

Ecological Impact Assessment

Land at Misselbrook Lane, North Baddesley

January 2023

A report by

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Report details

Site address: Land at Misslebrook Lane, North Baddesley, Hampshire
Grid reference: SU 40099 19510
Report date: 9th January 2023
Report author: Colin Hicks BSc (Hons) MCIEEM

Report reference: WOR 3459.1

Declaration of compliance

BS 42020:2013

This study has been undertaken in accordance with British Standard 42020:2013 Biodiversity, Code of Practice for Planning and Development.

Code of Professional Conduct

The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

Validity of survey data and report

The findings of this report are valid for 24 months from the date of the supporting surveys.

Revisions

Date	Report no:	Comment
09/01/2023	WOR 3459.1	Initial draft

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1. Introduction

1.1. Background

Western Ecology has been commissioned to complete an Ecological Impact Assessment in relation to a proposed battery site, access and cable route for an area of land close to Misselbrook Lane, near North Baddesley, Hampshire.

1.2. Purpose of this report

A preliminary ecological appraisal was completed in September 2022.

This report presents the ecological information relating to valued ecological receptors obtained during those surveys and the desk-study, assesses the significance of the effects of the proposed development on these features, and sets out proposed mitigation measures.

This report also assesses the effect of changes in habitat management and additional plantings associated with the development.

This report is intended to be used to inform consultees of the potential ecological impacts and proposed mitigation in relation to this development.

1.3. Site location

The site surveyed is situated in close to the village of North Baddesley and includes a cable route that runs north along Misselbrook Lane, east along Castle Lane, east along Templars Way and finishes on Bournemouth Road, Chandlers Ford, Hampshire.

2. Assessment methodology

2.1. Development site and Zone of Influence

The Development Site is shown on Map 1 and includes all areas within the planning application boundary and any immediately adjacent areas that may be affected by the proposed development.

The Zone of Influence for the purpose of this assessment is immediate habitats that will be potentially impacted by these proposals and designated sites within the local landscape.

Records for notable species were searched for within 1km as most species likely to be active here (other than birds) will have a restricted range.

2.2. Ecological baseline

The ecological baseline for the development site is the preliminary ecological appraisal completed in September 2022.

2.3. Site surveys

Preliminary Ecological Appraisal

A Preliminary Ecological Appraisal of the site was completed by Chris Ayre, BSc (Hons).

The survey was completed on 19th September 2022, between 12:00pm and 15:00pm. The weather had 50% cloud cover and sunny spells, an air temperature of 18.3°C, and a 2mph N wind.

Habitats were classified using the Phase 1 Habitat Survey methodology developed by the Joint Nature Conservation Committee (JNCC, 2010) and modified by the Institute of Environmental Assessment (IEA, 1995). The main plant species were recorded, and broad habitat types mapped. Habitats encountered are described within the Results section, with a map included within the report. Plant species were identified according to Stace (1997).

Desktop survey

The desktop survey collated existing biological records for the site and adjacent areas, and identified any nature conservation sites that may be affected by the proposals. This comprises an important part of the assessment process, providing information on ecological issues that may not be apparent during the site survey.

Consultees for the data search included:

- Hampshire Biological Records Centre provided biological records for protected/notable species and non-statutory sites within 1km of the site.
- Natural England - GIS dataset of SSSI Impact Risk Zones, statutory nature conservation sites.

Species data was examined for protected and notable species records. An assessment was then made, based on known habitat preferences, as to whether these species might be present within the site and how they might be affected by the proposal.

The location of nature conservation sites was examined to determine their ecological and landscape relationships with the proposed site. An assessment was then made of how the sites may be affected by the proposal, taking into account these relationships, and the species and/or habitat types for which the nature conservation site was chosen.

SSSI Impact Risk Zones are areas where the proposed planned change to the environment could either create significant damage to a local SSSI, or might require additional planning and consultation in order to avoid impacting such sites. The assessments are made according to the particular sensitivities of the features for which the SSSI is notified, and specifies the types of development that have the potential for adverse impacts.

In compliance with the terms and conditions relating to its commercial use, the full desk study data is not provided within this report.

2.4. Limitations

All areas of the assessment site were readily accessible during surveys. However, it must be realized that surveys only provide a snapshot of a site at a given time.

Although some plant species would have not been visible during the preliminary ecological appraisal, this is not considered a significant constraint as further botanical surveys were completed along reens during the optimal survey period.

2.5. Impact assessment method

The assessment of impacts has been carried out in accordance with the principles described by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018¹).

The ecological feature or resource that is affected by an impact is referred to as the receptor. Impacts are considered in terms of the value of the receptor in the context of nature conservation, and the character of the impact. From these the significance of the impact is determined.

