



**Land East of Showell
Farm, Chippenham**

**Technical Appendix 8.2
Shadow Habitats
Regulations
Assessment Report**

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On behalf of:
Hallam Land

May 2026

Report Reference
edp2272_r021a

Document Control

DOCUMENT INFORMATION

Client	Hallam Land
Report Title	Technical Appendix 8.2 Shadow Habitats Regulations Assessment Report
Document Reference	edp2272_r021a

VERSION INFORMATION

	Author	Formatted	Peer Review	Proofed by/Date
021_DRAFT	PNe	FMi	TWi	-
021a	PNe	-	PNe	MWI 300426

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(edp2272_d067b 30 April 2026 VMS/PNe)

Section 1

Introduction

- 1.1 This Shadow Habitats Regulations Assessment (sHRA) has been prepared by The Environmental Dimension Partnership Ltd (EDP) on behalf of Hallam Land (hereafter referred to as 'the Applicant') in relation to a proposed residential development scheme for at Land East of Showell Farm, Chippenham (hereafter referred to as 'the Site'). This assessment has been prepared to provide the information necessary to enable Wiltshire Council, as the competent authority, to undertake a Habitats Regulations Assessment (HRA) of the Proposed Development.
- 1.2 EDP is an independent environmental planning consultancy with offices in Cirencester, Cardiff, and Cheltenham. The practice provides advice to private and public sector clients throughout the UK in the fields of landscape, ecology, archaeology, cultural heritage, arboriculture, rights of way and masterplanning. Details of the practice can be obtained at our website (www.edp-uk.co.uk).

SITE CONTEXT

- 1.3 The Site is centred approximately at Ordnance Survey Grid Reference ST 912 708. The Local Planning Authority is Wiltshire Council. The location and extents of the Site are illustrated on **Plan EDP 1** and described in the material supporting the planning application, particularly the introductory chapters of the Environmental Statement (ES).
- 1.4 The Site measures 30 hectares (ha) and is located on the southern boundary of the parish of Chippenham, with the B4528 road located along the western boundary and the River Avon forming the eastern boundary. The Site comprises agricultural fields bounded by a network of hedgerows, some of which contain mature trees. There are also small areas of scrub, forbs and reedbeds along with lines of trees and a stream. Land uses in the surrounding landscape include agricultural, residential and industrial.
- 1.5 Due to the original Site boundary extending to the south, the majority of surveys included this area of land. This area of land, that has been subsequently excluded from the Site, is referred to as the 'Additional Survey Area'.

DESCRIPTION OF PLAN OR PROJECT

- 1.6 In brief, the project comprises 400 dwellings (10.45ha of residential development), 0.2ha local centre and a mixture of public open space and natural greenspace. This is hereafter referred to as the 'Proposed Development'.
- 1.7 The ecological sensitivities of the Site (described in this report) have influenced the final layout through an iterative design process. Thus, the masterplan incorporates a degree of 'inherent' mitigation to avoid or reduce the severity of potential ecological impacts.

- 1.8 A full description of the Proposed Development is provided in ES Chapter 2: The Site and the Proposed Development.

PURPOSE OF THIS REPORT

- 1.9 This sHRA aims to provide relevant and robust technical information to enable competent authorities to discharge their functions under Regulations 7 and 63 (requirement to carry out Appropriate Assessment) of the *Conservation of Habitats and Species Regulations 2017* (as amended), (hereafter referred to as the '*Habitat Regulations*'), in relation to the Proposed Development.
- 1.10 Regulation 63 (1) of the *Conservation of Habitats and Species Regulations 2017* (as amended) states that: *"a competent authority, before deciding to undertake, or 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 or a European offshore marine site (either alone or in combination with other plans or projects), and (b) is not directly connected with or necessary to the management of that site, must make an appropriate assessment of the implications of the plan or project for that site in view of that site's conservation objectives"*.
- 1.11 Regulation 63 (2) further states that *"a person applying for any such consent, permission or other authorisation must provide such information as the competent authority may reasonably require for the purposes of the assessment or to enable it to determine whether an appropriate assessment is required"*.
- 1.12 Regulation 63 (3) states that *"the competent authority must for the purposes of the assessment consult the appropriate nature conservation body and have regards to any representations made by that body within such reasonable time as the authority specifies"*.
- 1.13 Regulation 63 (5) goes on to state that *"in the light of the conclusions of the assessment, and subject to regulation 64, 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 or the European offshore marine site (as the case may be)"*.
- 1.14 Regulation 63 (6) concludes that *"in considering whether a plan or project will adversely affect the integrity of the site, the competent authority must have regard to the manner in which it is proposed to be carried out or to any conditions or restrictions subject to which it proposes that the consent, permission or other authorisation should be given"*.
- 1.15 This sHRA describes the potential for Likely Significant Effects (LSEs) on European sites to arise as a result of the Proposed Development at each stage of the HRA process. European sites include Special Protection Areas (SPAs) classified under the European Commission Directive on the Conservation of Wild Birds and Special Areas of Conservation (SACs) designated under the *Conservation of Habitats and Species 2017* (as amended). This report will also consider sites designated under the *Ramsar Convention on Wetlands of International Importance* (1971, Ramsar Sites) as per UK Government Policy (set out in paragraph 194 of the *National Planning Policy Framework* (2024)). This policy also brings candidate SACs (cSACs) and potential SPAs (pSPAs) within the requirement for HRA. For ease of reference, all such designated sites will hereafter be referred to as 'European sites'.

- 1.16 It is noted that s6(3) of the *European Union (EU) (Withdrawal) Act 2018* (as amended) requires retained EU law (such as the *Conservation of Habitats and Species Regulations 2017* (as amended)) to be interpreted in line with 'retained case law' which includes retained EU case law.

Section 2 Methodology

- 2.1 The HRA assessment process follows four sequential stages, with guidance having been published to aid competent authorities to fulfil their responsibilities (e.g. European Commission 2001¹; DCLG, 2006²):
- Stage 1: Habitat Screening;
 - Stage 2: Appropriate Assessment;
 - Stage 3: Alternative Solutions; and
 - Stage 4: Interests of Overriding Public Interest and Compensatory Measures.
- 2.2 In this case, owing to the nature of potential LSEs identified, and that proposed mitigation is deemed to successfully negate any effects, it was considered not necessary to take the assessment of the Proposed Development to Stage 3 or Stage 4.
- 2.3 Further details pertaining to the methodology and approach taken with regards to Stage 1 and Stage 2 are provided below, with details relating to European sites considered within this sHRA provided in **Section 3**.

