



BENGROVE LTD

Ecology-BNG-Wildlife

APPROPRIATE ASSESSMENT

PEARTREE COMMUNITY FARM

Client: Peartree Community Farm
Ltd

Date Issued: 15 July 2026

Our Ref: B25_123_AA

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BREACH HILL FARM PEA

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EXECUTIVE SUMMARY

This Appropriate Assessment has been prepared by Bengrove Ltd on behalf of Freshford Community Farm Ltd in relation to a planning application for the creation of a community farm at Land at Church Lane, Limpley Stoke, Wiltshire (OS grid reference ST 78471 60296).

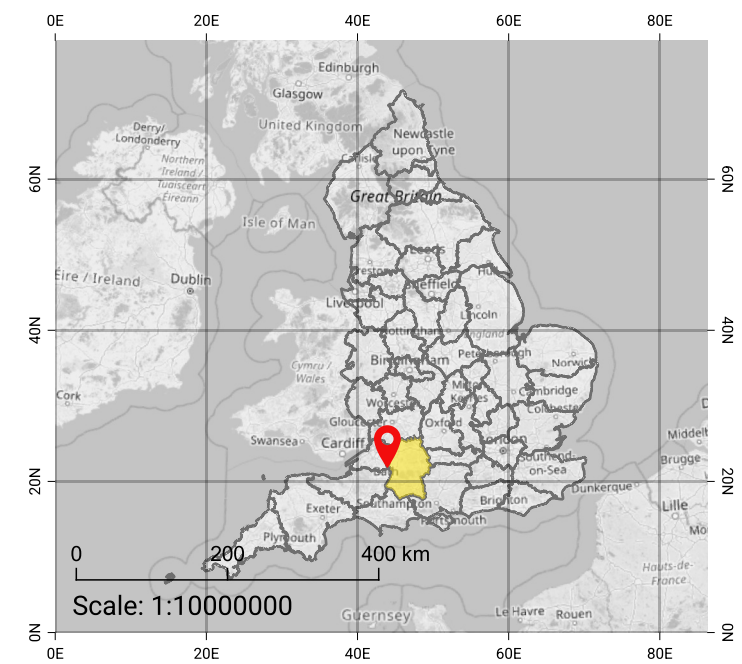
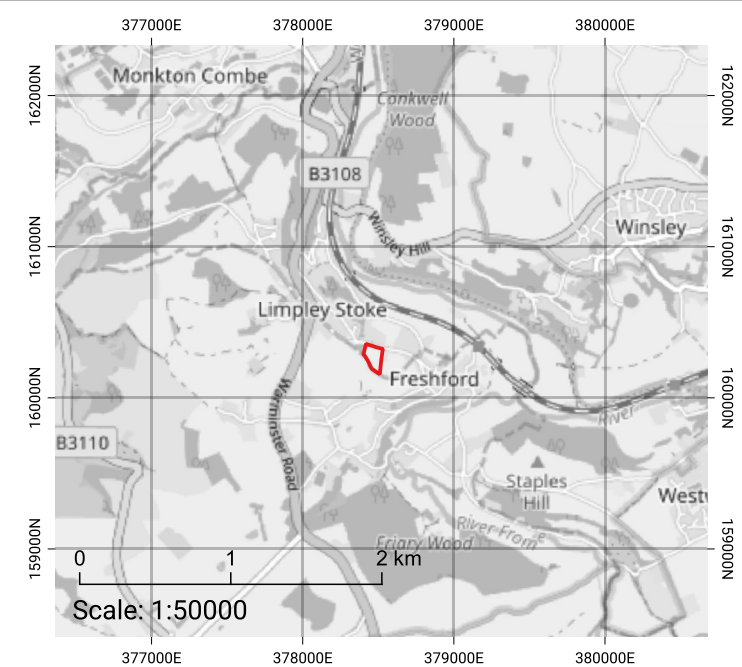
The site falls within the core consultation zone of the Bath and Bradford on Avon Bats Special Area of Conservation (SAC). The qualifying features are Greater Horseshoe Bat (*Rhinolophus ferrumequinum*), Lesser Horseshoe Bat (*Rhinolophus hipposideros*) and Bechstein's Bat (*Myotis bechsteinii*). Mells Valley SAC (qualifying feature: Greater Horseshoe Bat) also falls within the zone of influence and is assessed on a precautionary basis.

On an unmitigated, precautionary basis, a Likely Significant Effect on the qualifying features of the Bath and Bradford on Avon Bats SAC cannot be excluded. The development is accordingly taken forward to Appropriate Assessment.

The proposed vehicular access involves a gap of approximately 8 m in the northern boundary hedge (H1) on a lane with hedgerow on both sides of the road. Published research (Pinaud et al., 2018) confirms that crossing probability for Greater Horseshoe Bat at gaps of this scale is essentially unaffected. The gap will be unlit, removing the principal known deterrent for light-averse horseshoe bat species. A committed hopover structure will further reduce any navigational challenge at the crossing point.

The proposed habitat transformation — from low-value modified grassland to a diverse agro-ecological mosaic incorporating a 5 m wildflower ecological corridor, traditional orchard and growing spaces — will increase the foraging potential of the site interior for the SAC qualifying species. A new native hedgerow proposed along the eastern edge of the site will further enhance habitat connectivity for commuting bats. The net ecological outcome for SAC qualifying bat species is assessed as neutral to beneficial.

Overall Conclusion: Taking into account the committed mitigation and design measures, this Shadow Habitats Regulations Assessment concludes, beyond reasonable doubt, that the proposed development would not adversely affect the integrity of the Bath and Bradford on Avon Bats SAC or Mells Valley SAC, either alone or in combination with other plans or projects.



Project: Church Lane, Freshford
 Client: Freshford Community Farm Ltd
 Date: 29-04-2026
 Author: Peter Stockting
 Made with: QGIS 3.44.2-Solothurn

Site Location Plan
 Red_Line_Boundary

Grid Reference: ST78466028
 Latitude: 51.340704
 Longitude: -2.309236
 Nearest postcode: BA2 7GQ
 LNRS Authority: Wiltshire Council

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1. INTRODUCTION

1.1. Purpose of the Document

- 1.1.1 This assessment has been prepared by Bengrove Ltd on behalf of Freshford Community Farm Ltd to accompany a planning application for the creation of a community farm at Land at Church Lane, Limpley Stoke, Wiltshire. It is 'shadow' in character: it has been prepared by the applicant's ecological consultant to inform and support Wiltshire Council, acting as the competent authority under the *Conservation of Habitats and Species Regulations 2017* (as amended) (the 'Habitats Regulations'), in carrying out its own statutory Habitats Regulations Assessment. It is not a substitute for that statutory exercise.
- 1.1.2 The principal purposes of this report are to:
- carry out a shadow Likely Significant Effect (LSE) screening of the proposed development against the qualifying features of the relevant European Protected Sites;
 - present a shadow Appropriate Assessment (AA) of the project's effects, taking into account the committed mitigation and design measures, and to demonstrate that, beyond reasonable doubt, the development would not adversely affect the integrity of any relevant European Protected Site; and
 - provide Wiltshire Council with the evidence and analysis required to complete its statutory HRA and, where appropriate, to conclude no Adverse Effect on Site Integrity (AEOI).
- 1.1.3 It is accepted that, following the CJEU's judgment in *People Over Wind* (Case C-323/17), avoidance and mitigation measures cannot be relied upon at the LSE screening stage: the screening in Section 6 therefore proceeds on an unmitigated basis. The Appropriate Assessment in Section 8 takes full account of the committed mitigation and design measures, as expressly permitted by Regulation 63 of the Habitats Regulations.

