Species Regulations 2017 (as amended) that apply to assessment of impacts on all Habitats sites. This is because the National Planning Policy Framework (NPPF 2019) requires authorities to afford the same protection to pSPAs as they do to formal SPAs (see paragraph 176).

Until the Sherwood Forest area is formally proposed by government as a pSPA there is no legal obligation to undertake HRA. However, Natural England (NE) still advises that in order to reduce future risks should the site ever be proposed, it is logical for Local Authorities to satisfy themselves that current planning applications contain 'sufficient objective information to ensure that all potential impacts on the breeding nightjar and woodlark populations have been adequately avoided or minimised'. In doing so, NE advises that this should be done 'using appropriate measures and safeguards', in order to 'ensure that any future need to review outstanding permissions under the 2010 Regulations is met with a robust set of measures in place' (letter from Natural England, 28 June 2010 updated July 2011, September 2012, and March 2014). Natural England's Advice Note to Local Planning Authorities regarding the consideration of likely effects on the breeding population of nightjar and woodlark in the Sherwood Forest region, has been used to inform the following section regarding the

⁵⁰ <https://publications.naturalengland.org.uk/publication/6727956374224896> [Accessed 31/03/2025]

ppSPA⁵¹. Natural England has confirmed at time of writing this assessment that there are no planned recent updates to this advice note and their advice remains the same as time of writing this assessment.

In addressing the above, Natural England advises that local authorities take a 'risk-based approach' to forward planning and decision making, such that, development plans and proposals are accompanied by an 'additional and robust assessment of the likely impacts arising from the proposals on any breeding nightjar and woodlark in the Sherwood Forest area.'

Likely Conservation Objectives

'To maintain the species features in favourable condition, which is defined in part in relation to their population attributes. On this site favourable condition requires the maintenance of the population of each species feature. Maintenance also implies restoration, if evidence from condition assessment suggests a reduction in size of population.';

Likely Qualifying Features⁵²

With regard to the SPA, Natural England has stated that the following species should be considered as likely qualifying species:

- Woodlark (*Lullula Arborea*); and
- Nightjar (*Caprimulgus europaeus*);

Likely Environmental Vulnerabilities

Natural England suggest that in taking a risk-based approach to development plan making and decision-making, LPAs seek to ensure that plans and proposals are accompanied by an additional and robust assessment of the likely impacts arising from the proposals on breeding nightjar and woodlark in the Sherwood Forest area. This should ideally cover the potential direct, indirect and cumulative impacts which may include, but may not be limited to, the following;

- Disturbance to breeding birds from people, their pets and traffic (Public disturbance);
- Loss, fragmentation and/or damage to breeding and/or feeding habitat (Direct habitat and Loss of functionally linked land);
- Bird mortality arising from domestic pets and/or predatory mammals and birds; and
- Bird mortality arising from road traffic and/or wind turbines; and,
- pollution and/or nutrient enrichment of breeding habitats (Air Pollution: impact of atmospheric nitrogen deposition).

⁵¹ [https://www.newark-sherwooddc.gov.uk/media/nsdc-redesign/documents-and-images/your-council/planning-policy/local-development-framework/amended-allocations-and-development-management-dpd/ENV-3-Natural England s Advice Notes on the Sherwood ppSPA 2014.pdf](https://www.newark-sherwooddc.gov.uk/media/nsdc-redesign/documents-and-images/your-council/planning-policy/local-development-framework/amended-allocations-and-development-management-dpd/ENV-3-Natural%20England%20s%20Advice%20Notes%20on%20the%20Sherwood%20ppSPA%202014.pdf) [Accessed 13/05/2025]

⁵² <https://publications.naturalengland.org.uk/file/6341545577938944> [Accessed 31/03/2025]

Appendix C Screening of Policy Changes

Table 5-2 shows an the screenign results of the proposed changes to the policy. It is not a screening assessment of the whole policy which may have a different screening conclusion which can be referenced by reviewing the HRA of the revious version of the MLP.

Table 5-2 LSE assessment of policy changes

Policy Reference	Change to Policy	Test of Likely Significant Effects
S1 Presumption in favour of sustainable development	An additional note has been added to the policy	No likely significant effect. This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.
S2 The spatial strategy	Minor wording changes and updates to dates.	No likely significant effect. This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.
S3 Development in the Countryside	Wording change describing the design requirements of “individual buildings”.	No likely significant effect. This is a development management policy and does not in itself lead directly to any development.