STAGE 1: SCREENING

- 2.4 Each European site will be considered in the context of the Proposed Development and screened for any LSEs. This stage of the report presents the findings of the screening assessment undertaken to identify LSEs of the Proposed Development on European sites.
- 2.5 This stage considers the possibility for LSEs to occur based on high-level analysis of risks, taking into account the spatial relationship between impact sources and designated sites (and Functionally Linked Habitats and species), the magnitude of changes predicted with regard to atmospheric, coastal/estuarine, and freshwater receptor pathways (with reference to the relevant specialist studies), and any physical or other relationships between the Site boundary and each European site. Stage 1 screening for LSEs considers the project alone and in combination with other projects.
- 2.6 If it can be confidently predicted on the basis of objective information that no LSEs are identified for all the European sites considered, then HRA Stages 2 and beyond are not required and the report would take the form of a No Significant Effects Report.
- 2.7 The judgment of *People over Wind* and *Sweetman v. Coillte Teoranta* (12 April 2018) ruled that mitigation measures intended to avoid or reduce the harmful effects of the plan or

¹ European Commission (2001). Assessment of plans and projects significantly affecting Natura 2000 sites. Oxford Brookes University.

² DCLG (2006). Planning for the Protection of European sites: Appropriate Assessment. Guidance for Regional Spatial Strategies and Local Development Documents. Department for Communities and Local Government, HMSO, London.

project on a European site cannot be considered at the Stage 1 Screening Stage. Therefore, in this sHRA report, such measures will not be taken into account at Stage 1. Only measures that constitute part of the project design and are not intended to avoid or reduce effects on European site features, are therefore considered at the Screening Stage.

- 2.8 Evidence gathering and consultation, including the collation of baseline data on pertinent qualifying features within the Proposed Development's Zone of Influence (Zol), is an integral part of Stage 1 screening. Desk- and field-based investigations have been undertaken, in addition to consultation, to provide robust baseline information appropriate to inform the HRA. The full results from this work are presented in ES Chapter 8: Biodiversity and Technical Appendix 8.1: Ecological Baseline, which accompany the planning application. Detailed air quality (Chapter 6 of the ES) and traffic assessments (Chapter 5 of the ES) have also been undertaken to inform the sHRA, as described in detail later in this report.

STAGE 2: APPROPRIATE ASSESSMENT

- 2.9 Those LSEs screened in will then be subject to progression to Stage 2: Appropriate Assessment. Under the *Habitats Regulations*, the Competent Authority is required to carry out an Appropriate Assessment if there are deemed to be LSEs on European sites when considered alone or in combination with other projects, and where those LSEs arise from a plan or project not directly connected with, or necessary to the management of, that site or sites.
- 2.10 If Stage 1 identifies an LSE upon a European site, an assessment of the effects of the project upon the European site's conservation objectives/interest features is carried out either in respect of the project alone or in combination with other plans and projects which cannot be discounted. Conservation objectives for European sites are defined and published by Natural England and the assessment refers to the relevant objectives as necessary. The assessment will include sufficient information to enable an Appropriate Assessment to be undertaken by the competent authority and will detail mitigation designed to reduce or eliminate identified LSE upon those European sites screened into the assessment.

Section 3

Relevant European sites and Baseline Information

IDENTIFICATION OF RELEVANT EUROPEAN SITES

- 3.1 There are no European sites within or adjacent to the Site. However, European sites are known to be present within the wider area. With consideration of this and the type, scale and location of the Proposed Development, the following generic potential impact pathways for any nearby European sites have been identified.

Construction Impacts:

- Loss and/or fragmentation of Functionally Linked Habitats for vagile species; or
- Degradation of habitats arising from construction traffic resulting in changes in air quality (emissions and/or dust).

Operational Impacts:

- Degradation of habitats arising from increased traffic resulting in changes in air quality (emissions);
- Disturbance of species from increased recreational pressure; or
- Increased mortality of vagile qualifying species within Functionally Linked Habitats.

Zone of Influence

- 3.2 In light of the above potential impact pathways, a distance of 10km from the Site boundary has been used as a starting point to identify European sites that may be impacted by the Proposed Development. As such, all European sites within this 10km Zol of the Site will be considered within this sHRA.
- 3.3 Based on this 10km Zol, the only European site that will be screened in and assessed within this sHRA is the Bath and Bradford on Avon Bats SAC. The spatial relationship between this SAC and the Proposed Development is illustrated on **Plan EDP 1**.

QUALIFYING CRITERIA OF RELEVANT EUROPEAN SITES

- 3.4 The qualifying criteria and relative distance of relevant European sites from the Proposed Development are summarised below.

Bath and Bradford on Avon Bats Special Area of Conservation³

Name and SAC EU Code

3.5 Bath and Bradford on Avon Bats SAC; UK0012584.

Distance from Application Site

3.6 6.6km from the Application Site.

Qualifying Interest Features

3.7 Annex II species that are a primary reason for selection of this site:

- S1323 Bechstein's bat (*Myotis bechsteinii*). Small numbers of Bechstein's bats have been recorded hibernating in abandoned mines in this area, though maternity sites remain unknown; and
- S1304. Greater horseshoe bat (*Rhinolophus ferrumequinum*). This site in southern England includes the hibernation sites associated with 15% of the UK greater horseshoe bat population and is selected on the basis of the importance of this exceptionally large overwintering population.

3.8 Annex II species present as a qualifying feature, but not a primary reason for site selection:

- S1303. Lesser horseshoe bat (*Rhinolophus hipposideros*).