1.2. Scope of Assessment

- 1.2.1 A search radius of 15 km has been applied in identifying European Protected Sites potentially affected by the proposed development. Within this radius, the Bath and Bradford on Avon Bats SAC and Mells Valley SAC are identified as sites requiring assessment. Salisbury Plain SAC and SPA falls within the 15 km zone but is screened out at the source-pathway-receptor stage (see Section 4.3).
- 1.2.2 In the absence of site-specific bat activity survey data, this assessment is founded on precautionary assumptions about the identity and behaviour of bat species using the site, as set out in Section 5. These assumptions are consistent with the known distribution of SAC qualifying species in this landscape and with the

habitat assessment presented in the Preliminary Ecological Appraisal (Bengrove Consult, April 2026, ref. B25_123_PEA).

1.3. Structure of this Report

- 1.3.1 Section 2 sets out the legislative and policy context. Section 3 describes the development proposal. Section 4 identifies the relevant European Protected Sites. Section 5 sets out the evidence base and precautionary species assumptions. Section 6 presents the LSE screening. Section 7 describes the committed mitigation and design measures. Section 8 presents the Appropriate Assessment. Section 9 sets out the conclusions.

2. LEGISLATIVE AND POLICY CONTEXT

2.1. The Habitats Regulations

- 2.1.1 The *Conservation of Habitats and Species Regulations 2017* (as amended) implement the requirements of Council Directive 92/43/EEC (the 'Habitats Directive'). Under *Regulation 63*, where a plan or project is likely to have a significant effect on a European Protected Site (alone or in combination with other plans or projects), the competent authority must carry out an Appropriate Assessment of its implications for the site in view of the site's conservation objectives. The competent authority may agree to a plan or project only after having ascertained that it will not adversely affect the integrity of the European site (*Regulation 63(5)*). The standard of proof is that no reasonable scientific doubt remains as to the absence of adverse effects (Waddenzee, Case C-127/02). This does not equate to absolute certainty (*R (Wyatt) v Fareham BC* [2022] EWCA Civ).
- 2.1.2 In accordance with *People Over Wind* and *Sweetman v Coillte Teoranta* (Case C-323/17), the LSE screening is conducted without taking into account avoidance or mitigation measures. Mitigation measures may be taken into account only in the Appropriate Assessment.

2.2. National Planning Policy

- 2.2.1 The National Planning Policy Framework (MHCLG, 2025) requires planning decisions to protect and enhance biodiversity and geodiversity. Planning permission should not be granted where significant harm to biodiversity cannot be avoided, adequately mitigated or compensated for.

2.3. Wiltshire Bat SAC Planning Guidance (SD94)

- 2.3.1 Wiltshire Council's Supplementary Planning Document SD94 'Bath and Bradford on Avon Bats SAC: Planning Guidance' establishes the planning framework for development within the Bath SAC consultation zone, including requirements for bat survey evidence and expected mitigation standards. This report is prepared in accordance with the principles of SD94.

2.4. Conservation Objectives

- 2.4.1 The Conservation Objectives for the Bath and Bradford on Avon Bats SAC require the competent authority to ensure that the integrity of the site is maintained or restored as appropriate, and 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.

3. THE DEVELOPMENT PROPOSAL

3.1. Site Description

3.1.1 The application site (OS grid reference ST 78471 60296; BA2 7WD) is approximately 0.34 ha in area (set within a field that is around 1.7ha) and lies on the southern fringe of Limpley Stoke, occupying a single field bounded by Church Lane and residential properties to the north and north-east, agricultural land to the south, and the church and churchyard to the north-west. The site falls within the Avon Vales National Character Area (NCA 117). The River Frome lies approximately 332 m to the south-east and the Kennet and Avon Canal approximately 409 m to the north.

3.1.2 The principal habitats on site are:

- Modified grassland (UKHabs g4, 1.57 ha) - the open field, of low ecological distinctiveness and limited bat foraging value at baseline;
- Native hedgerow H1 (97.6 m) - the northern boundary hedge along Church Lane, of Low distinctiveness and Good condition; and
- Native hedgerow with hedgebank H2 (116.5 m) - the western boundary feature, of Medium distinctiveness and Good condition, and the most ecologically valuable habitat on site.

3.1.3 The site falls within the core consultation zone of the Bath and Bradford on Avon Bats SAC. The boundary hedgerows connect into the wider hedgerow and woodland network of the Avon and Frome valleys. Three SAC component sites lie within typical Greater Horseshoe Bat foraging range of the application site: Winsley Mines SSSI (942 m to the east), Combe Down and Bathampton Down Mines SSSI (2,447 m to the north-west), and Brown's Folly SSSI (4,978 m to the north). Iford Manor SSSI, which supports the second-largest Greater Horseshoe Bat maternity colony in England (over 250 bats recorded annually), lies approximately 1.85 km to the south-east. There are records of bat roosts close to the site, including roosts of lesser and greater horseshoe bats.

3.2. Development Description

3.2.1 Planning permission is sought for the creation of a community farm comprising no-dig and minimum tillage growing beds, kitchen garden areas, polytunnels and associated horticultural infrastructure, a traditional orchard, a 5 m wildflower ecological corridor, ancillary buildings and infrastructure clustered toward the northern part of the site, a new native hedgerow along the eastern edge of the site, and a new vehicular access from Church Lane through the northern boundary hedge (H1).

- 3.2.2 No external lighting is proposed for any part of the site or its access, either during construction or operation. The site will remain dark at night in perpetuity.

3.3. Committed Mitigation and Design Measures

- 3.3.1 The following measures are committed components of the development proposal and are taken into account in the Appropriate Assessment in Section 8:
- Retention of boundary hedgerows H1 and H2 in their entirety, with the exception of the minimum gap necessary for vehicular access (approximately 8 m in H1);
 - Installation of a hopover structure at the access gap, comprising closely spaced tall native woody planting on both sides of the gap, designed to guide bat flight above the road surface and maintain structural continuity for commuting bats;
 - No night-time lighting on the site or at the access during construction or operation;
 - Creation of a 5 m wildflower ecological corridor, traditional orchard and diverse growing habitats within the site interior, replacing the current modified grassland;
 - Planting of a new mixed native hedgerow along the eastern edge of the site, enhancing habitat connectivity for commuting bats; and
 - Ecological construction management controls to protect boundary hedgerows and avoid disturbance during the bat active season.

4. EUROPEAN PROTECTED SITES AND QUALIFYING FEATURES

4.1. Bath and Bradford on Avon Bats SAC

- 4.1.1 The Bath and Bradford on Avon Bats SAC is the European Protected Site of primary relevance to this application. It comprises five underground component SSSIs: Box Mine, Brown's Folly, Combe Down and Bathampton Down Mines, and Winsley Mines. The qualifying features are set out in Table 4.1 below.

