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Habitat Regulations Assessment (HRA)

Gypsy, Traveller and Travelling Showpeople Development
Plan Document (DPD)

Mansfield District Council

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Quality information

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1. Introduction

Scope of Project

- 1.1 AECOM was appointed by Mansfield District Council to assist in undertaking a Habitats Regulations Assessment (HRA)¹ for the Mansfield Gypsy Traveller and Travelling Showpeople Development Plan Document 2013-2033 (GTTSP DPD) that is currently at draft publication stage. This plan allocates permanent sites for Gypsy and Traveller use, allocates one Travelling Showpeople site and aims to safeguard existing Gypsy and Travelling Show people sites. It is a requirement of the Council to undertake a formal HRA that highlights any potential effects the GTTSP DPD could pose to European Sites.
- 1.2 The GTTSP DPD forms part of the overall development plan for the Mansfield District in conjunction with the Mansfield District Local Plan, Nottinghamshire Waste Core Strategy, Nottinghamshire Minerals Local Plan (LP) and any 'made' or adopted Neighbourhood Plans (NP).
- 1.3 The Mansfield LP (2013-2033) was subject to HRA from 2015 to 2019; that HRA assessed the alone and in combination impacts of increased development within Mansfield District (note: this plan included a single policy relating to gypsy and travelling show people – Policy H8). The level of detail within that LP was such that analysis for site-specific allocation of residential, employment and retail development and the impacts these might have to European Sites could be achieved. As a result, the 2019 Mansfield LP HRA² provides detailed analysis of impact pathways (namely air quality, habitat fragmentation, recreational pressure and urbanisation) that sets the context for the HRA of the GTTSP DPD and should be read in conjunction with this HRA for further discussion details, as required.
- 1.4 Policy H8 of the Local Plan was screened out as not presenting any likely significant effects because it did not seek to deliver or allocate gypsy and traveller sites but rather set out criteria against which proposed sites will be judged. The GTTSP DPD does allocate sites. The objective of this particular HRA is therefore to identify if any particular site allocations and/or policies in the GTTSP DPD have the potential to cause an adverse effect on the integrity of Natura 2000 or European designated sites or sites that have been submitted to the European Commission, but not yet formally adopted either in isolation or in combination with other plans and projects, and to determine whether site-specific mitigation measures are required. This includes Special Areas of Conservation (SAC), candidate SACs (cSAC), Special Protection Areas (SPA), proposed SPAs (pSPA) and Ramsar sites designated under the Ramsar convention). A key part of the 'in combination' assessment is to consider the allocations in the GTTSP DPD as part of the overall housing and employment growth proposals for Mansfield District.
- 1.5 This work also assesses impacts on habitat within the wider Sherwood area supporting European protected birds (nightjar and woodlark), known colloquially as the Sherwood possible potential Special Protection Area (ppSPA). Even though this area is not currently a designated or formally proposed SPA (and therefore is not covered by Article 6(3) of the Habitats Directive), it was included for purposes of good environmental practice and future-proofing; this is in line with advice provided by Natural England in advice notes dated 28 June 2010, updated July 2011, September 2012, and March 2014.

Legislation

- 1.6 The need for HRA is set out within Article 6 of the EC Habitats Directive 1992 and interpreted into British law by the Conservation of Habitats & Species Regulations 2017 (as amended). The ultimate aim of the Habitats Directive is to "maintain or restore, at favourable conservation status, natural habitats and species of wild fauna and flora of Community interest" (Habitats Directive, Article 2(2)). This aim relates primarily to habitats and species, and designated sites that have a significant role in delivering favourable conservation status. European sites (also called Natura 2000 sites) can be defined as actual or proposed/candidate Special Areas of Conservation (SAC) or Special Protection Areas (SPA). It is also Government policy for sites designated under the Convention on Wetlands of International Importance (Ramsar sites) to be treated as having equivalent status to Natura 2000 sites.

¹ Sometimes referred to in this document as the 'Regulations'.

² Mansfield District Council Local Plan Habitat Regulations Assessment of the Submitted Local Plan – Likely Significant Effects Including Appropriate Assessment (September 2019)

- 1.7 The Habitats Directive applies the precautionary principle to protected areas. Plans and projects can only be permitted having ascertained that there will be no adverse effect on the integrity³ of the site(s) in question. This is in contrast to the SEA Directive which does not prescribe how plan or programme proponents should respond to the findings of an environmental assessment; merely that the assessment findings (as documented in the 'environmental report') should be 'taken into account' during preparation of the plan or programme. In the case of the Habitats Directive, plans and projects may still be permitted if there are no alternatives to them 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.

Habitats Directive 1992

Article 6 (3) states that:

"Any plan of project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives."

Conservation of Habitats and Species Regulations 2017 (as amended)

Regulation 105 states that:

"A competent authority, before deciding to ... give any consent for a plan or project which is likely to have a significant effect on a European site ... must make an appropriate assessment of the implications for the plan or project in view of that 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."

Box 1: The legislative basis for HRA

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

³ Coherence of structure and function i.e. the ability of the site to achieve its conservation objectives

2. Methodology

Introduction

- 2.1 The need for Appropriate Assessment is set out within Article 6 of the EC Habitats Directive 1992 and interpreted into British law by the Conservation of Habitats and Species Regulations 2010. The ultimate aim of the Directive is to “maintain or restore, at favourable conservation status, natural habitats and species of wild fauna and flora of Community interest” (Habitats Directive, Article 2(2)). This aim relates to habitats and species within the European protected sites, not the European sites themselves, although the sites have a significant role in delivering favourable conservation status.
- 2.2 The Habitats Directive applies the precautionary principle to European sites. Plans and projects can only be permitted having ascertained that there will be no adverse effect on the integrity of the site(s) in question. Plans and projects with predicted adverse impacts on European sites may still be permitted if there are no alternatives to them 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.
- 2.3 Figure 1 below outlines the stages of HRA according to current Ministry of Housing, Communities and Local Government guidance⁴. The stages are essentially iterative, being revisited as necessary in response to more detailed information, recommendations and any relevant changes to the Plan under consideration until no significant adverse effects remain.