Conservation Objectives⁴:

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

- *The extent and distribution of the habitats of qualifying species;*
- *The structure and function of the habitats of qualifying species;*
- *The supporting processes on which the habitats of qualifying species rely;*
- *The populations of qualifying species; and*
- *The distribution of qualifying species within the site."*

Component Sites of Special Scientific Interest

3.9 The SAC is made of four component Sites of Special Scientific Interest (SSSIs), namely: Box Mine SSSI, Brown's Folly SSSI, Combe Down and Bathampton Down Mines SSSI, and Winsley Mines SSSI. The only one of these within 10km is the Box Mine SSSI.

³ English Nature (2005) Bath and Bradford-on-Avon Bat SAC Standard Data Form. <https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0012584.pdf>

⁴ Natural England (2018) European Site Conservation Objectives for Bath and Bradford-on-Avon Bat SAC (UK0012584) <https://publications.naturalengland.org.uk/file/6600635269251072>

- 3.10 The latest condition assessment for Box Mine SSSI undertaken by Natural England in 2026⁵ reported that *“The site is borderline for being in ‘favourable condition’: bat access is still completely unobstructed on two of the four aspects, and while the perimeter fence is down, human access to the mine shaft is prevented”*.

BASELINE INFORMATION

- 3.11 To inform the assessment of ecological impacts of the Proposed Development, a suite of desk- and field-based investigations have been completed at the Site. The methodology, results and conclusions of these investigations can be found within ES Chapter 8: Biodiversity and Technical Appendix 8.1: Ecological Baseline, which accompany the planning application.
- 3.12 A summary of the relevant surveys completed is provided below:
- Desk studies undertaken in March 2026, with information obtained from the Wiltshire and Swindon Biological Records Centre (data received 19 January 2026) and Multi-Agency Geographic Information for the Countryside (MAGIC) website;
 - Habitat surveys last updated in May 2025, based on the UK Habitat Classification⁶ survey technique;
 - Bat roost surveys (initial Ground Level Tree Inspections and Internal and External Building Inspections) in November 2024 and May 2025;
 - Bat activity surveys comprising:
 - Nighttime Bat Walkover (NBW) surveys completed each season in Autumn (October 2024), spring (April 2025), and summer (June 2025); and
 - Automated bat detector surveys conducted monthly in September and October 2024, and between April and August 2025, in accordance with the guidelines for a site with moderate suitability.
 - Bat activity surveys (monthly transects and statics) undertaken in 2021 and 2022; and
 - Advanced level bat trapping and radio tracking surveys for Bechstein’s bat undertaken in August 2021. This was undertaken across the entire south Chippenham draft allocation area, which includes the Site.

⁵ Box Mine SSSI Condition of Features (Natural England; 2026)
<https://designatedsites.naturalengland.org.uk/SiteFeatureCondition.aspx?SiteCode=S1005600&SiteName=Box%20Mine%20SSSI>

⁶ UKHab Ltd (July 2023) UK Habitat Classification Version 2.0 [<https://www.ukhab.org>]

3.13 The key findings that are applicable to the HRA can be summarised as follows:

- The Site does not contain any underground structures or large buildings suitable for hibernation or maternity roosts of any of the qualifying bat species;
- There are 11 trees on-site with varying suitability for roosting bats. All of these trees will be retained and protected from the Proposed Development;
- Although the Site contains a small pocket of Lowland Mixed Deciduous Woodland, this is only 0.04ha in extent and is therefore very limited in its suitability for any bat species;
- The Site contains and is bounded by a number of mature hedgerows, suitable to act as foraging and commuting corridors for bat species;
- The Site is bordered to the east by the River Avon; and
- Habitats within the Site are suitable for supporting foraging and commuting greater and lesser horseshoe bats as well as Bechstein's bat, with surveys confirming low levels of activity by all three species, primarily associated with the hedgerow network.

3.14 Relevant desk study and survey findings are set out in more detail within this sHRA where applicable.

3.15 This sHRA has also been informed by the air quality assessment of the Proposed Development, presented in ES Chapter 6: Air Quality of the EIA.

Section 4

Stage 1: Screening of Likely Significant Effects

- 4.1 This section considers the potential for LSEs to occur on Bath and Bradford on Avon Bats SAC as a result of the implementation of the Proposed Development. In accordance with best practice, this discussion is focused on the potential of the Proposed Development to impact upon the conservation objectives of the SAC.
- 4.2 To ensure all potential impact pathways are accounted for, all areas of vulnerability listed within the 'Site Improvement Plan' (SIP) for this SAC⁷ were considered, along with consideration of any other potential impact pathways specific to the Proposed Development and its location. All potential effects discussed within this section are considered in the absence of mitigation, as required in accordance with CJEU judgment C-323/17 in 2018 (People Over Wind and Sweetman v. Coillte Teoranta).
- 4.3 Potential impacts on Bath and Bradford on Avon Bats SAC that may arise from the construction or operational phases of the Proposed Development have been identified as follows:
- Loss or fragmentation of Functionally Linked Habitats;
 - Air pollution: impact of atmospheric nitrogen deposition (changing the habitat suitability for bats within the woodland); and
 - Recreational disturbance both directly on qualifying species and indirectly via a change in habitat.
- 4.4 Natural England's SIP for the SAC also lists pressures and threats that might affect the qualifying features of the designation. These are primarily relating to direct impacts (e.g., change in land use), a lack of knowledge on the distribution of Bechstein's bat within the designated site or an "*inappropriate site boundary*". Given its distance from the SAC, the Proposed Development will not have any impact on these elements. These other potential impact pathways are therefore not considered further within this report.

LOSS OF FUNCTIONALLY LINKED HABITAT

- 4.5 Populations of roosting greater and lesser horseshoe bats and Bechstein bats are qualifying features of the SAC. These species are highly mobile and are known to travel comparatively long distances for foraging purposes.
- 4.6 Due to the possibility of these qualifying bat species being present on-site, further detailed assessment is required to understand if the Site plays an important role in supporting the SAC populations of these species, and therefore if the Site is considered to be Functionally Linked Habitat.

⁷ Natural England (2015) Site Improvement Plan: Bath and Bradford on Avon Bat SAC
<https://publications.naturalengland.org.uk/file/5753272461688832>

- 4.7 Therefore, in the absence of further assessment, LSEs on Bath and Bradford on Avon Bats SAC due to detrimental impacts on qualifying bat species from loss or fragmentation of potentially Functionally Linked Habitats from the Proposed Development alone or in combination cannot be screened out. As such, Functionally Linked Habitats effects are taken forward to Appropriate Assessment in **Section 5** of this sHRA.