Table 4.1: Qualifying features of the Bath and Bradford on Avon Bats SAC

Qualifying Feature	Species Code	Notes
Greater Horseshoe Bat (<i>Rhinolophus ferrumequinum</i>)	Annex II - 1304	Hibernation and foraging populations
Lesser Horseshoe Bat (<i>Rhinolophus hipposideros</i>)	Annex II - 1303	Hibernation and foraging populations
Bechstein's Bat (<i>Myotis bechsteinii</i>)	Annex II - 1323	Hibernation population

- 4.1.2 The nearest SAC component site is Winsley Mines SSSI at approximately 942 m to the north-east of the application site. Combe Down and Bathampton Down Mines SSSI lies approximately 2,447 m to the north-west (distances measured boundary-to-boundary from the site's Red Line Boundary). The application site falls within the core area of the Bath SAC bat consultation zone. Natural England's Site Improvement Plan for the Bath SAC identifies light spill onto commuting routes used by horseshoe bats as one of the primary pressures affecting the qualifying features.

4.2. Mells Valley SAC

- 4.2.1 Mells Valley SAC is designated for Greater Horseshoe Bat (*Rhinolophus ferrumequinum*) and supports the maternity roost for approximately 12% of the UK's Greater Horseshoe Bat population. Its component sites are approximately 12-17 km to the south of the application site, at the outer extent of the recorded foraging range for this species from known roosts in this landscape. On a precautionary basis it is carried forward to Appropriate Assessment in Section 8.2.

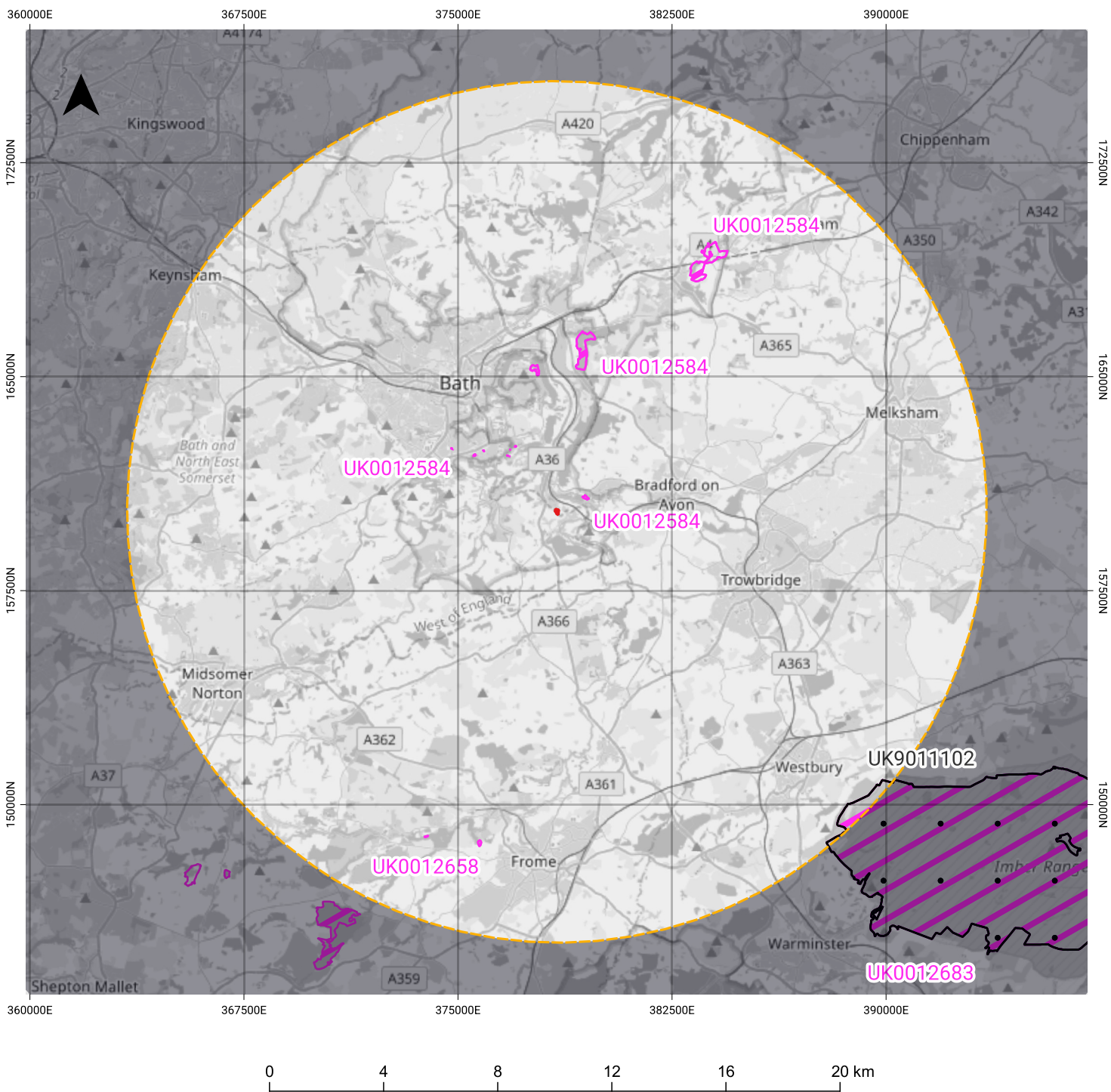
4.3. Sites Screened Out

- 4.3.1 Salisbury Plain SAC is designated for Annex I habitats and Marsh Fritillary butterfly. Salisbury Plain SPA is designated for birds. Neither site has qualifying bat features and no source-pathway-receptor link exists with the proposed community farm. Both are screened out. All other European Protected Sites within 15 km are designated for habitats or non-bat species for which no effects pathway exists and are screened out at source-pathway-receptor stage.

-  Red_Line_Boundary
-  15km Zone of Influence
-  Special Protection Areas (England)
-  Special Areas of Conservation (England)

SPECIAL AREAS OF CONSERVATION	
Uk0012584	Bath & Bradford on Avon Bats
Uk0012658	Mells Valley
Uk0012683	Salisbury Plain