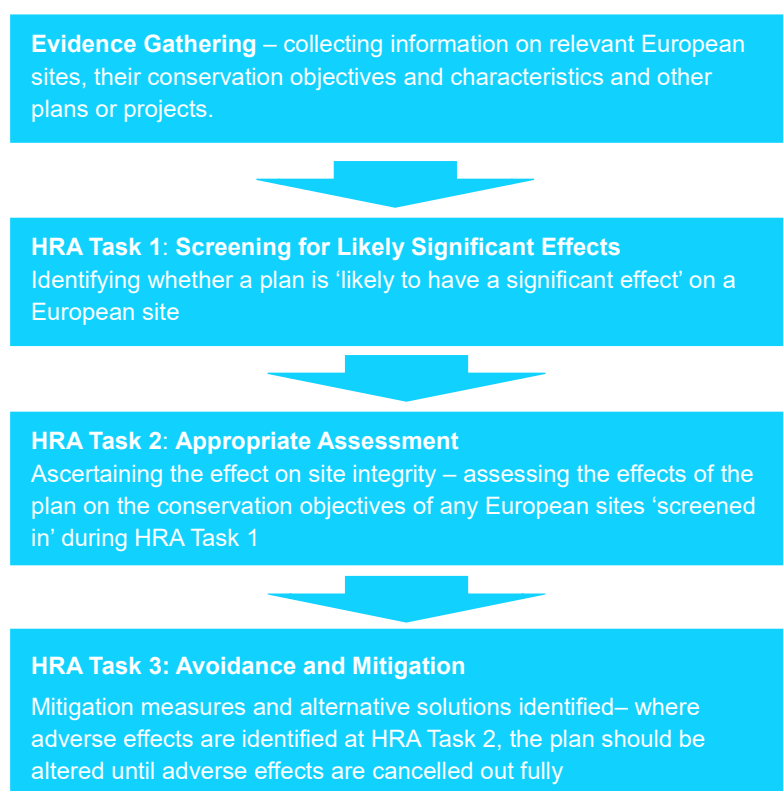


Figure 1: Four Stage Approach to Habitats Regulations Assessment. Source GOV.UK, 2019.

⁴ <https://www.gov.uk/guidance/appropriate-assessment>

HRA Task 1 – Likely Significant Effects (LSE)

- 2.4 Following evidence gathering, the first stage of any Habitats Regulations Assessment is a Likely Significant Effect (LSE) test - essentially a risk assessment to decide whether the full subsequent stage known as Appropriate Assessment is required. The essential question is:

"Is the plan or project, either alone or in combination with other relevant projects and plans, likely to result in a significant effect upon European sites?"

- 2.5 The objective is to 'screen out' those plans and projects that can, without any detailed appraisal, be said to be unlikely to result in significant adverse effects upon European sites, usually because there is no mechanism for an adverse interaction with European sites. This stage is undertaken in Section 4; Table 2 of this report.

HRA Task 2 – Appropriate Assessment (AA)

- 2.6 Where it is determined that a conclusion of 'no likely significant effect' cannot be drawn, the analysis has proceeded to the next stage of HRA known as Appropriate Assessment. Case law has clarified that 'appropriate assessment' is not a technical term. In other words, there are no particular technical analyses, or level of technical analysis, that are classified by law as belonging to appropriate assessment rather than determination of likely significant effects.
- 2.7 During July 2019 the Ministry of Housing, Communities and Local Government published guidance for Appropriate assessment⁵. Paragraph: 001 Reference ID: 65-001-20190722m explains: *'Where the potential for likely significant effects cannot be excluded, a competent authority must make an appropriate assessment of the implications of the plan or project for that site, in view the site's conservation objectives. The competent authority may agree to the plan or project only after having ruled out adverse effects on the integrity of the habitats site. Where an adverse effect on the site's integrity cannot be ruled out, and where there are no alternative solutions, the plan or project can only proceed if there are imperative reasons of over-riding public interest and if the necessary compensatory measures can be secured'*.
- 2.8 As this analysis follows on from the screening process, there is a clear implication that the analysis will be more detailed than undertaken at the Screening stage and one of the key considerations during appropriate assessment is whether there is available mitigation that would entirely address the potential effect. In practice, the appropriate assessment would take any policies or allocations that could not be dismissed following the high-level Screening analysis and analyse the potential for an effect in more detail, with a view to concluding whether there would be an adverse effect on integrity (in other words, disruption of the coherent structure and function of the European site(s)).
- 2.9 A decision by the European Court of Justice⁶ concluded that measures intended to avoid or reduce the harmful effects of a proposed project on a European site may no longer be taken into account by competent authorities at the Likely Significant Effects or 'screening' stage of HRA. That ruling has been considered in producing this HRA.
- 2.10 Also, in 2018 the Holohan ruling⁷ was handed down by the European Court of Justice. Among other provisions paragraph 39 of the ruling states that *'As regards other habitat types or species, which are present on the site, but for which that site has not been listed, and with respect to habitat types and species located outside that site, ... typical habitats or species must be included in the appropriate assessment, if they are necessary to the conservation of the habitat types and species listed for the protected area'* [emphasis added]. This has been taken into account in the HRA process with regard in particular to habitats of value (or potential value) for nesting woodlark or nightjar that lie outside the indicative ppSPA boundary and the potential for impacts on habitats within the indicative ppSPA boundary that are not of conservation importance in themselves but are of particular value for nesting nightjar and woodlark.

⁵ GOV (2019). *Appropriate Assessment*. Available online at: <https://www.gov.uk/guidance/appropriate-assessment> [Accessed: 20/11/2019].

⁶ People Over Wind and Sweetman v Coillte Teoranta (C-323/17)

⁷ Case C-461/17

HRA Task 3 – Avoidance and Mitigation

- 2.11 Where necessary, measures are recommended for incorporation into the GTTSP DPD in order to avoid or mitigate adverse effects on European sites. There is considerable precedent concerning the level of detail that a Local Plan document needs to contain regarding mitigation for impacts on European sites; it is that the Plan must provide an adequate policy framework within which these measures can be delivered. The implication of this precedent is that it is not necessary for all deployable measures (i.e. the specific detailed measures that will be implemented at planning application level) to be fully developed prior to adoption of the Plan.
- 2.12 In evaluating significance, AECOM has relied on professional judgement as well as the results of previous Natural England consultation regarding development impacts on the European sites considered within this assessment.
- 2.13 When discussing 'mitigation' for a DPD, one is concerned primarily with the policy framework to enable the delivery of such mitigation rather than the details of the mitigation measures themselves since the DPD is a high-level policy document.

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

- 2.14 It is a requirement of the Regulations that the impacts 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 European site(s) in question.
- 2.15 In considering the potential for in-combination effects with regional housing development on European sites, the primary consideration is the impact of visitor numbers – i.e. recreational pressure and urbanisation.
- 2.16 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 may 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 would otherwise be screened out because its individual contribution is inconsequential.