AIR POLLUTION

- 4.8 To understand the likelihood of the Proposed Development having an adverse effect on any receptor, including European sites, a Transport Assessment (Chapter 5 of the ES) and an Air Quality Assessment (Chapter 6 of the ES) have been undertaken.
- 4.9 Natural England internal operation guidance⁸ advises that traffic related impacts on air quality need to be considered for European sites located within 200m of relevant roads. The guidance states that *"With regard to potential risks from road traffic emissions, Natural England and Highways England are in agreement that protected sites falling within 200 metres of the edge of a road affected by a plan or project need to be considered further"*. The guidance goes on to note that *"where (unusually) there is a credible risk that air quality impacts might extend beyond 200 metres from a road, Natural England may advise that additional sites should also be scoped into the HRA"*.
- 4.10 It is not considered that the Proposed Development represents an exceptional circumstance and therefore the 200m buffer from a road has been adopted.
- 4.11 The Transport Assessment shows that the only main road that runs within 200m of the Bath and Bradford on Avon Bats SAC, which is likely to see any significant increase in vehicle levels from the Proposed Development, is the A4. This road lies 81m from the SAC at its nearest point.
- 4.12 The Air Quality Assessment was undertaken in accordance with the Institute of Air Quality Management's A Guide to the Assessment of Air Quality Impacts in Designated Nature Conservation Sites⁹. This guidance (as well as the guidance produced by both JNCC and Natural England on air quality impact assessments) sets out a *de minimis* threshold, where any increase of greater than 1% of the Critical Level of an atmospheric pollutant, would require further assessment.
- 4.13 None of the qualifying bat species are known to be sensitive to air quality effects from vehicle emissions. However, the woodlands within the SAC that they rely on are. According to the Air Pollution Information System¹⁰, from those pollutants likely to occur through an increase in traffic, these broadleaved mixed and yew woodlands are only sensitive to

⁸ Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations (NEA001). [<http://publications.naturalengland.org.uk/publication/4720542048845824>]

⁹ Holman et al (2020). A guide to the assessment of air quality impacts on designated nature conservation sites – version 1.1, Institute of Air Quality Management, London. <https://iaqm.co.uk/text/guidance/air-quality-impacts-on-nature-sites-2020.pdf>

¹⁰ Air Pollution Information System (2026) Site Relevant Critical Loads & Search by Location <https://www.apis.ac.uk/app>

Nitrogen loading. The minimum critical loading for Nitrogen is 10kg N/ha/yr and the maximum is 15 kg N/ha/yr.

- 4.14 Natural England has adopted¹¹ guidance from the JNCC¹² that sets out what levels of increase in the Average Annual Daily Traffic flow (AADT) would likely trigger an increase above 1% of the critical levels of Nitrogen. Within the JNCC guidance, Table 5.3 identifies that at 50m from the road (the SAC is 81m at its closest point), to achieve a 1% of the critical Load of Nitrogen (10kg/ha/yr) an increase of 606 AADT would need to be achieved.
- 4.15 Although the traffic models were not undertaken for the point location of the SAC, they were undertaken for the junction for the A4 (westbound) from the A350. At this point, the traffic models have shown a potential increase of 356 AADT from the project alone or 513 AADT as a cumulative increase from this project with all other known projects. This would therefore be the maximum increase in traffic in proximity to the SAC according to the traffic modelling (Chapter 5 of the ES).
- 4.16 This has confirmed that both the project alone increase (356 AADT) and the in-combination increase (513 AADT) along the west bound A4 would be less than the threshold (606 AADT).
- 4.17 Given that the increase in traffic and any pollution from the Proposed Development alone is below the assessment threshold, it is likely to be imperceptible on any modelling. This level of increase is therefore not considered likely to have an in-combination effect through the degradation of air quality around the SAC.
- 4.18 Any impacts through a degradation in air quality are likely to be imperceptible, and therefore are not considered to have an LSE, either alone or in-combination, on the SAC, and therefore air quality is screened out from further assessment for the Proposed Development.

RECREATIONAL DISTURBANCE

- 4.19 Pressure or threat from recreational use of Bath and Bradford on Avon Bats SAC is listed as a vulnerability of this SAC⁷. However, this is mostly to ensure that the entrances to the mines are secure enough to prevent uncontrolled or unauthorised access but should remain unobstructed enough to continue to be accessible to bats.
- 4.20 Natural England's latest condition assessment report for the relevant component SSSI (Box Mine SSSI)⁵, confirms that *".... while the perimeter fence is down, human access to the mine shaft is prevented"*.
- 4.21 Although the main reason for the designation is for the mine system that provides the internationally important roosting, the woodlands around the entrances (within the SAC) provide essential foraging areas. Most of the land surface within the SAC is intensively farmed and is not known to be of significant interest, but there are pockets of woodland.

¹¹ Natural England (December 2025). Air pollution and development: advice for local authorities. <https://www.gov.uk/guidance/air-pollution-and-development-advice-for-local-authorities>

¹² Joint Natural Conservancy Council (2021) Guidance on Decision-making Thresholds for Air Pollution. <https://jncc.gov.uk/resources/6cce4f2e-e481-4ec2-b369-2b4026c88447>

- 4.22 These woodland areas are publicly accessible and therefore vulnerable to recreational disturbance and pressures. Footprint Ecology undertook a recreational study in 2017 on similar woodlands (around Trowbridge) surrounding the SAC¹³. Their findings found that 75% of people within these woodlands were from within 3.4km (or less depending on the woodland). The distance to these woodlands from the Site is 6.6km and therefore well outside the recreational risk zone for this particular study. However, this distance cannot be completely relied upon in this case as, although it was for similar woodlands, no study has been undertaken for the woodlands around the Box Mine SSSI components of the SAC.
- 4.23 Given the distance from the Site to the SAC, it is unlikely that the Proposed Development will increase the number of recreational users to these blocks of woodlands. However, a very slight, non-significant increase in visitor numbers from a residential development at this distance may occur and therefore cannot be ruled out. This slight increase may have an in-combination recreational effect on these woodlands.
- 4.24 In addition, there are woodlands that are connected to the SAC, which have significant roosts for Bechstein's bats within them. These are (on a precautionary basis) assumed to be Functionally Linked to the SAC. Some of these woodlands are also open to the public and therefore vulnerable to recreational disturbance and pressures. These woodlands are closer to the Site, with the nearest known maternity colony within 1km of the Site. The majority of these maternity roosts are in woodlands that are inaccessible to the public, however, some have public rights of way, and may have a slight increase in recreational pressure.
- 4.25 The proposed development of up to 400 residential dwellings may have a slight increase recreational pressures in the surrounding area. Therefore, in the absence of further assessment, LSEs on Bath and Bradford on Avon Bats SAC due to detrimental impacts from recreational pressure alone or in combination cannot be screened out.