SPECIAL PROTECTION AREAS	
Uk9011102	Salisbury Plain



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Bat Consultation Zones

 Red_Line_Boundary

Trowbridge Westbury Bat Mitigation Strategy

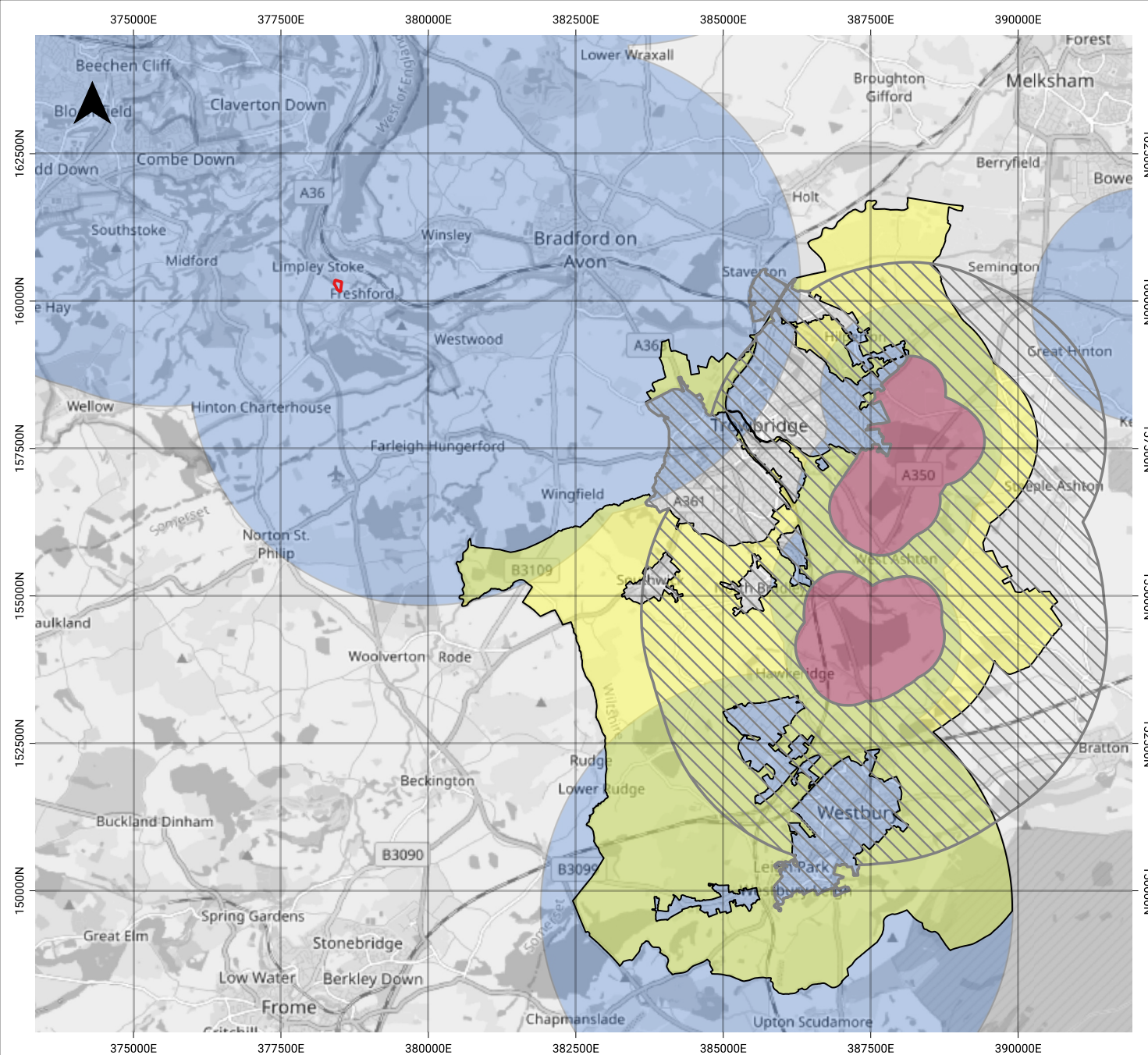
 Medium risk for increased recreational impacts

 High risk for habitat loss and increased recreational impacts

 Medium risk for habitat loss

Impact Zones For Bat Species

 Bath and Bradford on Avon bat SAC core area.



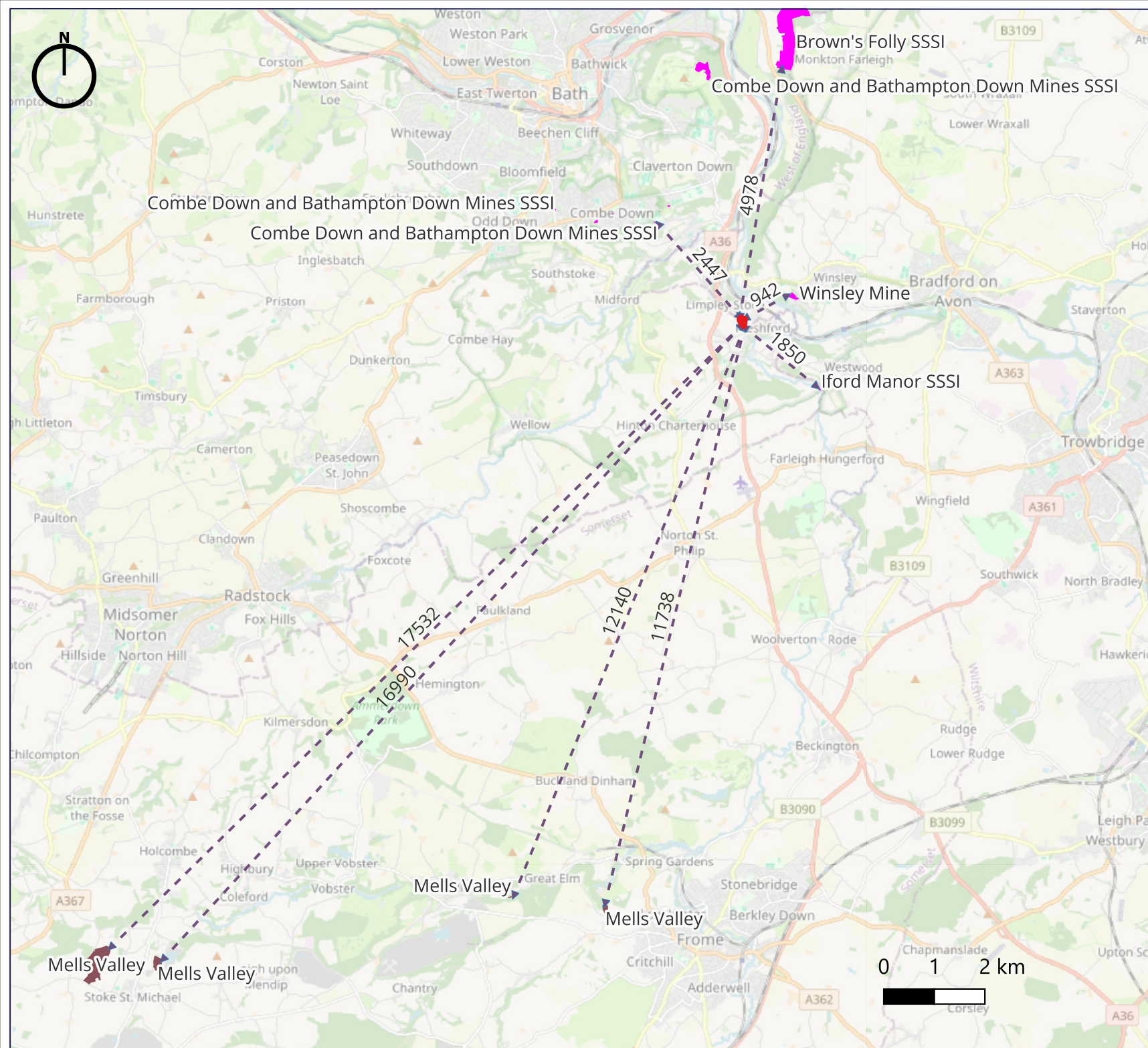
0 2 4 6 8 10 km

Scale: 1:100000

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Contains map data available for export on the Wiltshire Planning Explorer website. Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors.