3. Internationally Designated Sites

Birklands and Bilhaugh Special Areas of Conservation (SAC)

Introduction

- 3.1 Covering an approximate area of 271.84 hectares, Birklands and Bilhaugh SAC is a landscape-remnant of the historic Sherwood Forest, which is of World-renowned cultural significance due to the high concentration of ancient oak trees and associated folklore. The trees and open woodland pasture habitat have been utilised over the centuries as a medieval Royal hunting forest, as a source of timber for the construction of cathedrals and English naval fleets, and more recently for public amenity, recreation and tourism. There is high public usage across the SAC supported by a network of Public Rights of Way and permissive paths. Part of the SAC forms part of the Sherwood Forest Country Park and National Nature Reserve.
- 3.2 Birklands and Bilhaugh SAC is located in central Nottinghamshire and sits in the Pennine rain shadow with just 62.5cm precipitation per annum on average. The SAC is protected from extreme weather conditions however due to the sandy nature of the soils, stored heat is readily exchanged during the night and can result in a sudden fall in temperature, the consequence of which are frequent frosts even within summer months although drought conditions occur frequently. Average yearly temperatures are 9.4°C with maximum temperatures in July and January the coldest.
- 3.3 The highest point of the SAC is 95 metres above sea level with the lowest of 55m. Soils are derived mainly from the underlying Sherwood Sandstones and in part from glacial deposits resulting in nutrient poor, light pebbly soils which are mainly acidic and excessively free draining and often only comprise a very thin humus layer overlying the mineral deposit. The sandstone is free draining to precipitation and surface water which is able to percolate quickly to the Sherwood aquifer some depths below. Surface water is not found on site and the water table is currently 15-20m below the surface⁸.

Reason for designation⁹

- 3.4 Annex I habitats that are the reason for the selection of this site, are:
 - Old acidophilous oak woods with *Quercus robur* on sandy plains:
 - This habitat type generally comprises ancient lowland oak woodland on acidic, sandy or gravelly substrates. Ancient and veteran trees are relatively abundant in UK stands of this habitat type compared to examples in continental Europe, and are often associated with assemblages of notable lichens, fungi and/or invertebrates.
 - The qualifying woodland feature (H9190) at Birklands and Bilhaugh is especially notable for its rich invertebrate fauna, particularly the groups of beetles, spiders and flies which are closely associated with and dependent upon the various micro-habitats provided by old trees and dead or decaying wood. The diversity and number of associated woodland fungi present at Birklands and Bilhaugh SAC is also particularly large, the most notable species being the bracket fungi *Grifola sulphurea* and *Fistulina hepatica* and the nationally rare Oak polypore *Piptoporus quercinus*.

Historic trends and current pressures¹⁰

- 3.5 Birklands and Bilhaugh SAC supports extensive areas of the old acidophilous oak woodland SAC feature which was managed for hundreds of years as an extensively grazed wood pasture. However, this habitat

⁸ Natural England (2016). *European Site Conservation Objectives: Supplementary Advice on Conserving and Restoring Site Features. Birklands and Bilhaugh Special Area of Conservation (SAC)*. Available online at: <http://publications.naturalengland.org.uk/publication/5179475394297856> [Accessed: 21/11/19].

⁹ JNCC (2019). *Birklands and Bilhaugh SAC*. Available online at: <https://sac.jncc.gov.uk/site/UK0012740> [Accessed: 21/11/19].

¹⁰ Natural England (2015). *Site improvement plan: Birklands and Bilhaugh SAC*. Available online at: <http://publications.naturalengland.org.uk/publication/6727956374224896> [Accessed: 21/11/19].

is slowly reverting to high forest woodland and heath following the cessation of traditional livestock grazing. This woodland is particularly notable for its remnant ancient and decaying oak trees which support rich assemblages of invertebrates and fungi.

- 3.6 Parts of the woodland are now being restored to wood pasture to sustain the invertebrate and fungi assemblages, and the exceptional population of ancient standing oaks which are dotted throughout the SAC. However, much of the site supports much younger stands of mature and immature oak trees consisting of both *Quercus robur* and *Q. petraea*, with birch *Betula pendula* also scattered throughout the stands. The field layer consists mainly of bramble and bracken, but where the canopy is more open, swards of acid grassland and ericaceous heath can be found. There are several threats and pressures that are currently experienced by the site, these include:

- Public access and disturbance (e.g. trampling of vegetation);
- Planning permissions (this related specifically to the demolition and relocation of the old visitor centre, which is now complete));
- Change in land management (Due to a previous lack of management, the site has a very large age gap between the ancient trees and the next generation cohort. This will result in localised extinction of invertebrate species and an alteration to vegetation structure without intervention;
- Physical modification (specifically, the effects of deep seam coal extraction immediately beneath the SAC leading to surface fissures);
- Air pollution – nitrogen deposition from vehicles and industry;
- Disease; and
- Invasive species.

Conservation objectives¹¹

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

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

Sherwood possible potential Special Protection Area (ppSPA)

Introduction

- 3.8 A portion of the Sherwood Forest area is currently being considered as a possible potential Special Protection Area for its population of nightjar and woodlark. It is referred in this document as a possible potential SPA or 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 Birklands Ringing Group Sherwood Forest nightjar survey recorded 88 nightjar territories, while data cited by RSPB indicates approximately 70 pairs¹². Irrespective of the figure used, these figures represent between 1% and 2% of the UK population of approximately 4,600 churring males¹³. 'Percentage of UK population' is a first step (Stage 1) towards considering if an area qualifies as an SPA or potential SPA

¹¹ Natural England (2018). European Site Conservation Objectives for Birklands and Bilhaugh Special Area of Conservation. Available online at: <http://publications.naturalengland.org.uk/publication/5179475394297856> [Accessed: 21/11/2019].

¹² RSPB Futurescapes Sherwood Forest Available online at: <https://www.rspb.org.uk/globalassets/downloads/documents/futurescapes/futurescapes-sherwoodforest-booklet.pdf>

¹³ Conway, G., Wotton, S., Henderson, I., Langston, R., Drewitt, A. & Currie, F. (2007) Status and distribution of European Nightjars *Caprimulgus europaeus* in the UK in 2004. *Bird Study* 54: 98–111. It is standard practice to equate 1 churring (singing) male with a probable breeding pair.

(pSPA)¹⁴, although it does not mean a formal proposal for designation will arise and provides no information regarding the actual boundary of a potential SPA. This information is currently being assessed along-side a UK-wide review programme led by Defra¹⁵ that has been ongoing for a decade. 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 remains 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. There is no timetable for the provision of such advice.