SUMMARY

- 4.26 **Table EDP 4.1** provides a summary of the Stage 1: Screening Assessment of the Proposed Development alone and/or in combination with other projects and plans.

Table EDP 4.1: Summary of Stage 1: Screening Assessment

European Site	Potential Impact Pathway	Potential for LSE?	Relevant Qualifying Feature(s)
Bath and Bradford on Avon Bats SAC	Loss of potential Functionally Linked Habitats.	Yes	Greater horseshoe bat; Lesser horseshoe bat; and Bechstein Bat
	Air pollution: impact of atmospheric nitrogen deposition.	No	N/A

¹³ Footprint Ecology. (Oct, 2017). Trowbridge Visitor Survey and Recreation Management Strategy.

European Site	Potential Impact Pathway	Potential for LSE?	Relevant Qualifying Feature(s)
	Recreational disturbance.	Yes	Disturbance to Functionally Linked Habitat (outside the Site), or disturbance to woodlands within the SAC that are supporting habitats of the bat species.

Section 5

Stage 2: Appropriate Assessment

- 5.1 The HRA Screening Assessment undertaken in **Section 4** concluded that, as a precaution in the context of case law, LSEs on the conservation objectives of Bath and Bradford on Avon Bats SAC with respect to the loss of Functionally Linked Habitats and recreational pressure result of the Proposed Development cannot be completely discounted.
- 5.2 Accordingly, an assessment of these potential effects resulting from the Proposed Development alone and in combination with other plans or projects is undertaken in this section.

LOSS OF FUNCTIONALLY LINKED HABITATS

- 5.3 Populations of roosting greater and lesser horseshoe bats and Bechstein's bats are qualifying features of the SAC. These species are highly mobile and are known to travel comparatively long distances for foraging purposes.
- 5.4 Due to the possibility of these qualifying bat species being present on-site, further detailed assessment is required to understand if the Site is used by a significant number of these species, and therefore if the Site is considered to be Functionally Linked Habitats.

Bechstein's Bat

- 5.5 The desk study returned 19 records of Bechstein's bat from within 4km of the Site. Seven of these relate to known roosts, with three of these relating to known maternity roosts. The nearest roosts are known to be 350m south of the Site boundary, in a lowland mixed deciduous woodland.
- 5.6 The Bechstein's bat is considered generally rare throughout its Great Britain range, sparsely distributed, and considered one of Great Britain's rarest mammals in part due to genuine scarcity but also a result of difficulties in achieving reliable surveys. In Great Britain, the species is restricted to southern England, with strongholds in southern counties, including Sussex, Wiltshire, Hampshire and Dorset. British populations appear to favour mature deciduous woodlands with a high proportion of oak and ash species, which offer a variety of natural roosting opportunities as well as providing important foraging habitat for this species. Larger woods are strongly favoured. However, European populations also roost within beech woods and conifer woodlands where adequate under-storey is present ¹⁴
- 5.7 Bechstein's bats have been recorded foraging mainly in deciduous woodland with a closed canopy. Preferred woodland foraging habitats used by Bechstein's bat include those with a predominance of oak (*Quercus robur*) and ash (*Fraxinus excelsior*) in the woodland canopy, a dense understory with a predominance of native species including hazel and hawthorn and large areas of contiguous woodland (either in one block or several smaller connected

¹⁴ Schofield, HW., and Mitchell-Jones, AJ., (2022). The Bats of Britain and Ireland. Vincent Wildlife Trust

areas) of at least 25ha¹⁵. This estimate of 25ha as a minimum viable range has been taken from a model (as referenced) which assumed a minimum viable population of 25 breeding females each requiring 1ha of foraging territory.

- 5.8 Box Mine SSSI is assumed to be used for hibernating Bechstein's bat and is also an important site for swarming Bechstein's bat which is likely to be frequented by bats whose core ranges are a considerable distance from the Site. Bechstein's bats are regularly recorded during autumn swarming trapping surveys at a range of stone mines within the Bath and Bradford on Avon Bats SAC (40 records amounting to a total of 184 individual Bechstein's bats trapped and ringed during this time). Whilst the swarming function is not a qualifying feature of the SAC, it is nonetheless a vital element of the ecology of Bechstein's bat.
- 5.9 Bechstein's bat foraging typically occurs within the core sustenance zone (CSZ)¹⁶ which has been calculated as a maximum of between 2 and 3km from their colony roosts. Therefore, given the distance of 6.6km to the nearest point of the designated site, the Site is not within the CSZ for Bechstein's from this SAC, so the Site not considered functionally linked directly to the SAC. However, there are known maternity roosts of this species within 2km of the Site, that may themselves be functionally linked to the SAC.
- 5.10 While there are several pockets of woodland in the wider landscape that have been proven to be used by Bechstein's bat, including for maternity roosting, there are no large or strongly connected woodlands within the Site that would provide optimum habitat for foraging or roosting for this species.
- 5.11 The trapping and radio tracking survey for this species in 2021 and 2022 did not record any Bechstein's bat flying into or using the Site. All bats caught were outside the Site and travelled to roosting locations within woodlands outside of the Site. The closest location was 350m from the Site's southern boundary. It should be noted that a single Bechstein bat was recorded flying to a veteran tree (over 500m from the Site's boundary) within a hedgerow rather than a woodland roost on one occasion during this study. This confirms that Bechstein's bat will use non-woodland trees if strongly connected, but only as likely day roosts.
- 5.12 The monthly bat activity surveys of the Site in both 2022 and 2025 all recorded *Myotis* species using the Site for foraging and commuting. No evidence of roosting was recorded and, given the timings of the registrations (both during the transects and on the static detectors), it is not considered that *Myotis* species roost on or immediately adjacent to the Site. Given the difficulty in separating registrations of *Myotis* species, it is impossible to rule out that some of these recordings were Bechstein's bat; however, no confirmed Bechstein's were identified.
- 5.13 Although Bechstein's bat may therefore use the hedgerows and small pocket of woodland on-site for commuting and foraging, any potential registrations are likely attributed to