 Red Line Boundary

BASE MAPS

 Mells Valley SAC

 Bat SSSI Sites

 Distance to sites in metres

OpenStreetMap

Project Name:
Freshford Community Farm

Client Name:
Freshford Community Farm Ltd

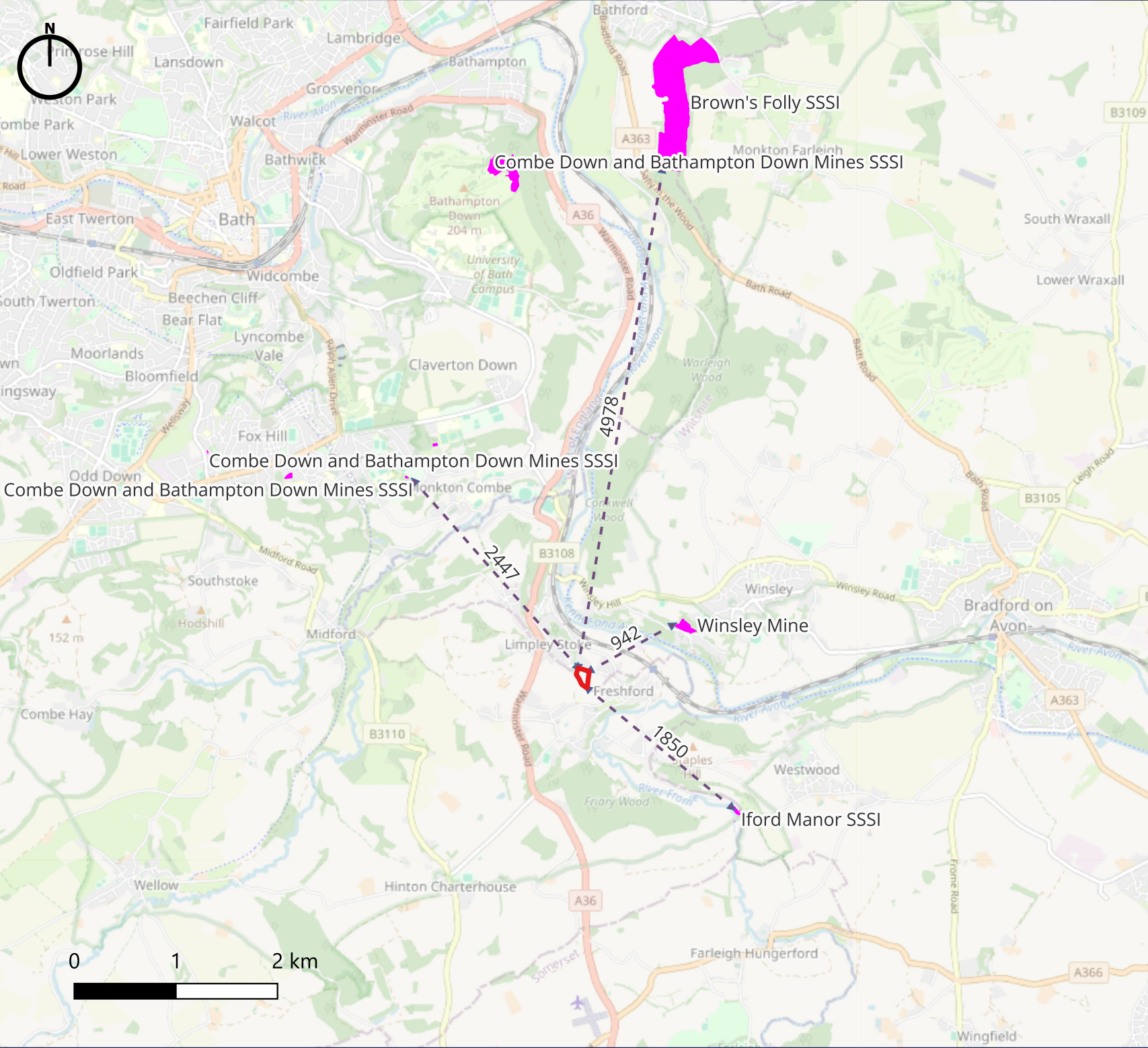
Drawing Name:
Distances to Bat Sites

Date:
23/06/2026

Scale:
1:100000 @A4

Suitability:
For Issue

Project Number:
B25_123



 Red Line Boundary

BASE MAPS

 Distance to SSSI in metres

 Bat SSSI Sites

OpenStreetMap

Project Name:
Freshford Community Farm

Client Name:
Freshford Community Farm Ltd

Drawing Name:
SSSI Bat Sites Plan

Date:
23/06/2026

Scale:
1:50000 @A4

Suitability:
For Issue

Project Number:
B25_123



5. BASELINE BAT ECOLOGY AND EVIDENCE BASE

5.1. Survey Evidence

- 5.1.1 The Preliminary Ecological Appraisal (Bengrove Ltd, April 2026, ref. B25_123_PEA) included a Phase 1 habitat survey, a protected species scoping assessment, and a preliminary roost inspection of all features within the Red Line Boundary. No structures with bat roosting potential are present within the Red Line Boundary and no buildings or mature trees capable of supporting bat roosts are proposed for removal. Bat survey risks are accordingly limited to commuting and foraging impacts.
- 5.1.2 No targeted bat activity survey data have been collected from this site at the time of preparing this report. The Appropriate Assessment is therefore based on the precautionary assumptions set out in Section 5.2. These assumptions represent the maximum plausible use by each qualifying species, consistent with known distribution and ecology in this landscape. The overall conclusions are accordingly robust to the full range of plausible survey outcomes.

5.2. Qualifying Species - Precautionary Assumptions

Greater Horseshoe Bat

- 5.2.1 Greater Horseshoe bats are assessed as having a high likelihood of using the boundary hedgerows (H1 and H2) as regular commuting and foraging features. The species commutes from hibernation and maternity roosts along hedgerows, woodland edges and river corridors, very rarely crossing open ground. Foraging is concentrated in cattle- and horse-grazed permanent pasture, unimproved meadow and woodland edge, typically within 4 km of the maternity roost (up to 7 km in some cases). The SAC hibernacula at Winsley Mines SSSI (942 m away), Combe Down and Bathampton Down Mines SSSI (2,447 m away) and Brown's Folly SSSI (4,978 m away), and the Iford Manor maternity colony (over 250 individuals; 1.85 km south-east; the second-largest GHB maternity colony in England), all lie well within this commuting range.
- 5.2.2 Radio-tracking studies in comparable landscapes confirm the ecological value of the site's context. Duvergé and Jones (1994) found that adult GHB summer foraging areas were located within 3–4 km of maternity roosts, with a mean adult range of 2.2 km. More recent telemetry at the Brockley Hall Stables maternity roost (North Somerset and Mendip Bats SAC) — which has grown five-fold since 2001 — recorded adult bats regularly foraging up to 12 km from the roost,

illustrating that as populations recover they exploit a wider landscape (Foxley et al., 2025). Analysis of GHB foraging habitat use identifies the top five feeding areas as: cattle-grazed pasture (38.6%); ancient semi-natural woodland (16.6%); pasture with other stock (10.3%); meadows grazed by cattle in autumn (9.4%); and broadleaved woodland and other meadows (4.9%) (Duvergé & Jones, 1994). Tall, wide hedgerows are also documented as important for dispersal and, in some cases, foraging (Billington, 2000). The principal threats to GHB foraging habitat are identified as conversion of pasture to arable, intensive hedgerow management and reduction in cattle stocking — all of which reduce prey invertebrate abundance and diversity (North Somerset and Mendip Bats SAC SPD, April 2026).