		There are no impact pathways by which this policy change could impact Habitats sites.
S4 Urban regeneraton	Wording change to the description of landmark buildings.	No likely significant effect. This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.
S5 Delivering Key Regeneration Sites	This policy has been removed	No likely significant effect.
P1 Achieving High Quality Design	Wording changes to add references to “Healthy life”.	No likely significant effect. This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.
P2 Safe, healthy and attractive development	Wording to reference “hot takeaways” referenced	No likely significant effect. This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.
P3 Connected developments	No change	No likely significant effect.
P4 Comprehensive development	Change to reference to Appendix only.	No likely significant effect.

		This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.
P5 Climate change and new development	Addition of references to blue infrastructure and biodiversity.	No likely significant effect. This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.
P6 Home estensins and alterations	No change	No likely significant effect.
P7 Amenity	No change	No likely significant effect.
P8 Shop front design and signage	Addition of reference to “publicly accessible commercial routes”	No likely significant effect. This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.
H1 The following sites, as shown on the Policies Map, are allocated for housing development	Sites which have been completed have been removed, plans where planning permission has been granted have been moved to Policy H2.	Likely significant effect. This policy refers to allocations and locations and as such has the potential to impact Habitats sites through the following pathways: • Atmospheric pollution • Direct loss of habitat • Loss of functionally linked habitat • Recreational pressure

		• Urbanisation • Water quality • Water level, flow and flow
H2 Committed housing sites	Completed and lapsed sites have been removed, new commitments added.	Likely significant effect. This policy refers to allocations and locations and as such has the potential to impact Habitats sites through the following pathways: • Atmospheric pollution • Direct loss of habitat • Loss of functionally linked habitat • Recreational pressure • Urbanisation • Water quality • Water level, flow and flow
H3 Housing density and mix	No change	No likely significant effect.
H4 Affordable housing	Changes to appendices references and removal of references to the percentage of homes built on green or brown field land.	No likely significant effect. This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.
H5 Custom and self-build homes	No change	No likely significant effect.
H6 Specialist housing	No change	No likely significant effect.
H7 Houses in multiple occupation and bedsit accommodation	No change	No likely significant effect.

H8 Accommodation for Gypsies, Travelers and Travelling Showpeople
Previous need figures removed, site allocations brought under a single DPD

Likely significant effect.

This policy refers to allocations and locations and as such has the potential to impact Habitats sites through the following pathways:

- Atmospheric pollution
- Direct loss of habitat
- Loss of functionally linked habitat
- Recreational pressure
- Urbanisation
- Water quality
- Water level, flow and flow

E1 Enabling economic development
No change

No likely significant effect.

E2 Sites allocated as new employment areas
Changes to Use Classes to current codes

Likely significant effect.

This policy refers to allocations and locations for employment use and as such has the potential to impact Habitats sites through the following pathways:

- Atmospheric pollution
- Direct loss of habitat
- Loss of functionally linked habitat
- Water quality
- Water level, flow and flow

E3 Retaining land for employment uses
Class references updated.

No likely significant effect.

This is a development management policy and does not in itself lead directly to any development.

There are no impact pathways by which this policy change could impact Habitats sites.

Policy E4 Other industrial and business development	Class references updated.	No likely significant effect. This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.
Policy E5 Improving skills and economic inclusion	No change	No likely significant effect.
RT1 Main town centre uses	Clarified that there is a definition of main town centre uses in the NPPF to which this policy applies	No likely significant effect. This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.
RT2 Mansfield town centre vision and strategy	Replaced previous vision to one which reflects the Mansfield Town Centre Masterplan.	No likely significant effect. This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.
RT3 Mansfield town centre primary shopping area	Changes to references to use classes. Updates to NPPF references.	No likely significant effect. This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.