- 3.9 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 European 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).
- 3.10 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*' (advice note from Natural England, 28 June 2010 updated July 2011, September 2012, and March 2014). Natural England confirmed, at time of writing the Local Plan HRA, that there are no planned updates to this advice note and their advice remains the same as time of writing this assessment.
- 3.11 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*'.
- 3.12 Currently, since the site is not officially proposed for designation, there are no formal conservation objectives or site boundaries available. Therefore, it is difficult to provide the same level of detail regarding site vulnerabilities, as has been given to Birklands and Bilhaugh SAC. In the absence of this information, a more informal approach must be taken although the level of analysis is identical for the SAC and ppSPA.
- 3.13 According to evidence submitted for the Rufford Energy Recovery Facility (ERF) Public Inquiry (February – September 2010), an indicative ppSPA boundary was drawn and was based on combined Indicative Core Areas submitted by Natural England, and Sherwood Important Bird Areas submitted by RSPB. The updated advice letter submitted by Natural England (March 2014), advises that it is the combined boundaries of these areas that form an informal ppSPA boundary. The Birklands and Bilhaugh SAC is included within this boundary. Draft *Conservation Objectives and Qualifying Features of Interest* were submitted by Natural England as part of the ERF public inquiry, of which Natural England has advised that these are used to inform a '*risk-based approach*'. However, it remains a fact that all of these, particularly the precise site boundary since the current boundary includes areas such as business parks, are subject to change prior to any formal designation as a pSPA.

Reason for site selection

- 3.14 Interest features of the ppSPA constitute¹⁶:

¹⁴ For more information, see the Joint Nature Conservation Committee's website on SPA classification:

<http://jncc.defra.gov.uk/page-1405>

¹⁵ The time schedule of this UK SPA Review has been changeable. There are many issues included in this review, including a more realistic alignment with the European Habitats Directive. This may have implications in how sites are selected and what complimentary areas are included. For more information, see the Joint Nature Conservation Committee's website (Review of the UK SPA Network): <http://jncc.defra.gov.uk/page-162>

¹⁶ Draft Conservation Objectives and Qualifying Features of Interest submitted by Natural England as part of the Rufford Energy Recovery Facility (ERF) Public Inquiry (February – September 2010).

- Nightjar and woodlark populations including breeding sites and occupied territories; and
- Nightjar and woodlark habitats including lowland heathland, coniferous woodland with a mosaic of bare ground and low vegetation amongst young scrub, scattered trees or dense stands of young conifer trees.

Historic trends and current pressures

3.15 There are no formal conservation objectives for the site but identified potential pressures include;

- Public access and disturbance of breeding birds by people and dogs;
- Urban encroachment – including, for example, loss, fragmentation and/or damage to breeding and/or feeding habitat and bird mortality arising from domestic pets and/or predatory mammals and birds;
- Change in, or lack of, favourable land management such that nesting habitat is reduced or change in quality;
- bird mortality arising from road traffic and/or wind turbines
- Air pollution – nitrogen deposition from vehicles and industry (i.e. nutrient enrichment of breeding habitats); and
- Invasive species within preferred nesting habitat.

Conservation objectives

3.16 *'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.'*¹⁷

3.17 The locations of the SAC, ppSPA and areas of existing and proposed heathland and acid grassland creation around Mansfield are shown on the map in Appendix A1.

¹⁷ Draft Conservation Objectives and Qualifying Features of Interest were submitted by Natural England as part of the Rufford Energy Recovery Facility (ERF) Public Inquiry (February – September 2010).

4. Likely Significant Effects

Introduction

- 4.1 Mansfield District is located to the north of Nottingham and south-east of Chesterfield. The district has an estimated population of approximately 108,800 residents. This represents 13% of the total Nottinghamshire county population of approximately 823,100¹⁸. Main roads that connect Mansfield town to surrounding villages, towns and cities include the A60 that runs northwards, A38, A6191 and the A617 which runs around the western and southern sections of the district connecting with the M1. The Mansfield boundary, at its closest point, is located 750m west from the Birklands and Bilhaugh SAC. It is approximately 3km from the nearest urban area of Market Warsop. The Sherwood ppSPA overlaps with the eastern part of the district, near to the urban boundary.
- 4.2 Based on the HRA work undertaken for the Mansfield Local Plan HRA there are several pathways of impact that require analysis regarding increased development within the Mansfield district. Other pathways (water abstraction) were entirely dismissed at the Local Plan level as presenting no connection to growth in Mansfield District and therefore do not need discussing in this HRA. The remaining pathways are:
- Air quality;
 - Recreational pressure;
 - Fragmentation of nightjar and woodlark habitat; and
 - Urbanisation
- 4.3 Table 1 identifies the environmental impact pathways, which were identified by the Mansfield Local Plan HRA as being relevant for consideration regarding the SAC and ppSPA due to increased development within the Mansfield district. These impact pathways are also relevant to the development allocations and policies of the GTTSP DPD given the need to consider allocations in the DPD in combination with the housing and employment growth in the Local Plan. Note that Table 1 does not set out the Test of Likely Significant Effects for the DPD (that is contained in Table 2) but is presented to provide introductory context to the issues that will be investigated.

Table 1. How both European Sites could be susceptible to the above impact pathways due to increased residential development, including gypsy and traveller accommodation.

Impact pathway	Discussion
Air quality	It was assessed during the 2019 HRA that increased residential development within the Mansfield district would increase the number of vehicles ¹⁹ . Increased site allocations for the development of residence for gypsy and travellers could also increase vehicle numbers within the district in combination with housing and employment proposals in the Local Plan. As a result, an increase in air pollution may arise from development relative to the situation without such growth ²⁰ . Pollutants released from vehicles may be carried directly by wind currents and deposited to European Sites/nesting habitat, or pollutants may become soluble and taken up during evaporation and deposited to European Sites / nesting habitat at precipitation. This generally occurs within 200m of significant roads, so the potential for gypsy and traveller sites to contribute traffic to roads within 200m ²¹ of the SAC or ppSPA in combination with the Local Plan growth is particularly relevant.
Recreational pressure	Recreational pressure is a conservation concern for the Birklands and Bilhaugh SAC and Sherwood ppSPA. There is a risk that increased residential allocation for gypsy and

¹⁸ 2018 Mid-Year population estimates, available at <https://www.nottinghamshire.gov.uk/business-community/economic-data/population-estimates>

¹⁹ Font, A., Baker, T., Mudway, I.S., Purdie, E., Dunster, C. and Fuller, G.W., 2014. Degradation in urban air quality from construction activity and increased traffic arising from a road widening scheme. *Science of the Total Environment*, 497, pp.123-132.

²⁰ Litman, T. and Colman, S.B., 2001. Generated traffic: Implications for transport planning. *ITE journal*, 71(4), pp.38-46.