¹⁵ Bat Conservation Trust (2013) Bechstein's bat. An introduction for woodland owners. https://cdn.bats.org.uk/uploads/pdf/Bechsteins_bat_woodland_guide_2nd_Ed_2013.pdf?v=1541085201

¹⁶ Bechstein's bat - Species Summary Sheet. Bat Conservation Trust (2024) <https://cdn.bats.org.uk/uploads/pdf/Resources/For-professionals/LNRS-docs/Bechsteins-bat-Species-Summary-Sheet.docx?v=1707221949>

individual Bechstein's bat commuting through the Site to more favourable areas. The stronger connections for this species (better structured hedgerows and the woodland plot) are located running east-west along the northern boundary of the Site, as well as along the southern boundary of the Additional Survey Area (outside the Site). It is here, if anywhere on-site that this species is most likely to be found.

- 5.14 On this basis, the Site is not considered to be functionally linked for Bechstein's bat to the Bath and Bradford on Avon Bats SAC, nor provide essential habitat to off-site functionally linked roosts.

Greater Horseshoe Bat

- 5.15 The desk study returned 69 records of greater horseshoe bat within 4km of the Site, the closest of which is located around 560m north of the Site recorded in 2014. Of these desk study records, 32 relate to a known roost, three of which are detailed as a hibernation roost. Only two maternity roosts are currently confirmed in Wiltshire: one in Box Mine SSSI and the other at a residential property in Westbury Leigh, both of which are over 4km from the Site.
- 5.16 The Bat Conservation Trust (BCT) states that the greater horseshoe bat have a CSZ of 3km from their roosts, however, some data has shown that this may be up to 4km¹⁷.
- 5.17 Greater horseshoe bats require a diverse habitat mosaic, including:
- Grazed pasture;
 - Mature semi-natural woodlands;
 - Other grasslands;
 - Scrub;
 - Well-developed hedgerows or lines of trees; and
 - Watercourses.
- 5.18 The Site therefore provides suitable foraging habitats for this species, as well as suitable connectivity around the wider landscape.
- 5.19 During the monthly static surveys (both in 2022 and 2025) greater horseshoe bat were recorded in very low numbers during all months and at all four static locations. The greatest number recorded (seven recordings in total) was in October 2025, with six of these passes recorded along the northern boundary hedgerow. This was a peak count of four passes on any given night, indicating that it is most likely one or two individuals passing through the Site, but a maximum of four.

¹⁷ Bat Conservation Trust (2020). Core Sustainance Zones and habitats of importance for designing Biodiversity Net Gain for bats. <https://cdn.bats.org.uk/uploads/pdf/Bat-Species-Core-Sustainance-Zones-and-Habitats-for-Biodiversity-Net-Gain.pdf?v=1596874016>

- 5.20 Greater horseshoe bat was not recorded during the 2022 transect surveys and only recorded once during the transect surveys in 2025. This was a single individual in June, centred around an area of open habitat (grass pasture).
- 5.21 Given the very low numbers recorded of this species (a maximum of four individuals) and the distance of the Site to the SAC (well outside the 4km CSZ), the Site is not considered to be functionally linked for greater horseshoe bat.

Lesser Horseshoe Bat

- 5.22 The desk study returned 135 records of lesser horseshoe bat within 4km of the Site, with the closest record locations around 578m south-east of the Site recorded in 2003. Of the desk study records, 56 relate to a known roost, four of which are detailed as being a maternity roost and seven as hibernation roosts.
- 5.23 The BCT states that the lesser horseshoe bat have a CSZ of 3km from their roosts, however, some data has shown that this may be up to 4km¹⁷.
- 5.24 Lesser horseshoe bats are specialised for foraging in cluttered environments, particularly woodlands, wooded riparian corridors, and mature treelines and hedgerows, feeding within or below the canopy. Landscapes which are of most importance for lesser horseshoe contain a high proportion of woodland, parkland and grazed pasture, linked with linear features, such as overgrown hedgerows. Therefore, the Site does provide suitability for lesser horseshoe bat.
- 5.25 Lesser horseshoe bats were recorded in low numbers during the majority of automated detector survey periods in 2025. Lesser horseshoe bats were recorded during all survey months and at all four locations. Activity varied throughout the year, with the greatest number of passes recorded in April. 134 passes were made in April and were recorded along the northern boundary hedgerow on a single night. The next highest peak count for any night at any location was 15 at the same location also in April. Only five other nights recorded more than 10 passes on any detector, and most of these were also in the same location. This shows that the single peak in April was a significant anomaly recorded at one location on one night. This single night was in April, when lesser horseshoes have emerged from hibernation, but likely before a maternity roost is occupied. Lesser horseshoe during this time will be very active, foraging more to replenish weight lost during hibernation and before maternity.
- 5.26 Detailed analysis of the data has shown that during this night, the lesser horseshoe bats were recorded from 1.5 hours after sunset to two hours before sunrise. This has shown that the roost is unlikely to be in very close proximity to the Site. In addition, the calls were spread out throughout this period, most likely indicating a larger number of bats, rather than a few individuals passing the same detector multiple times.
- 5.27 This is corroborated by the automated detector surveys undertaken at the Site at the same locations in 2022. During this survey, lesser horseshoe bats were continuously recorded around the Site in very low numbers, however, a peak of 41 and 44 passes were recorded in April and September, again focused on two nights (one in each of April and September).