- 5.2.3 Greater Horseshoe bats are assumed to use H1 and H2 as regular commuting and foraging features. The open field interior is assumed to be used at low density, reflecting its limited suitability as modified grassland relative to the preferred foraging habitats of this species.

Lesser Horseshoe Bat

- 5.2.4 Lesser Horseshoe bats are assessed as having a high likelihood of using the boundary hedgerows. The species specialises in foraging in cluttered environments - woodland, scrub and dense hedgerows - and is strongly light-averse. It typically ranges approximately 2 km from roosts. The connectivity of H1 and H2 to the wider hedgerow and woodland network of the Avon and Frome valleys makes regular use as commuting and foraging features a reasonable and precautionary assumption.
- 5.2.5 Radio-tracking of a Lesser Horseshoe Bat colony in North Somerset found a maximum foraging distance of 4.1–4.5 km and a mean maximum range of 2.2 km, with half of all foraging time spent within 600 m of the roost (Knight, 2006; Bontadina et al., 2002). Bontadina et al. (2002) recommended conservation management focus within 2.5 km of maternity roosts, with special consideration within 600 m. The primary foraging habitat for Lesser Horseshoe Bat is broadleaf woodland, where individuals often hunt high in the canopy; however, the species will also forage along hedgerows, tree-lines and well-wooded riverbanks, and landscapes containing a high proportion of woodland and grazed pasture linked by overgrown hedgerows are identified as most important (Schofield, 2008; Barataud et al., 2000). Woodland associated with wetland habitat is particularly favoured (Barataud et al., 2000). Rough grassland and scrub are identified as important predictors of micro-moth abundance, and long-sward grassland is recognised as a beneficial foraging habitat for LHB alongside woodland (North Somerset and Mendip Bats SAC SPD, April 2026).
- 5.2.6 Lesser Horseshoe bats are therefore assumed to use H1 and H2 as regular commuting and foraging features. Use of the open field interior is assumed to be low.

Bechstein's Bat

- 5.2.7 Bechstein's bats are a woodland specialist requiring mature semi-natural deciduous woodland with a closed canopy. The application site contains no woodland; its hedgerows are not directly connected to the mature woodland blocks (Midford Valley Woods, Inwood Warleigh, Cleaves Wood) that this species would typically inhabit. The likelihood of regular use is assessed as low.
- 5.2.8 Bechstein's bats are assumed to make occasional use of the boundary hedgerows as a commuting feature. Regular foraging use is not assumed.

5.3. Baseline Site Conditions

- 5.3.1 The modified grassland (g4, 1.57 ha) that comprises the open field is of limited foraging value for SAC qualifying bat species. The boundary hedgerows H1 and H2 are the principal bat-interest features at baseline. H2 (the western hedgebank) is

the most ecologically valuable feature on site, given its structural complexity, hedgebank character, native woody species diversity and connection to the surrounding habitats. The open field is likely used primarily by non-SAC species adapted to open-space foraging such as Noctules (*Nyctalus noctula*) and Common Pipistrelles (*Pipistrellus pipistrellus*) at low to moderate density.

Baseline Habitats

-  Red Line Boundary
-  Native hedgerow
-  Modified grassland

Date: 29-04-2026
Author: Peter Stocking
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Base map from Google Satellite © 2026, Airbus, Maxar Technologies.



0 50 100 m

Scale: 1:1500

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6. LIKELY SIGNIFICANT EFFECT - SCREENING ASSESSMENT

6.1. Effects Pathways

6.1.1 In accordance with People Over Wind (Case C-323/17), the LSE screening is conducted without reference to avoidance or mitigation measures. The effects pathways identified are set out in Table 6.1 below.

Table 6.1: Effects pathways considered at LSE screening stage

Effects Pathway	Description	SAC Features Potentially Affected
Hedge fragmentation	Creation of approximately 8 m gap in northern boundary hedge H1, disrupting linear commuting continuity	GHB, LHB, Bechstein's Bat
Foraging habitat change	Conversion of modified grassland to community farm habitats (growing beds, polytunnels, ecological corridor, orchard)	GHB, LHB
Artificial light pollution	Introduction of site-associated lighting onto commuting or foraging features	GHB, LHB, Bechstein's Bat
Construction disturbance	Noise, vibration and vegetation works adjacent to boundary hedgerows during construction	GHB, LHB, Bechstein's Bat

6.2. Screening Conclusion

6.2.1 On a precautionary, unmitigated basis, it is not possible to exclude a Likely Significant Effect on the qualifying features of the Bath and Bradford on Avon Bats SAC through the pathways of hedge fragmentation and construction phase disturbance. The absence of lighting and the net-positive habitat change are not taken into account at this stage in accordance with People Over Wind.

6.2.2 The Bath and Bradford on Avon Bats SAC is screened in for Appropriate Assessment. Mells Valley SAC is also screened in on a precautionary basis. This is a precautionary conclusion that triggers the requirement for Appropriate Assessment - it is not a finding that the development will harm either SAC.

7. MITIGATION AND DESIGN MEASURES

7.1. Retention of Boundary Hedgerows

- 7.1.1 Both H1 and H2 will be retained in their entirety throughout and after construction, except for the minimum access gap in H1 (approximately 8 m). Both features will be protected by fencing in accordance with BS 5837:2012 throughout construction. No pruning, cutting or earthworks within their root protection areas will be undertaken except as necessary for the access works.

7.2. Access Gap and Hopover Structure

- 7.2.1 A hopover structure will be installed at the access gap in H1. The hopover will comprise closely spaced native woody planting on both sides of the gap, ensuring a clear, unlit aerial corridor with vegetation rising to not less than 3 m on both sides within 3 m of the road edge. The detailed design and species specification will be agreed with Wiltshire Council's ecologist prior to commencement of access works and can be secured by condition.

7.3. Lighting Strategy

- 7.3.1 No artificial lighting is proposed anywhere on the application site or at the access, during construction or operation. The site and its access will remain dark at night in perpetuity. This is the primary design measure for SAC qualifying bat species and eliminates the principal risk factor identified in the scientific literature for light-averse horseshoe bats.

7.4. Habitat Enhancement

- 7.4.1 The proposed development replaces low-value modified grassland with a diverse agro-ecological mosaic. The ecological implications of this transformation for SAC qualifying species are assessed in detail in Section 8.