RT4 Mansfield town centre improvements	Updated to reflect any sites allocated by RT6.	No likely significant effect. This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.
RT5 Accessing Mansfield town centre	No change	No likely significant effect.
RT6 Retail and leisure allocations	References to RT6a and RT6c deleted as they have been completed or partially developed. RT6 amended to reflect changes to the use cases.	No likely significant effect. There are no new development sites introduced by this change. There are no impact pathways by which this policy change could impact Habitats sites.
RT7 Retail and leisure commitments	Retail and leisure commitments – list updated to reflect planning permissions granted.	No likely significant effect. There are no new development sites introduced by this change. There are no impact pathways by which this policy change could impact Habitats sites.
RT8 District and Local Centres	Updated to reflect changes to uses classes order and the NPPF.	No likely significant effect. This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.
RT9 Neighbourhood parades	Nonmaterial changes to wording	No likely significant effect.

		This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.
RT10 Hot food takeaways and exclusion zones	Extension to the restriction to fast food outlets. Removed reference to the use conditions to restrict permitted development rights.	No likely significant effect. This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.
RT11 Visitor Economy	No change	No likely significant effect.
SUE1 Pleasley Hill Farm	Removal of reference to SPD.	No likely significant effect. There are no new development sites introduced by this change. There are no impact pathways by which this policy change could impact Habitats sites.
SUE2 Land off Jubilee Way	Removal of reference to SPD.	No likely significant effect. There are no new development sites introduced by this change. There are no impact pathways by which this policy change could impact Habitats sites.
SUE3 Land at Berry Hill	Updated to reflect granting of planning permission	No likely significant effect. There are no new development sites introduced by this change. There are no impact pathways by which this policy change could impact Habitats sites.

IN1 Infrastructure Delivery	No change	No likely significant effect.
IN2 Green infrastructure	References to BNG included	No likely significant effect. This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.
IN3 Protection of community open space and outdoor sports provision	Nonmaterial changes to wording	No likely significant effect. This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.
IN4 New community open space and outdoor sports provision	Nonmaterial changes to wording	No likely significant effect. This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.
IN5 Allotments	No change	No likely significant effect.
IN6 Designated local green space	No change	No likely significant effect.
IN7 Local shops, community and cultural facilities	Nonmaterial changes to wording	No likely significant effect. This is a development management policy and does not in itself lead directly to any development.

		There are no impact pathways by which this policy change could impact Habitats sites.
IN8 Protecting and improving the sustainable transport network	No change	No likely significant effect.
IN9 Impact of development on the transport network	No change	No likely significant effect.
IN10 Car and cycle parking	Nonmaterial changes to wording	No likely significant effect. This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.
IN11 Telecommunications and broadband	Updated to apply to all not just major development. Updated in line with other recently adopted local plans.	No likely significant effect. This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.
NE1 Protection and enhancement of landscape character	No change	No likely significant effect.
NE2 Biodiversity and geodiversity	Strengthened references to BNG	No likely significant effect. This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.

NE3 Pollution and land instability	No change	No likely significant effect.
NE4 Mineral safeguarding areas	No change	No likely significant effect.
HE1 Historic Environment	Clarified wording around protections for the historical environment	No likely significant effect. This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.
HE2 Pleasley Vale regeneration area	Change to word order in policy name	No likely significant effect.
CC1 Renewable and low carbon energy generation	Nonmaterial changes to wording	No likely significant effect. This is a development management policy and does not in itself lead directly to any development. There are no impact pathways by which this policy change could impact Habitats sites.
CC2 Flood Risk	No change	No likely significant effect.
CC3 Sustainable Drainage Systems	No change	No likely significant effect.
CC4 River and waterbody corridors	No change	No likely significant effect.
IM1 Monitoring and Review of the Local Plan	No change	No likely significant effect.