- 5.28 The peaks in activity during April and September indicate that this hedgerow (the northern boundary hedgerow) is of greater importance for lesser horseshoe bat during dispersal months, rather than during the summer (maternity) months.
- 5.29 Lesser horseshoe bats were only recorded during the NBW survey in April 2025, with only one pass recorded, within the Additional Survey Area.
- 5.30 The Site is clearly used sporadically throughout the year by lesser horseshoe bats. The most important feature is the northern boundary hedgerow, which was used on one or two occasions each year during the dispersal months. However, given the infrequency of the records, and most of these being in very low numbers, as well as the distance of the Site to the SAC (well outside the 2 or 3km CSZ), the Site is not considered to be functionally linked for lesser horseshoe bat.

Summary for all Qualifying Species

- 5.31 As set out above, the Site is not considered to be functionally linked to the Bath and Bradford on Avon Bats SAC for any of its qualifying species. However, it is likely used by all three species, in low numbers and very sporadically. The most important location within the Site for these species is the northern boundary hedgerow, as well as the grassland and tree groups alongside the River Avon.
- 5.32 Both of these areas are proposed to be retained and buffered from development within the site layout for the Proposed Development (see **Appendix EDP 1**).
- 5.33 The area along the River Avon is to be included within the 10ha Natural Green Space area, which is being enhanced for its biodiversity and sensitive public access. The entire area will be unlit, and the existing species-poor modified grassland in this area will be enhanced; reducing the number of pesticides and changing the management to increase its plant diversity and therefore its invertebrate diversity for the benefit of foraging bats.
- 5.34 The northern boundary hedgerow is again to be retained and enhanced as part the Proposed Development. Within the site layout there is a 40m strip of proposed public open space running along this entire boundary. This area will also be accessible to the public; however, no lighting is proposed in this area. Additional woody planting will be used to enhance the hedgerow and connectivity corridor, bulking out the hedgerow with tree and scrub species and including patches of trees within the enhanced grassland within the southern half of the buffer.
- 5.35 In addition to the features of the layout described above, it is proposed that a sensitive lighting strategy is produced at the detailed design stage, which can be secured by planning condition. This lighting strategy will include lux contour plans based upon the detailed layout, detailing the locations and technical specifications of lighting necessary to achieve dark corridors on-site for bats (where lighting levels do not exceed 0.5 lux) in the relevant locations.
- 5.36 It can therefore be concluded that there will be no significant adverse effects upon the integrity of Bath and Bradford on Avon Bats SAC in respect of loss of Functionally Linked Habitats, either alone and in combination with other projects or plans.

RECREATIONAL DISTURBANCE

- 5.37 As identified in **Section 4**, a very slight increase in recreational use cannot be ruled out for either the woodlands around the SAC that provide supporting habitat for the qualifying bat species; or woodlands that support functionally linked maternity roosts of Bechstein's bats. Although it is not considered that the increase from the Proposed Development alone would have a significant effect on the SAC, an in-combination effect with other developments cannot be ruled out.
- 5.38 To ensure that any increase resulting from the Proposed Development is negligible, and therefore does not add to any significant in-combination increase, a large area of natural greenspace is being proposed on-site as follows:
- This will be an area of approximately 10ha in size;
 - Where recreational mitigation for European Sites is required, Suitable Alternative Natural Greenspace is normally required at a rate of eight hectares per 1,000 new residents, which is equivalent to 0.0192ha per dwelling. For the Proposed Development (up to 400 dwellings), the minimum size would therefore be 7.68ha, so the proposal for this natural greenspace far exceeds this;
 - The natural greenspace is within the red line boundary of the Proposed Development, and therefore immediately accessible for the residents without the need to drive (or park);
 - No areas of formal open spaces (such as sports grounds, playing fields or formal children's play areas) form part of the natural greenspace. However, play on the way areas will be provided. Play elements will include natural features such as logs, boulders and interest through landform;
 - The natural greenspace includes extensive circular walks. The footpaths will be of varying design, with the main loop being laid hoggin paths and others being mown grass. This will enable year-round access whilst maintaining the natural character;
 - The proposed area is connected to other local footpaths; allowing a greater diversity of routes if desired;
 - The natural greenspace borders the River Avon that flows alongside the Proposed Development and will also include new woodland and scrub planting that will give the space a natural feel; and
 - Information boards at strategic points will outline the layout of the natural greenspace and routes available to visitors.
- 5.39 The outline of the natural greenspace within the Site is shown in **Appendix EDP 1**.

- 5.40 As the natural greenspace forms part of the Proposed Development, it will be secured for the lifetime of the development. Management will be set out within a Landscape and Ecology Management Plan (LEMP), to be secured by planning condition, to ensure the Proposed Development provides a natural greenspace that is accessible to all residents throughout the year.
- 5.41 With adherence to the mitigation set out above, it is not considered that the Proposed Development will have a significant increase in recreation within the SAC nor within any area considered to be functionally linked and therefore is not anticipated to have an adverse effect, either alone or in-combination, on Bath and Bradford on Avon Bats SAC.

Section 6 Conclusions

- 6.1 As outlined in this sHRA produced by EDP, a screening assessment of the implications of the Proposed Development on relevant European sites has been undertaken. Potential LSEs, resulting from the Proposed Development alone or in combination with other projects, have been ruled out at the screening stage for all relevant European sites with the exception of the Bath and Bradford on Avon Bats SAC.
- 6.2 Potential LSEs on the SAC have been identified relating to potential impacts upon populations of the qualifying bat species due to the loss or fragmentation of Functionally Linked Habitats; and increased recreational pressure that can cause the degradation of supporting habitats. An Appropriate Assessment, in view of the SAC's Conservation Objectives, has therefore been undertaken, taking into consideration the application of additional mitigation measures.
- 6.3 The findings of this work are set out within this document such that the competent authority, in exercising their duties under the *Habitats Regulations*, has all the necessary information before them in considering the Proposed Development.
- 6.4 This sHRA has demonstrated that the Site does not contain Functionally Linked Habitats; and any adverse effects upon the integrity of this SAC from recreation (either within the SAC or within its Functionally Linked Habitats) can be avoided, subject to delivery of the following mitigation measures:
- Adherence to those habitat parameters and indicative delivery set out within the parameter plans and Illustrative Landscape Masterplan, including the large areas of publicly open space;
 - The production of a sensitive lighting strategy including lux contour plans based upon the future detailed layout of the Site for prior approval, detailing the locations and technical specifications of lighting necessary to ensure the requirements of the dark corridors on-site for bats (where lighting levels do not exceed 0.5 lux) are met. The detailed lighting design is to be prepared in accordance with the proposed lighting strategy outlined in the Lighting Impact Assessment submitted along with the outline planning application; and
 - The production of a LEMP for the Site, to include a detailed planting scheme of all habitats to be enhanced and created alongside those to be retained, in addition to detailing the long-term management of habitats on-site for bats over the lifetime of the development.
- 6.5 Provided that the above measures are secured through planning conditions, it is considered that adverse effects upon the integrity of all relevant European sites can be avoided.