²¹ Standard method for assessing the impacts of road traffic on European sites that is used by Highways England (formerly the Highways Agency) on their schemes and which Natural England also supports.

travellers may increase the number of visitors to European Sites considered in combination with housing growth across Mansfield and other authorities surrounding the SAC and ppSPA. For the SAC, increased recreational pressures would arise from habitat destruction via abrasion and vegetation trampling²². Furthermore, features (i.e. breeding birds) of the Sherwood ppSPA are easily disturbed by human presence; reducing the ppSPA capabilities to support said features^{23 24}. Visitor surveys of the Sherwood Forest Country Park²⁵ from various years, show that approximately 30-42% (over a third) of visitors to the site came from within Nottinghamshire (NG post code)²⁶, travelling from up to 20km. Visitors to the SAC and ppSPA is highly likely as these areas boarder or lie within the Mansfield district boundary. Generally, areas with visitor attractions, car parking and/or cafés tend to attract the largest number of visitors than those with fewer or no visitor amenities; for those without visitor amenities this tends to attract a more localised geographic visitor trend (HRA 2019, Section 6).

Fragmentation of nesting habitat for nightjar and woodlark (typically acid grassland, heathland and rotationally managed plantation) ²⁷	Simply described, habitat fragmentation is the division of an expanse of habitat into smaller, individual patches that are isolated from each other by the removal of the original habitat ²⁸ . Putting in barriers in place which hinder movement between habitat patches, such as development, can also create challenges for species that depend on these habitats. Heathland is arguably one of the most severely fragmented habitats in the world with heathland cover decreased by 85% over the past 150 years as a result of, for example, agriculture, changes in land management and development ²⁹ . The loss of heathland has had population consequences to the species that are supported by this habitat (including nightjar and woodlark) ³⁰ . Given the areas of heathland, acid grassland and plantation woodland across Mansfield District, including beyond the ppSPA boundary and taking into account areas proposed for restoration to these habitats, there is a risk that increased development could, in combination, further fragment these habitats, either through direct loss or providing barriers to movement; thus, impacting on the species..
Urbanisation	The natural environment is complex; organisms exist in a web of interactions that make up ecosystems ³¹ . Urban encroachment (i.e. the encroachment of significant amounts of new development) close to European Sites and breeding habitat can interfere with these interactions and lead to likely significant effects ^{32 33} such as through cat predation, increased risk of fly tipping or increased risk of arson. Considering the proximity to nightjar and woodlark breeding habitat, there is a strong impact pathway present between increased development within Mansfield and ppSPAs. For the Local Plan HRA, in relation to nightjar and woodlark, a zone of 400m was used in the Local Plan HRA to identify development sites that may particularly contribute to this pathway.

²² Liddle, M.J., 1975. A selective review of the ecological effects of human trampling on natural ecosystems. *Biological Conservation*, 7(1), pp.17-36.

²³ Vangansbeke, P., Blondeel, H., Landuyt, D., De Frenne, P., Gorissen, L. and Verheyen, K., 2017. Spatially combining wood production and recreation with biodiversity conservation. *Biodiversity and conservation*, 26(13), pp.3213-3239.

²⁴ Morris, A., Burges, D., Fuller, R.J., Evans, A.D. and Smith, K.W., 1994. The status and distribution of Nightjars *Caprimulgus europaeus* in Britain in 1992. A report to the British Trust for Ornithology. *Bird study*, 41(3), pp.181-191.

²⁵ Visitor surveys for Sherwood Forest Country Park were carried out by ACK Tourism and RJS Associates Ltd. and included results from: Winter 2004, Summer 2005, Autumn 2006, Spring 2008 and Spring 2009. And also Nottinghamshire County Council Visitor Survey from August 2015.

²⁶ WSP for Newark and Sherwood DC. October 2009. Newark and Sherwood Core Strategy Options Report- Assessment under the Habitats Regulations.

²⁷ Nesting habitat is of primary relevance as there are a limited number of habitats in which nightjar and woodlark successfully nest and some (notably heathland) are nationally scarce. In contrast neither species has very specific foraging requirements and will forage in a wide range of common and widespread habitats.

²⁸ Wilcove, D.S., McLellan, C.H. and Dobson, A.P., 1986. Habitat fragmentation in the temperate zone. *Conservation biology*, 6, pp.237-256.

²⁹ English Nature (2002). *Lowland heathland a cultural and endangered landscape*. Northminster House: Peterborough

³⁰ Liley, D. and 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(2), pp.219-230.

³¹ Carlson, T.N. and Arthur, S.T., (2000). The impact of land use—land cover changes due to urbanization on surface microclimate and hydrology: a satellite perspective. *Global and planetary change*, 25(1-2), pp.49-65.

³² Booth, D.B., 1991. Urbanization and the natural drainage system—impacts, solutions, and prognoses.

³³ Liddle, B. and Lung, S., 2010. Age-structure, urbanization, and climate change in developed countries: revisiting STIRPAT for disaggregated population and consumption-related environmental impacts. *Population and Environment*, 31(5), pp.317-343.

- 4.4 The Local Plan HRA concluded that none of these impact pathways could be entirely dismissed regarding potential likely significant effects and therefore an appropriate assessment was undertaken for both the SAC and ppSPA. Ultimately, the Local Plan appropriate assessment concluded that there would be no adverse effects on the integrity of either Birklands and Bilhaugh SAC or the Sherwood possible potential SPA (ppSPA) from the Local Plan due to a combination of the distribution of housing sites, a protective policy framework and (with regard to recreational pressure) delivery of a strong network of natural green infrastructure in Mansfield district, incorporating the large number of existing accessible natural open spaces and woodlands around the district, outside the ppSPA. Since this DPD is allocating additional sites beyond those identified in the Local Plan a specific analysis needs to be undertaken regarding the implications of this DPD for the overall conclusions of the Local Plan HRA.
- 4.5 The screening assessment follows the approach set out in the Local Plan HRA 2019, (Table 4.1). For the Screening assessment of this DPD (Table 2), green shading in the final column indicates that the proposed development site or policy has been deemed not to lead to a likely significant effect on any European sites due to the absence of any mechanism for an adverse effect. Orange shading indicates that a pathway of impact potentially exists, and further discussion is therefore required. The GTTSP DPD outlines a very small scale of growth within the Mansfield district on a very small number of sites. Therefore, impacts to the SAC and ppSPA are considered inherently small scale 'in combination' with other development allocations of the Mansfield LP and surrounding districts (Newark and Sherwood District, Gedling District, Bassetlaw District and Ashfield District). Furthermore, the Mansfield Local Plan was subject to HRA in 2015-2019. That HRA included strategic assessment of air quality, recreational pressure, fragmentation of nightjar & woodlark habitat and urbanisation 'in combination' with growth in other authority areas over the same time period as the proposed GTTSP DPD. Therefore, discussions of impacts to European Sites are discussed 'in combination' with other development growth in Mansfield and with neighbouring districts, where that is relevant (i.e. with regard to recreational pressure and air quality).
- 4.6 In summary, the Likely Significant Effect test concludes that no likely significant effects are posed to Birklands & Bilhaugh SAC and that the only likely significant effects that require some further discussion regarding the ppSPA are recreational pressure and air quality, both due to the 'in combination' effects with growth across Mansfield and other districts surrounding the ppSPA in their Local Plans.