Appendix D Site Allocations (Options)

Table 5-3 Details of options for site allocations within the MLP

Site Ref	Policy Ref	Planning Status	Development Type	Distance to SAC (km)	Distance to ppSPA (km)
1	2	Permission Granted	Housing	9.1	2.6
2	M3(b)	Completed	Housing	8.8	2.9
3	M3(c)	Pending Decision	Mixed	9.7	3.1
4	M3(d)	Pending Decision	Housing	9.6	2.8
5	M3(e)	Live	Housing	7.7	1.1
6	H1h	Live	Housing	9.2	3.9
7	M3(g)	Live	Housing	7.5	1.3
8		Live	Housing	7.2	0.7
9	M3(i)	Live	Housing	8.3	0.3
10	M3(j)	Live	Housing	9.9	2.5
11	H1k	Live	Housing	8.9	0.5
12	M3(l)	Live	Housing	9.2	3.8
13	H1a	Pending Decision	Housing	5.3	0.0
14	H1s	Permission Granted	Housing	7.7	2.8
15	H1g	Live	Housing	10.6	4.0
16	M3(p)	Superseded	Housing	10.1	3.1
17	M3(q)	Live	Housing	9.3	2.5
18	M3(r)	Live	Housing	8.4	2.2
19	M3(s)	Permission Granted	Housing	6.8	0.5
20	H1f	Live	Housing	10.2	4.2
21	M3(u)	Superseded	Housing	8.0	1.8

Site Ref	Policy Ref	Planning Status	Development Type	Distance to SAC (km)	Distance to ppSPA (km)
22	M3(v)	Live	Housing	8.2	2.1
23	M3(w)	Permission Granted	Housing	8.1	1.8
24	H1n	Permission Granted	Housing	7.9	1.6
25	H1o	Live	Housing	9.4	3.7
26	M3(z)	Permission Granted	Housing	8.0	2.4
27a	H1e	Pending Decision	Housing	8.9	0.4
27b	H2	Permission Granted	Housing	8.8	0.3
27c		Live	Economic	9.0	0.4
28	H1q	Live	Housing	9.0	4.0
29	M3(ac)	Live	Housing	8.5	3.5
30	M3(ad)	Live	Housing	6.8	1.7
31	M3(ae)	Pending Decision	Housing	6.4	1.5
32	M3(af)	Live	Housing	9.3	4.3
33	H2	Pending Decision	Housing	4.6	2.5
34	H1w	Live	Housing	3.6	0.5
35	H1v	Permission Granted	Housing	4.5	1.6
36	H1v	Permission Granted	Housing	4.6	1.3
37	M4(a)	Permission Granted	Economic	8.8	0.3
38	M4(b)	Live	Economic	8.2	0.0
39A	M4(c)	Live	Economic	8.0	0.1
39B	M(c)	Live	Economic	8.2	0.0
40	M4(d)	Live	Economic	8.3	0.0
41	M4(e)	Live	Economic	8.7	0.1
42	W3(a)	Live	Housing	4.3	1.0

Site Ref	Policy Ref	Planning Status	Development Type	Distance to SAC (km)	Distance to ppSPA (km)
43	W3(b)	Live	Economic	3.9	0.5
44		Live	Housing	9.4	2.5
45		Live	Housing	4.9	0.9
46		Live	Housing	8.9	3.8
47		Live	Housing	8.2	3.2
48		Live	Housing	5.7	0.7
49		Live	Housing	4.6	1.1
50		Live	Housing	5.6	0.7
51		Live	Housing	3.1	1.4
52		Live	Mixed	10.1	5.1
53	SUE1	Live	Housing	6.6	1.6
54		Permission Granted	Housing	10.2	1.1
55		Live	Housing	6.8	1.8
56		Live	Housing	5.1	0.4
57		Permission Granted	Housing	4.8	0.9
58		Live	Housing	10.9	3.8
59		Permission Granted	Housing	10.5	1.7
60		Pending Decision	Housing	7.1	2.1
61		Live	Economic	10.6	1.3
62		Live	Housing	8.6	0.5
63		Live	Economic	4.0	0.5
64		Live	Housing	8.6	3.3
65		Live	Housing	7.8	1.6
66		Live	Housing	10.0	3.9