Appendix EDP 1

Site Layout



- Site Boundary (29.97ha)
- Other Land in the Applicants Control
- Proposed Vehicular, Cycle and Pedestrian Access
- Proposed Emergency Vehicle, Pedestrian and Cycle Access
- Pedestrian/Cycle Access
- Existing Vegetation
- Proposed Tree Planting
- Proposed Scrub Planting
- Meadow Planting
- Amenity Green Space
- Mown Path/Nature Trail
- Footpath
- Sustainable Drainage Feature
- Play Provision
- Primary Street
- Secondary Street
- Shared Surface/Private Drive
- Public Square
- Allotment
- Orchard

client
Hallam Land Management

project title
Land East of Showell Farm, Chippenham

drawing title
Illustrative Site Layout

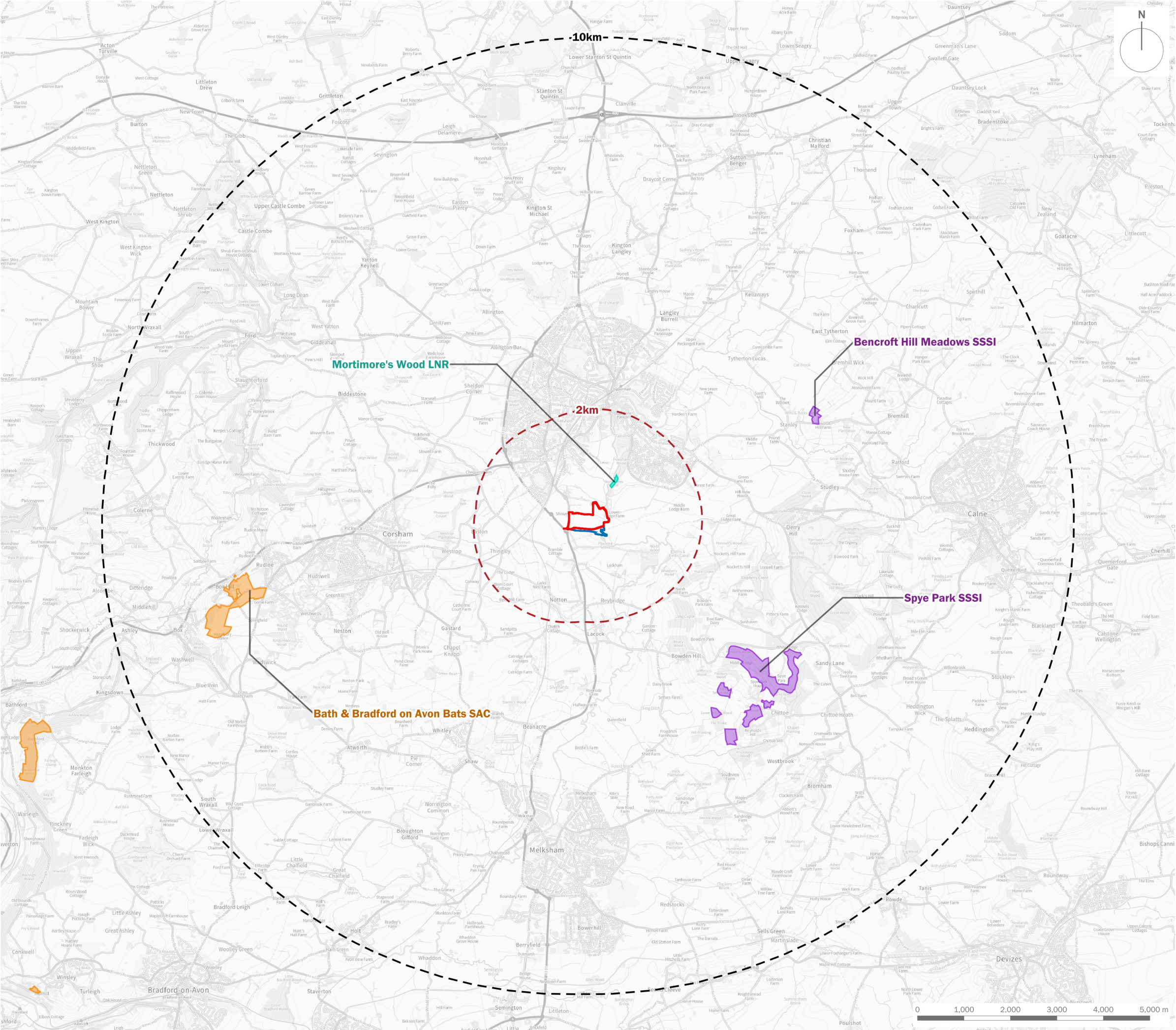
date	17 APRIL 2026	drawn by	NBo
drawing number	edp2272_d066	checked	PWI
scale	1:2,500 @ A2	QA	OSh



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Plans

Plan EDP 1: Statutory Designated Sites
(edp2272_d067b 30 April 2026 VMS/PNe)



Site Boundary

Additional Survey Area

10km Range Ring

2km Detailed Study Area

Special Area Conservation (SAC)

Site of Special Scientific Interest (SSSI)

Local Nature Reserve (LNR)

client

Hallam Land

project title

Land East of Showell Farm, Chippenham

drawing title

Statutory Designated Sites

date

30 APRIL 2026

drawn by

VMS

drawing number

edp2272_d067b

checked

PNe

scale

1:80,000 @ A3

QA

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