8. APPROPRIATE ASSESSMENT

8.1. Bath and Bradford on Avon Bats SAC

Greater Horseshoe Bat

Impact 1: Access gap in boundary hedge H1

- 8.1.1 The creation of a vehicular access through H1 introduces an approximately 8 m gap in an otherwise continuous linear commuting and foraging feature. The assessment of this impact is the central ecological question of this sHRA.



Figure 1: H1 from inside the site, with Church Lane to the left of frame

Nature and context of the gap

- 8.1.2 The gap is located in H1, which runs along the southern bank of Church Lane. Church Lane is a minor, unclassified rural lane with hedgerow vegetation on its northern margin, such that the open-air crossing from the perspective of a bat following the hedge line is limited to the width of the road surface itself: approximately 8 metres. There are street lights on Church Lane that illuminate

the road. At the point of the access, intact hedge continues on both sides, with comparable vegetation on the far side of the lane providing onward structural cues.



Figure 2: existing street lights on Church Lane

Published evidence on gap-crossing behaviour in *Rhinolophus* species

- 8.1.3 Pinaud et al. (2018) provides the most directly applicable quantitative evidence on gap-crossing by Greater Horseshoe bats. Using acoustic monitoring at hedgerow gaps of varying widths in western France, the study found that crossing probability declines below 50% at approximately 38 metres and becomes negligible above approximately 130 metres. A gap of 8 metres falls well below the threshold at which any measurable deterrence effect was observed; at this scale, crossing probability is essentially indistinguishable from that along an unbroken hedge. The authors confirm that short gaps within well-connected hedge networks are routinely used even without formal crossing structures.
- 8.1.4 Claireau et al. (2019) demonstrated that Greater Horseshoe bats follow narrow, predictable commuting routes and that crossing structures are effective when spatially aligned with those routes, confirming that crossing behaviour is not inhibited at short gaps in relatively dark, enclosed conditions. More broadly, Verboom and Huitema (1997) and Limpens and Kapteyn (1991) established that bats traverse small gaps within continuous hedgerow networks as a routine navigational behaviour, particularly where structural cues provide orientation on both sides.

The role of lighting

- 8.1.5 The scientific literature consistently identifies artificial light - rather than the physical gap itself - as the primary deterrent to horseshoe bat crossing at road junctions and hedge gaps. Stone et al. (2009) demonstrated experimentally that introduction of street lighting on confirmed Lesser Horseshoe bat commuting routes caused significant reductions in activity and delays to commuting, and that removal of lights restored activity to pre-treatment levels within the same night. Downs et al. (2016) confirmed that Lesser Horseshoe bats commute predominantly along dark hedgerow corridors and cross gaps in dark conditions as a regular behaviour. Fensome and Mathews (2016), in a meta-analysis of roads and bat activity, identified *Rhinolophus* species as particularly sensitive to artificial light at road crossings rather than to physical road width.

- 8.1.6 The access gap at Church Lane will be unlit. No artificial lighting is proposed at or near the access. The primary identified deterrent for SAC qualifying bat species is therefore absent.

Hopover structure

- 8.1.7 The committed hopover - dense native woody planting on both sides of the gap, guiding bat flight above road level - further reduces any residual navigational challenge. Hopover structures are a well-established and empirically supported mitigation measure for hedge gap crossings in the context of SAC bat species, as recognised in the BCT Good Practice Guidelines (Collins, 2023).

Assessment conclusion - access gap

- 8.1.8 Taking into account the short length of the gap (approximately 8 m, less than 7% of the 97.6 m H1 feature); the lane's context; continuous hedgerow on both sides of Church Lane; the published evidence that Greater Horseshoe bat crossing probability at gaps of this scale is essentially undiminished in the absence of lighting (Pinaud et al., 2018); and the committed hopover structure - it is concluded, beyond reasonable doubt, that the access gap will not materially impede the commuting or foraging activity of Greater Horseshoe bats along the northern boundary hedge, and that structural and functional continuity of the commuting corridor is maintained.

Impact 2: Habitat transformation within the site interior

- 8.1.9 The proposed development replaces modified grassland (g4, 1.57 ha) with a diverse community farm mosaic. This is assessed as a net benefit for Greater Horseshoe bat foraging.
- 8.1.10 The North Somerset and Mendip Bats SAC SPD (April 2026) — which contains relevant research — explicitly identifies wildflower meadow or semi-improved rough grassland managed for moths (long swards) and woodland/copses as valued replacement foraging habitats for horseshoe bats, scoring at least 6 in the Habitat Suitability Index (SPD Section B4.6). The SPD guidance on grassland creation states that the habitat "will need to be managed to produce a long sward to support an abundance of Noctuid moths, one of the main prey items hunted by Greater Horseshoe Bats" (SPD Section C6.3), and confirms that long-sward grassland is of equivalent benefit to Lesser Horseshoe Bat (SPD Section C6.12). Rough grassland and scrub are also identified as important predictors of micro-moth abundance for LHB. Habitat diversity — specifically the combination of grassland, scrub, hedgerow and woodland — is consistently identified in the scientific literature underpinning the SPD as producing the greatest invertebrate prey abundance for both species.
- 8.1.11 At baseline, the modified grassland (g4) scores approximately 3 in the Habitat Suitability Index (HSI) for horseshoe bats (North Somerset SPD; Somerset Bat

Guidance). The proposed habitats — the 5 m wildflower ecological corridor managed for moths and traditional orchard — score substantially higher (6 or above) in the same index, representing a quantifiable improvement in the foraging resource available to SAC qualifying species within the site boundary. The no-dig and minimum tillage growing areas further contribute invertebrate diversity through high soil organic matter and year-round vegetation cover. The net effect of the habitat transformation is an increase in the quality and diversity of accessible foraging habitat, directly supporting the Conservation Objectives of the Bath SAC.

- 8.1.12 This positive impact is relevant to the Conservation Objectives of the Bath SAC, which require the maintenance of the structure, function and supporting processes of the habitats of qualifying species. The proposals contribute to rather than detract from the extent and quality of accessible foraging habitat in this landscape unit. The new native hedgerow along the eastern edge of the site will additionally enhance structural connectivity for commuting bats.

Impact 3: Artificial lighting

- 8.1.13 No artificial lighting is proposed. This pathway is not engaged. The site and its access will remain dark at night (except for any ambient illumination from the existing street lights) in perpetuity, consistent with the existing character of Church Lane.

Impact 4: Construction phase disturbance

- 8.1.14 Construction will be limited to daytime hours. Boundary hedgerows will be protected by fencing throughout. Construction lighting will be managed to prevent spill onto H1 and H2. The duration of works at the hedge for access formation will be short. Construction phase disturbance is not assessed as giving rise to any lasting impact on Greater Horseshoe bats' use of the site.

Assessment conclusion: Taking into account the committed mitigation and design measures, it is concluded that the proposed development will not adversely affect the integrity of the Bath and Bradford on Avon Bats SAC with respect to the qualifying feature of Greater Horseshoe bats. The net impacts on the extent, structure, function and supporting processes of the habitats used by Greater Horseshoe bats are assessed as neutral to beneficial.