Site Ref	Policy Ref	Planning Status	Development Type	Distance to SAC (km)	Distance to ppSPA (km)
67		Live	Housing	5.7	0.7
68	H2	Permission Granted	Housing	10.1	3.0
69		Live	Housing	10.0	2.1
70		Permission Granted	Housing	10.4	1.0
71a		Live	Economic	6.8	0.1
71c		Live	Economic	6.7	0.1
72		Live	Housing	6.8	0.5
73	H1d	Live	Housing	8.7	0.5
74a		Live	Mixed	10.5	5.5
74b			Economic	10.5	5.2
74c	SUE1	Live	Mixed	10.2	5.1
74d		Live	Housing	10.5	5.0
75	H2	Permission Granted	Housing	10.1	3.1
76	SUE2	Live	Mixed	6.3	0.0
77	H1i	Permission Granted	Housing	9.0	2.6
78	NE3	Live	Housing	10.7	3.5
79	H1u	Permission Granted	Housing	9.2	3.6
80		Permission Granted	Housing	11.1	3.4
81	H2	Permission Granted	Housing	10.1	4.4
82		Live	Economic	10.6	4.3
83		Live	Mixed	9.4	2.8
84		Permission Granted	Housing	10.4	2.4
85		Completed	Housing	10.4	2.3
86		Permission Granted	Housing	10.4	2.2

Site Ref	Policy Ref	Planning Status	Development Type	Distance to SAC (km)	Distance to ppSPA (km)
87	H2	Permission Granted	Housing	2.8	1.1
88		Live	Housing	9.9	5.1
89	H1b	Live	Housing	11.1	3.0
90	SUE3	Permission Granted	Mixed	8.7	0.0
91		Live	Housing	10.7	0.6
92		Permission Granted	Housing	10.2	5.2
93		Permission Granted	Housing	9.4	3.8
94		Permission Granted	Housing	7.9	1.9
95		Permission Granted	Housing	11.0	2.6
96		Completed	Housing	10.8	2.5
97		Completed	Housing	5.9	0.6
98		Permission Granted	Housing	6.3	0.4
99	H-La009	Completed	Housing	9.5	3.6
100		Pending Decision	Housing	3.4	0.7
101	H1a	Permission Granted	Housing	5.4	0.0
102		Completed	Housing	8.7	2.5
103		Permission Granted	Housing	6.7	2.0
104		Permission Granted	Housing	6.8	2.1
105		Completed	Housing	7.9	2.9
106		Live	Housing	9.8	1.7
107		Live	Housing	9.6	4.5
108		Live	Housing	8.1	3.1
109		Superseded	Housing	11.2	2.7
110		Completed	Housing	7.4	2.4

Site Ref	Policy Ref	Planning Status	Development Type	Distance to SAC (km)	Distance to ppSPA (km)
111		Completed	Housing	9.2	3.3
112		Superseded	Housing	4.0	2.0
113		Completed	Housing	8.8	0.8
114		Completed	Housing	9.5	3.0
115		Live	Housing	8.2	3.0
116		Live	Housing	7.3	0.3
117		Live	Housing	8.0	1.9
118		Live	Housing	8.1	3.1
119		Permission Granted	Housing	8.4	2.4
120		Permission Granted	Economic	7.9	2.7
121		Live	Economic	7.8	2.6
122		Superseded	Housing	3.9	1.9
123		Completed	Economic	11.1	2.0
124		Permission Granted	Housing	8.8	2.5
125		Duplicate	Housing	7.9	1.6
126		Live	Housing	9.8	3.1
127	MCA1(a)	Live	Economic	9.3	3.2
128	MCA1(c)	Live	Economic	9.0	2.9
129	WDC3(a)	Live	Economic	4.0	1.3
130	WDC3(b)	Live	Economic	4.0	1.4
131	MCA1(d)	Live	Mixed	8.9	2.8
132	WDC3(c)	Permission Granted	Economic	3.9	1.5
133	MCA1(e)	Live	Economic	8.9	2.8
134		Permission Granted	Economic	9.3	3.1

Site Ref	Policy Ref	Planning Status	Development Type	Distance to SAC (km)	Distance to ppSPA (km)
135		Completed	Economic	10.3	3.5
136		Live	Economic	9.6	2.5
137		Permission Granted	Economic	6.8	0.0
138		Completed	Economic	8.6	0.1
139		Pending Decision	Economic	8.5	0.0
140		Completed	Economic	11.0	2.3
141		Live	Economic	10.8	2.1
142		Live	Economic	10.8	1.9
143		Live	Economic	6.4	0.0
144		Completed	Economic	8.1	3.1
145		Live	Economic	8.5	0.1
146		Live	Economic	8.4	0.1
148		Live	Economic	9.5	4.5
149		Live	Economic	8.0	2.9
150		Live	Economic	7.9	0.0
151		Live	Economic	8.5	0.0
152		Completed	Housing	4.5	2.6
153		Completed	Housing	4.0	1.5
154		Completed	Housing	5.7	2.5
155		Completed	Housing	9.3	1.6
156		Completed	Housing	9.2	1.5
157		Permission Granted	Housing	8.1	2.6
158		Completed	Housing	6.4	1.4
159		Completed	Housing	6.8	0.8