Screening outcome of GTTSP DPD

Table 2. Screening outcome of likely significant effects

Policy	Designated site location	Brief summary	Screening outcome for ppSPA	Screening outcome for SAC
GT1 Gypsy, Traveller and Travelling Showpeople Accommodation Needs	- Birklands and Bilhaugh SAC: 750m, W (of the district boundary) - Sherwood ppSPA; within district boundary	Policy identifies the need for 3 permanent pitches (accommodated within 1 permanent site), 1 transit / emergency site (to accommodate up to 20 caravans and associated vehicles) and 2 travelling show people sites.	Likely significant effects. Screened in. This policy provides for development in principle within the Mansfield district boundary. The potential impact pathways are: - Air quality (only in-combination with growth in the Mansfield Local Plan and other local plans surrounding the ppSPA); - Recreational pressure (only in-combination with growth in the Mansfield Local Plan and other local plans surrounding the ppSPA) Urbanisation and habitat fragmentation are screened out. GTTSP sites allocated in Policy GT2, GT3 and GT4 are located 4.5km, 2.5km and 3km respectively from the ppSPA. GT2 is located 260m north of Oxeclose Wood (owned by the Forestry Commission) that supports mixed and broadleaved woodland, and GT3 is directly opposite Three Lakes Shirebrook Country Park that supports mixed and broadleaved woodland but there is no indication that either constitute rotationally felled plantation, which is the key woodland habitat used for nesting by nightjar and woodlark. Moreover, the current land use at GT2 is pasture, GT3 consists of an electricity substation (buildings and associated hardstanding) and GT4 comprises mixed use of allotments and developed land (buildings and associated hardstanding). These habitats are generally not considered suitable for nesting nightjar and woodlark. Furthermore, the closest suitable heathland habitat and associated sightings of these species are located towards the eastern boundary of Mansfield at a minimum of 1.1km from the closest	No likely significant effects. Screened out. This policy provides for development in principle within the Mansfield district boundary. However, the HRA of the Local Plan established that the relocation of the visitor centre in Newark & Sherwood District that took place in 2018 is expected to result in a significant reduction in visitor activity within the more sensitive areas of the SAC part of the Country Park, there is no reason to expect recreational pressure within the SAC to become unsustainable and the relocation of the visitor centre could entirely avoid an unsustainable increase in visitors that might otherwise occur over the plan period. As such, it was considered unnecessary for the Mansfield Local Plan to include specific interventions targeted particularly at the SAC interest features, since the most effective possible intervention (relocating the visitor centre) has already been identified and is being taken forward. Since the closest allocated site is 6.3km from the SAC there are no urbanisation or fragmentation risks. Air quality impacts can also be screened out since the Local Plan HRA established that the only road within 200m of the SAC is a minor road that will not constitute a significant travel route for Mansfield residents.

			GTTSP allocation (GT4) and a minimum of 2km from the remaining (GT2 and GT3).	
GT2 Lane	Common Lane	- Birklands and Bilhaugh SAC: 8.3km, NW - Sherwood ppSPA; 4.2km, W	Policy allocates one transit site for a maximum of 20 caravans (11 pitches). Likely significant effects. Screened in. This policy provides for the development for up to 20 caravans located north of Common Lane, west of Mansfield urban area. The potential impact pathways are: - Air quality (only in-combination with growth in the Mansfield Local Plan and other local plans surrounding the ppSPA); - Recreational pressure (only in-combination with growth in the Mansfield Local Plan and other local plans surrounding the ppSPA) Urbanisation and habitat fragmentation are screened out. GTTSP site GT2 is located 4.5km from the ppSPA. GT2 is located 260m north of Oxeclose Wood (owned by the Forestry Commission) that supports mixed and broadleaved woodland, but there is no indication that this constitutes rotationally felled plantation, which is the key woodland habitat used for nesting by nightjar and woodlark. Moreover, the current land use at GT2 is pasture. This habitat is generally not considered suitable for nesting nightjar and woodlark. Furthermore, the closest suitable heathland habitat and associated sightings of these species are located towards the eastern boundary of Mansfield at a minimum of 2km from GT2.	No likely significant effects. Screened out. Rationale is as for Policy GT1
GT3 Lane	Longster Lane	- Birklands and Bilhaugh SAC: 6.3km, W - Sherwood ppSPA; 2.5km, SW	Policy allocates one yard for development. Likely significant effects. Screened in. This policy provides for the use as a Travelling and Showpeople site with a limit of 6 caravans on site located north of Common Lane, north of Mansfield urban area and west of Market Warsop. The potential impact pathways are:	No likely significant effects. Screened out. Rationale is as for Policy GT1

	- Air quality (only in-combination with growth in the Mansfield Local Plan and other local plans surrounding the ppSPA); - Recreational pressure (only in-combination with growth in the Mansfield Local Plan and other local plans surrounding the ppSPA) Urbanisation and habitat fragmentation are screened out. GTTSP site GT3 is 2.5km from the ppSPA. GT3 is directly opposite Three Lakes Shirebrook Country Park that supports mixed and broadleaved woodland but there is no indication that it constitutes rotationally felled plantation, which is the key woodland habitat used for nesting by nightjar and woodlark. Moreover, the current land use at GT3 consists of an electricity substation (buildings and associated hardstanding). These habitats are generally not considered suitable for nesting nightjar and woodlark. Furthermore, the closest suitable heathland habitat and associated sightings of these species are located towards the eastern boundary of Mansfield at a minimum of 2km from GT3.	
Policy GT4 • Birklands and Bilhaugh SAC: Policy allocates a limit of 8 pitches. 8km, NE Priory Road • Sherwood ppSPA; 3km, NE Allotments	Likely significant effects. Screened in. This policy provides for the development of 8 pitches (6 permanent pitches and 2 visitor pitches) located at Priory Road in Mansfield Woodhouse within the Mansfield urban area. The potential impact pathways are: - Air quality (only in-combination with growth in the Mansfield Local Plan and other local plans surrounding the ppSPA); - Recreational pressure (only in-combination with growth in the Mansfield Local Plan and other local plans surrounding the ppSPA) Urbanisation and habitat fragmentation are screened out. GTTSP site GT4 is located 3km from the ppSPA. Moreover, the current land use at GT4 comprises mixed use of allotments and developed land (buildings and	No likely significant effects. Screened out. Rationale is as for Policy GT1