Lesser Horseshoe Bat

- 8.1.15 The access gap assessment for Lesser Horseshoe bats is substantively identical to that for Greater Horseshoe bats. Stone et al. (2009) used Lesser Horseshoe bats as the focal species in the key experimental study on street lighting and commuting bats, confirming both the species' sensitivity to artificial light and, by implication, its ability to cross short unlit gaps as a regular behaviour. Downs et al. (2016)

provides direct evidence of gap-crossing by Lesser Horseshoe Bat at scales considerably larger than the proposed 8 m gap in dark conditions.

- 8.1.16 The habitat transformation is assessed as particularly beneficial for Lesser Horseshoe bats. The proposed traditional orchard provides the structurally complex, cluttered foraging microhabitat characteristic of the woodland and woodland-edge habitats that both horseshoe species favour. Woodland micro-moth abundance — a key prey resource for LHB — is positively related to the density of native trees and understorey cover, with compact woodland patches supporting higher populations of woodland micro-moth species (SPD Section C6.9). Traditional orchard, with its diverse native fruit tree canopy, understorey scrub layer and rough grassland floor, replicates these structural characteristics. Providing "a variety of types of vegetation from trees to shrubs and rough grass will also benefit Lesser Horseshoe bats" (SPD Section C6.9).
- 8.1.17 The 5 m wildflower ecological corridor and the no-dig and minimum tillage growing areas further contribute to year-round invertebrate diversity. The net effect on foraging habitat available to Lesser Horseshoe Bat within the site boundary is clearly positive.

Assessment conclusion: Taking into account the committed mitigation and design measures, it is concluded that the proposed development will not adversely affect the integrity of the Bath and Bradford on Avon Bats SAC with respect to the qualifying feature of Lesser Horseshoe Bat. The habitat transformation is assessed as beneficial for this species.

Bechstein's Bat

- 8.1.18 As noted in Section 5.2.3, the likelihood of regular use of the application site by Bechstein's bats is low. On a precautionary basis, the access gap assessment is nevertheless applied. Bechstein's Bat, while predominantly a woodland interior species, is known from radio-tracking studies to commute along linear landscape features and to cross open areas including well-lit roads under some circumstances. A short, dark, unlit gap of 8 m with hedgerow on both sides of the road would not constitute a barrier for a species capable of such movements.
- 8.1.19 The habitat transformation is neutral for Bechstein's bats. Neither the modified grassland baseline nor the community farm habitats represent productive Bechstein's Bat foraging territory. The traditional orchard may provide some marginal benefit as a foraging margin habitat as it matures over the long term.

Assessment conclusion: Taking into account the committed mitigation and design measures, it is concluded that the proposed development will not adversely affect the integrity of the Bath and Bradford on Avon Bats SAC with respect to the qualifying feature of Bechstein's Bat.

8.2. Mells Valley SAC

- 8.2.1 Mells Valley SAC (qualifying feature: Greater Horseshoe bat maternity roost) lies approximately 12-15 km to the south of the application site, well beyond the typical foraging range of Greater Horseshoe Bat from any known roost in this landscape. No functional connection between the application site and the Mells Valley SAC population has been identified. The committed measures - retention of boundary hedgerows, no night-time lighting, and positive habitat enhancement - further eliminate any residual pathway. No meaningful adverse effect pathway between the proposed community farm and the Mells Valley SAC qualifying feature can be identified.

Assessment conclusion - Mells Valley SAC: It is concluded that the proposed development will not adversely affect the integrity of Mells Valley SAC.

8.3. In-Combination Assessment

- 8.3.1 The in-combination assessment considers whether the proposed development, together with other plans or projects, could adversely affect the integrity of any relevant European Protected Site (Regulation 63(5)).
- 8.3.2 The application site is a small field (approximately 1.7 ha) proposed for conversion to a community farm. The sole structural impact is an 8 m gap in a 97.6 m hedgerow, mitigated by hopover planting. The development introduces no artificial lighting and creates net-positive foraging habitat. In the context of cumulative pressures on the Bath SAC qualifying features - primarily incremental light spill from development within the bat consultation zone - the proposed development contributes net benefit rather than net harm. No other committed or proposed development in close proximity to the application site has been identified that would combine with it to give rise to a cumulative adverse effect.

In-combination conclusion: It is concluded, beyond reasonable doubt, that the proposed development will not adversely affect the integrity of the Bath and Bradford on Avon Bats SAC or Mells Valley SAC in combination with other plans or projects.

9. CONCLUSIONS

9.1.1 This Shadow Habitats Regulations Assessment has assessed the proposed community farm at Land at Church Lane, Limpley Stoke, Wiltshire against the qualifying features of the Bath and Bradford on Avon Bats SAC and, on a precautionary basis, of Mells Valley SAC. The conclusions are summarised in Table 9.1 below.

Table 9.1: Summary of HRA conclusions

Stage / Site	Conclusion	Key Basis
LSE - Bath SAC	Likely Significant Effect cannot be excluded (unmitigated basis)	Precautionary; People Over Wind (C-323/17)
LSE - Mells Valley SAC	Likely Significant Effect cannot be excluded (precautionary basis)	Screened in precautionarily; no functional pathway identified
AA - Bath SAC (GHB)	No Adverse Effect on Site Integrity - beyond reasonable doubt	8 m gap <7% of H1; crossing probability unaffected at this scale (Pinaud et al. 2018); hopover committed; habitat net positive
AA - Bath SAC (LHB)	No Adverse Effect on Site Integrity - beyond reasonable doubt	As GHB; orchard, ecological corridor and new eastern hedgerow beneficial for LHB; lighting is key deterrent not gap per se (Stone et al. 2009)
AA - Bath SAC (Bechstein's)	No Adverse Effect on Site Integrity - beyond reasonable doubt	Low likelihood of use; gap not a barrier in dark conditions; habitat change neutral
AA - Mells Valley SAC	No Adverse Effect on Site Integrity - beyond reasonable doubt	No functional pathway; site beyond foraging range of Mells Valley population

Stage / Site	Conclusion	Key Basis
In-combination	No Adverse Effect on Site Integrity - beyond reasonable doubt	Net-positive development; no cumulative adverse pressure on SAC qualifying features

9.1.2 These conclusions are contingent upon implementation of the following committed measures, to be secured by condition:

- Retention of H1 and H2 in their entirety other than the minimum access gap;
- Installation of an agreed hopover structure at the access gap (design to be agreed and approved prior to commencement);
- No artificial lighting on the site or access, in perpetuity;
- Planting of a new mixed native hedgerow along the eastern edge of the site; and
- An Ecological Construction Management Plan and a Habitat Management Plan for the wildflower ecological corridor, orchard and growing areas.

Overall Conclusion: On the basis of this Shadow Habitats Regulations Assessment, and taking into account the committed mitigation and design measures described herein, Bengrove concludes, beyond reasonable doubt, that the proposed community farm at Land at Church Lane, Limpley Stoke would not adversely affect the integrity of the Bath and Bradford on Avon Bats SAC or Mells Valley SAC, either alone or in combination with other plans or projects. Wiltshire Council is respectfully requested to adopt this shadow assessment as the basis for its statutory Appropriate Assessment and to conclude accordingly.

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