Site Ref	Policy Ref	Planning Status	Development Type	Distance to SAC (km)	Distance to ppSPA (km)
160		Permission Granted	Housing	7.1	2.0
161		Live	Housing	9.2	2.9
162		Completed	Housing	8.2	2.9
163		Completed	Housing	8.2	3.2
164		Permission Granted	Housing	7.6	2.6
165		Permission Granted	Housing	9.0	2.9
166		Completed	Housing	7.3	2.2
167		Completed	Housing	9.1	3.8
168		Completed	Housing	8.3	1.7
169		Live	Economic	8.8	0.3
170	SUE1	Live	Housing	9.9	4.9
171		Live	Housing	10.5	1.1
172		Live	Housing	5.4	0.1
173		Live	Housing	9.3	1.8
174		Live	Housing	8.3	2.5
175	H1x	Pending Decision	Housing	5.6	2.4
176		Permission Granted	Housing	3.9	1.9
177	H1p	Permission Granted	Housing	10.9	2.3
178		Permission Granted	Housing	8.9	3.1
179		Completed	Housing	9.2	3.3
180		Permission Granted	Housing	9.9	4.1
181	H-Po044	Completed	Housing	9.2	2.9
182	H2	Permission Granted	Housing	3.8	1.6
183	H2	Permission Granted	Housing	8.7	0.5

Site Ref	Policy Ref	Planning Status	Development Type	Distance to SAC (km)	Distance to ppSPA (km)
184		Permission Granted	Mixed	9.0	2.8
185		Live	Housing	8.8	2.4
186		Live	Housing	10.1	3.1
187		Live	Mixed	4.9	0.2
188		Live	Housing	5.3	0.7
189	H1r	Pending Decision	Housing	6.3	0.8
190		Live	Housing	6.5	1.7
191		Live	Housing	8.3	0.3
192		Live	Housing	11.1	3.7
193		Live	Gypsy and Traveller Pitches	5.3	0.7
199		Completed	Housing	11.5	3.7
200		Permission Granted	Economic	7.8	2.3
201		Permission Granted	Economic	9.4	4.4
202		Completed	Economic	9.3	4.3
203	H2	Permission Granted	Housing	8.3	1.6
204	H2	Permission Granted	Housing	2.8	1.4
205		Live	Housing	4.0	2.1
206		Live	Housing	4.1	2.1
207		Live	Housing	4.3	2.3
208		Live	Housing	2.9	1.1
209		Live	Housing	9.1	2.8
210		Live	Housing	2.8	1.4
211		Permission Granted	Economic	2.8	1.1
212		Permission Granted	Economic	11.4	2.2

Site Ref	Policy Ref	Planning Status	Development Type	Distance to SAC (km)	Distance to ppSPA (km)
213		Completed	Economic	7.7	2.5
214		Permission Granted	Economic	9.6	4.5
215		Permission Granted	Economic	11.3	2.4
216		Permission Granted	Economic	5.9	0.0
217		Live	Housing	9.6	4.6
218		Live	Housing	9.9	1.9
219		Live	Mixed	4.7	0.5
220			Gypsy and Traveller Pitches	9.9	4.9
221			Gypsy and Traveller Pitches	8.1	2.3
222		Duplicate	Gypsy and Traveller Pitches	9.2	3.9
223			Gypsy and Traveller Pitches	7.9	2.8
224			Gypsy and Traveller Pitches	6.3	1.3
225			Gypsy and Traveller Pitches	7.0	2.0
226			Gypsy and Traveller Pitches	7.2	2.2
227			Gypsy and Traveller Pitches	7.3	2.2
228			Gypsy and Traveller Pitches	7.7	2.6
229			Gypsy and Traveller Pitches	8.0	3.0
230			Gypsy and Traveller Pitches	8.0	3.0
231			Gypsy and Traveller Pitches	7.9	3.0
232			Gypsy and Traveller Pitches	7.9	3.0
233			Gypsy and Traveller Pitches	8.1	3.2
234			Gypsy and Traveller Pitches	7.0	2.3
235			Gypsy and Traveller Pitches	8.2	3.4
236			Gypsy and Traveller Pitches	7.6	3.1