			associated hardstanding). These habitats are generally not considered suitable for nesting nightjar and woodlark. Furthermore, the closest suitable heathland habitat and associated sightings of these species are located towards the eastern boundary of Mansfield at a minimum of 1.1km from GT4).	
Policy Safeguarding Existing Sites	GT5 N/A	Policy provides safeguarding to existing lawful site.	No likely significant effects. Screened out. This is a development management policy and is not expected to pose likely significant effects to European Sites since there are no impact pathways present. 'Safeguarding' a site simply prevents it from being subject to conflicting alternative development in the future.	No likely significant effects. Screened out. This is a development management policy and is not expected to pose likely significant effects to European Sites since there are no impact pathways present. 'Safeguarding' a site simply prevents it from being subject to conflicting alternative development in the future.
Policy Design and Site Layout	GT6 N/A	Policy provide development requirements for GTTSP plots. These aspects are access and parking, environmental, waste and commercial activity.	No likely significant effects. Screened out. This is a development management and design policy and will not pose likely significant effects to European Sites since there are no pathways present.	No likely significant effects. Screened out. This is a development management and design policy and will not pose likely significant effects to European Sites since there are no pathways present.

5. Appropriate Assessment

Introduction

- 5.1 The appropriate assessment must consider all impact pathways that have been screened in, whether they are due to policies alone or to impact pathways that arise in combination with other projects and plans. That analysis is the purpose of this section. The law does not require the 'alone' and 'in combination' effects to be examined separately provided all effects are discussed. As identified earlier, the impact pathways of concern to this AA are inherently 'in combination' since the amount of new development in the GTTSP DPD is too small to result in an adverse effect alone but only 'in combination' with other plans and projects.
- 5.2 The HRA screening exercise undertaken in Chapter 4, Table 2 indicated a total of four policies that could have likely significant effects on the Sherwood ppSPA due to air quality and recreational pressure. At the screening stage the following policies were screened in, requiring further assessment:
- GT1 Gypsy, Traveller and Travelling Showpeople Accommodation Needs;
 - GT2 Common Lane (a transit / emergency stopping site for up to 20 caravans);
 - GT3 Longster Lane (1 yard for use of Travelling Showpeople site and a limit of 6 caravans on site); and
 - GT4 Priory Road Allotments (8 pitches encompassing 6 permanent pitches and 2 visitor pitches)
- 5.3 Note that case law has established that appropriate assessment is not a technical term; it simply means whatever level of further assessment the competent authority (Mansfield District Council) considers appropriate in order to draw a conclusion regarding adverse effects on European site integrity. As already identified this assessment is inherently 'in combination' because the potential for an effect only arises when the cumulation of growth across Mansfield (in the Local Plan and GTTSP DPD) and surrounding Local Plans is considered.

Air quality

- 5.1 Due to the small allocation of GTTSP development within the Mansfield district; increased development and air quality impacts to European Sites are assessed in combination. As described in Table 2, increased development (Policies GT1, GT2, GT3 and GT4) could increase atmospheric pollutants through the release of chemicals from vehicle emissions when considered in combination with growth across Mansfield and surrounding authorities. The question is whether they are likely to contribute materially to changes in flows on relevant roads within 200m of European sites. The issue of air quality was assessed in the Mansfield LP HRA 'in combination' with growth in surrounding authorities. That HRA concluded that:
- **Road traffic and Birklands and Bilhaugh SAC** – if air quality calculations present an instance whereby development during the Mansfield LP period is expected to be nominal, it would be reasonable to conclude that the local plan's impact (and its contribution to any in combination effects) can be considered essentially neutral³⁴. A 200m buffer around the SAC was used to identify the potential area that could be affected by nitrogen deposition from road traffic³⁵. The only road that was identified within 200m of the SAC was Swinecote Road (B6034) located in the town of Edwinstowe in Newark and Sherwood District. This road was considered 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 and a conclusion of no adverse effect on integrity was reached. This matches the conclusion of the Newark and Sherwood Local Plan HRA and applies to the GTTSP DPD as well as the Local Plan since this road will not be a significant movement corridor for users of the allocated sites given the remoteness of these sites from the SAC (the closest being over 6km away).
 - **Road traffic and Sherwood ppSPA** – a total of eight roads were identified within or close to Mansfield District and within 200m of the ppSPA. However, considering the ppSPA designation of nightjar and woodlark the Mansfield LP HRA concluded that the belt of permanent woodland next to roads are likely

³⁴ There is currently no formal guidance regarding this threshold but in other parts of the country Natural England has accepted that a change below 100 AADT due to a Local Plan is nominal

³⁵ Design Manual for Roads and Bridges: Volume 11 Environmental Assessment, Highways Agency, May 2007.

to reduce dispersal of the emitted pollutants into the ppSPA³⁶ (or suitable nightjar/woodlark habitat area); emitted pollutants will deposit to semi-mature or mature plantation at a time when nightjar and woodlark will be absent; and the process of planting and felling the trees on a fifty to sixty year cycle, as well as plantation management (such as weed suppression), is likely to have a much greater and long-term effect on ground vegetation in this area (and therefore its suitability for use by nightjar and woodlark) than atmospheric nitrogen deposition. It was also identified that no areas of heathland within the ppSPA boundary currently lie within 200m of the relevant roads (i.e. those expected to receive a significant increase in daily traffic); other than narrow bands of road verge that will not be used for nesting. While part of Ratcher Hill Quarry within 200m of Jubilee Way (South) is proposed for future restoration to heathland, Jubilee Way South is remote from the allocated gypsy and traveller sites and the three sites are very unlikely to contribute to any change in average annual daily traffic on this road.