Site Ref	Policy Ref	Planning Status	Development Type	Distance to SAC (km)	Distance to ppSPA (km)
237			Gypsy and Traveller Pitches	10.0	5.0
238			Gypsy and Traveller Pitches	10.2	5.3
239			Gypsy and Traveller Pitches	10.4	5.5
240			Gypsy and Traveller Pitches	10.3	5.4
241			Gypsy and Traveller Pitches	10.5	5.7
242			Gypsy and Traveller Pitches	9.8	5.1
243			Gypsy and Traveller Pitches	9.9	2.6
244			Gypsy and Traveller Pitches	3.8	1.7
245			Gypsy and Traveller Pitches	5.5	2.3
246			Gypsy and Traveller Pitches	3.8	1.8
247			Gypsy and Traveller Pitches	8.5	3.4
248			Gypsy and Traveller Pitches	5.0	0.8
249			Gypsy and Traveller Pitches	6.6	1.2
250			Gypsy and Traveller Pitches	7.9	1.8
251			Gypsy and Traveller Pitches	7.7	1.8
252			Gypsy and Traveller Pitches	7.3	2.0
263			Gypsy and Traveller Pitches	8.2	0.0
264			Gypsy and Traveller Pitches	11.1	3.4
265		Live	Gypsy and Traveller Pitches	8.3	0.2
266			Gypsy and Traveller Pitches	10.1	4.4
267	H1m	Pending Decision	Housing	9.4	4.4
268		Pending Decision	Housing	10.4	5.5
269		Live	Housing	4.9	2.9
270	H1l	Live	Housing	10.6	1.0

Site Ref	Policy Ref	Planning Status	Development Type	Distance to SAC (km)	Distance to ppSPA (km)
271		Live	Economic	9.3	2.9
272		Live	Economic	9.3	2.8
273		Live	Economic	9.4	2.8
274		Live	Economic	8.4	0.0
275		Live	Housing	8.4	2.4
276		Live	Economic	8.2	2.8
277		Live	Economic	9.1	3.0
278		Live	Economic	9.5	4.5
286		Live	Gypsy and Traveller Pitches	6.3	2.5
287		Live	Housing	3.0	1.4
290		Live	Housing	8.1	1.8
291		Live	Housing	8.2	0.2
292		Permission Granted	Housing	8.6	2.5
293		Permission Granted	Housing	6.9	2.1
294		Permission Granted	Housing	8.9	3.2
295		Permission Granted	Housing	7.3	1.5
296		Permission Granted	Housing	10.2	5.3
297		Permission Granted	Housing	9.2	0.8
298		Pending Decision	Housing	4.6	2.4
299		Permission Granted	Housing	7.1	2.1
300		Pending Decision	Housing	5.6	0.6
301		Permission Granted	Housing	3.8	1.8
302		Completed	Housing	9.3	0.8
317		1		9.3	2.9

Site Ref	Policy Ref	Planning Status	Development Type	Distance to SAC (km)	Distance to ppSPA (km)
1	2	Permission Granted	Housing	9.1	2.6
2	M3(b)	Completed	Housing	8.8	2.9
3	M3(c)	Pending Decision	Mixed	9.7	3.1
4	M3(d)	Pending Decision	Housing	9.6	2.8
5	M3(e)	Live	Housing	7.7	1.1
6	H1h	Live	Housing	9.2	3.9
7	M3(g)	Live	Housing	7.5	1.3
8		Live	Housing	7.2	0.7
9	M3(i)	Live	Housing	8.3	0.3
10	M3(j)	Live	Housing	9.9	2.5
11	H1k	Live	Housing	8.9	0.5
12	M3(l)	Live	Housing	9.2	3.8
13	H1a	Pending Decision	Housing	5.3	0.0
14	H1s	Permission Granted	Housing	7.7	2.8