- **Industrial development** - A 10km buffer around the SAC was used to identify existing areas of industrial development that may significantly impact on air quality. Based on consultation with the Mansfield District Council's Environmental Health team, there were no concerns raised. The Mansfield District Council 2017 Air Quality Annual Status Report (ASR June 2017) states that no sites were identified in the district of existing, new or recently changed industrial installations, or in neighbouring authorities in which emissions have increased substantially or in which exposure levels have been significantly introduced. It is envisaged that most measures put in place through environmental permits and the monitoring of these permits (issued by the Mansfield District Council and the Environment Agency) will address likely risks (refer to the Mansfield LP HRA for further analysis).
- 5.2 The HRA of the Newark and Sherwood Amended Core Strategy (June 2018)³⁷ notes that, as advised by Natural England, only 17% of nitrogen deposited on the SAC derives from road traffic (paragraph 5.1.3 of Newark & Sherwood Amended Core Strategy HRA). This is supported by the fact that, while nitrogen deposition rates at the SAC exceed the critical load for the habitat, the Air Pollution Information System (apis.ac.uk) page for this SAC shows that NO_x concentrations (the primary vehicular source of nitrogen) are approximately 33% below the critical level being an average of 13.62 µg m⁻³ compared to a critical level of 30 µg m⁻³. In other words, ammonia (derived primarily from agriculture) is the most likely source of the majority of nitrogen deposited at the SAC, rather than NO_x derived from traffic. Impacts in relation to agriculture are beyond the remits of HRA and cannot be assessed here further. Both the Newark and Sherwood HRA and Mansfield HRA concluded that changes in flows on the B6034 due to growth would be negligible; demonstrated by air quality modelling.
- 5.3 Furthermore, the Mansfield Local Plan contains a number of policies aimed at improving air quality. Policies IN8 (Protecting and Improving the Sustainable Transport Network) and IN9 (Impact of Development on the Transport Network) and NE3 (Pollution and land instability) all set out a strong policy framework for Mansfield Council to encourage and facilitate delivery and use of sustainable transport and public transport, which given the potential for reduction in reliance on private vehicles could reduce emissions across the local transport network.
- 5.4 Taking all this information into account, it is reasonable to conclude that no adverse effect upon the integrity of the ppSPA would result from increased GTTSP development within Mansfield 'in combination' with growth from other sources.

Recreational pressure

- 5.5 The sites allocated in Policy GT2, GT3 and. or GT4 are located 4.5km, 2.5km and 3km consecutively from the ppSPA. These distances are considered too great to result in isolated, direct recreational impacts from development. Furthermore, such a small level of development is unlikely to result in a material change in recreational activity at the ppSPA.
- 5.6 Again, due to the small scale of development proposed by the GTTSP DPD increased residential development is considered in combination with development elsewhere in Mansfield over the plan period.

³⁶ Xu, Y. (2008) Modelling the effects of roadside trees, results and conclusions. Report for the London Borough of Harrow. AEA, Harwell, Oxon.

Air pollution removal by urban trees and shrubs in the United States (2006). David J. Nowak, Daniel E. Crane, Jack C. Stevens. Urban Forestry & Urban Greening 4 115–123

Freer-Smith, P.H., Beckett, K.P. and Taylor, G. (2005). Deposition velocities to *Sorbus aria*, *Acer campestre*, *Populus deltoides* x *trichocarpa* 'Beaupre', *Pinus nigra* and x *Cupressocyparis leylandii* for coarse, fine and ultra-fine particles in the urban environment. Environmental Pollution 133, 157–167.

³⁷ Habitats Regulations assessment of the Newark and Sherwood Publication Amended Core Strategy: Appropriate Assessment (June 2018).

This is an issue that is most appropriate to tackle at Local Plan level and it was discussed extensively in the Mansfield LP HRA; a summary of this analysis is described below.

- 5.7 Visitor surveys of the Sherwood Forest Country Park³⁸ from various years, show that approximately 30-42% (over a third) of visitors to the site came from within Nottinghamshire (NG post code)³⁹, travelling from up to 20km. The proportion of NG postcode visitors within and around the Mansfield area (NG19, NG20 & NG21) was about 8%. Other nearby concentrations of visitors included Sheffield, Doncaster, Derbyshire and Lincolnshire. Based on a latest visitor survey for the Sherwood Forest Country Park (2015), the vast majority (86%) of respondents had visited Sherwood Forest before; this is similar to previous (2013) survey results reported in the HRA of the submitted Local Plan. Results from this survey also showed that more people are coming back to Sherwood Forest than ever before. This highlights that it is a popular tourist destination.
- 5.8 According to the Nottinghamshire County Council August 2015 visitor survey, the main reason people visit the Sherwood Forest was to take children or grandchildren out for the day (34%). The majority of visitors came for a walk or stroll around the forest (97%). The Major Oak was an important and enjoyable element of the day for 88% of visitors. Dog walkers made up 9% of visitors.
- 5.9 A 2010 Mansfield Citizen Panel questionnaire indicated that the Sherwood Forest Country Park receives an even distribution of visitors from all areas of the district. Therefore, it is taken that any development within the district may, cumulatively impact on the ppSPA.
- 5.10 However, the residents of Mansfield district have access to a good choice of accessible woodlands outside the ppSPA and other areas of nearby natural green space with visitor facilities (e.g. café and toilets). Many of these are closer to Mansfield district residents than the Sherwood Forest Country Park thereby providing alternative recreation.
- 5.11 The Mansfield LP HRA also reviewed the 'in combination' assessment of the amended Newark & Sherwood Core Strategy HRA (June 2018) that covered three neighbouring plans within catchment of the SAC, as well as the HRAs of the other authorities around the SAC (Gedling, Ashfield and Bassetlaw). The Newark & Sherwood HRA concluded that due to the landscapes surrounding Mansfield, including green infrastructure, open space and woodland; these *'should help to offset increases in recreational pressures on the ppSPA as well as Birkland & Bilhaugh SAC'* (paragraph 8.2.3).
- 5.12 The Local Plan HRA concluded that Policy NE2 and Policy IN2 of the Local Plan between them provide an adequate policy framework to enable a proportionate response to the protection of the nightjar and woodlark habitat in the ppSPA from recreational pressure (and thus avoiding an adverse effect on the integrity of the ppSPA) within the context of the large amount of existing accessible semi-natural greenspace, outside the ppSPA area in Mansfield. They do this by developing and promoting of a strong managed green infrastructure network through the Green Infrastructure & Biodiversity SPD facilitated by Policy IN2 and through ensuring specific large developments close to the ppSPA provide bespoke mitigation as necessary.
- 5.13 It is therefore reasonable to conclude that the appropriate policy measures are in place to ensure there are no impacts to the integrity of Sherwood ppSPA due to increased GTTSP development within Mansfield.

³⁸ Visitor surveys for Sherwood Forest Country Park were carried out by ACK Tourism and RJS Associates Ltd. and included results from: Winter 2004, Summer 2005, Autumn 2006, Spring 2008 and Spring 2009. And also Nottinghamshire County Council Visitor Survey from August 2015.

³⁹ WSP for Newark and Sherwood DC. October 2009. Newark and Sherwood Core Strategy Options Report- Assessment under the Habitats Regulations.

6. Conclusion

- 6.1 It is concluded that the appropriate safeguarding policies already exist within the Mansfield Local Plan that apply to the development of GTTSP sites. In addition, in combination issues of residential development and GTTSP allocation with regards to air quality, habitat fragmentation, recreational pressure, and urbanisation have been addressed and appropriately mitigated for within the Mansfield LP HRA. Therefore, no adverse effect would occur on the integrity of European Sites.

Appendix A 1: Map of European sites