As part of the impact assessment the available means to avoid, minimise or mitigate for adverse impacts are incorporated into the design, so that the final impact assessment identifies the residual (net) impacts that are predicted. The consequences for development control, policy guidance and legislative compliance can then be identified.

2.6. Method for valuation of receptors

The ecological value of habitats present is provided in line with Guidelines for Ecological Impact Assessment (CIEEM, 2018), and those which are important in terms of legislation or policy are identified. Table 1 summarises this information and details the extent of each habitat recorded here.

¹ CIEEM, 2018. *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Technical Guidance Series*. Chartered Institute of Ecology and Environmental Management, 43 Southgate Street, Winchester, Hampshire.

The nature conservation value, or potential value, of the habitat is determined within the following geographic context:

- International importance (e.g. internationally designated sites such as Special Areas of Conservation, Special Protection Areas, Ramsar sites);
- National importance (e.g. nationally designated sites such as Sites of Special Scientific Interest or species populations of importance in the UK context);
- County importance (e.g. SNCI, habitats and species populations of importance in the context of Hampshire);
- Local importance (e.g. important ecological features such as old hedges, woodlands, ponds);
- Site importance (e.g. habitat mosaic of grassland and scrub which may support a diversity of common wildlife species);
- Negligible importance. Usually applied to areas such as built development or areas of intensive agricultural land.

The examples are not exclusive and are subject to further professional ecological judgment.

2.7. Impact Assessment Criteria

The assessment of potential impacts arising due to the development considers on-site impacts (i.e. within the footprint of the works) and those that may occur to adjacent and more distant ecological features.

Potential effects on valued receptors, adverse or positive, are identified for both the construction and operational phases. The effects are then assessed and characterised according to the following criteria:

- Direction (positive, adverse, or neutral)
- Magnitude of impact
- Spatial extent over which the impact would occur
- The temporal duration of the impact
- Permanence
- Frequency and timing
- Potential for cumulative effects.

The assessment identifies any information gaps and any uncertainties that may be material in the confidence of predicting effects. Confidence in predictions is given as:

- Certain/near-Certain: probability estimated at 95% chance or higher.
- Probable: probability estimated above 50% but below 95%.
- Unlikely: probability estimated above 5% but less than 50%.
- Extremely Unlikely: probability estimated at less than 5%.

The precautionary principle is applied whenever there is substantial doubt. The impact timescale is given as:

- Acute, immediate, and discrete;

- Short-term: 0-3 years;
- Medium term 3-10 years; and
- Long term: 10 years +.

Effects include, but are not restricted to:

- loss or change of habitat;
- disturbance during construction, operation, and decommissioning;
- chemical effects from airborne pollutants
- contravention of legal status or protection (including where the receptor would not meet or exceed the value threshold).

For the purposes of this assessment the significance of the effect is determined using the matrix in Table 1 where the scale of the effect is measured against the value of the receptor.

Ecologically significant impact is defined as an impact (negative or positive) on the integrity of a defined site or ecosystem and/or the conservation status of habitats or species within a given geographical area. For the purposes of this assessment the effects that are identified in red shaded cells are significant.

Table 1. Matrix for assessment of significance of effect

Scale of effect	Evaluation of nature conservation receptor				
	Very high/ International	High/ national	Medium/ regional	Low/ local	Negligible/site only
Major positive effect	Large positive	Large positive	Large positive	Large positive	Large positive
Intermediate positive effect	Moderate positive	Moderate positive	Moderate positive	Moderate positive	Moderate positive
Minor positive effect	Slight positive	Slight positive	Slight positive	Slight positive	Slight positive
Neutral	None	None	None	None	None
Minor negative effect	Slight adverse	Slight adverse	Slight adverse	Slight adverse	None
Intermediate negative effect	Large adverse	Large adverse	Moderate adverse	Slight adverse	None
Major negative effect	Very large adverse	Very large adverse	Large or moderate adverse	Slight adverse	None

European Protected Sites– definition of significance of effect

For a European Protected Site the integrity of a site is:

‘the coherence of the ecological structure and function across its whole area that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified.’

Disturbance should not have a significant effect on the integrity of a European Protected Site.

2.8. Mitigation

Where there is potential that the proposed development will have a significant effect on a valued ecological feature of nature conservation interest, recommendations for mitigation are made based on the mitigation hierarchy suggested in Paragraph: 018 Reference ID: 8-018-20140306 of National Planning Practice Guidance;

- Avoidance –significant harm to wildlife species and habitats should be avoided through design.
- Mitigation – where significant harm cannot be wholly or partially avoided, it should be minimised by design, or by the use of effective mitigation measures that can be secured by, for example, conditions or planning obligations.
- Compensation – where, despite whatever mitigation would be effective, there would still be significant residual harm, as a last resort, this should be properly compensated for by measures to provide for an equivalent value of biodiversity.

1 Geffery Close
Landrake
Saltash
Cornwall
PL12 5HA

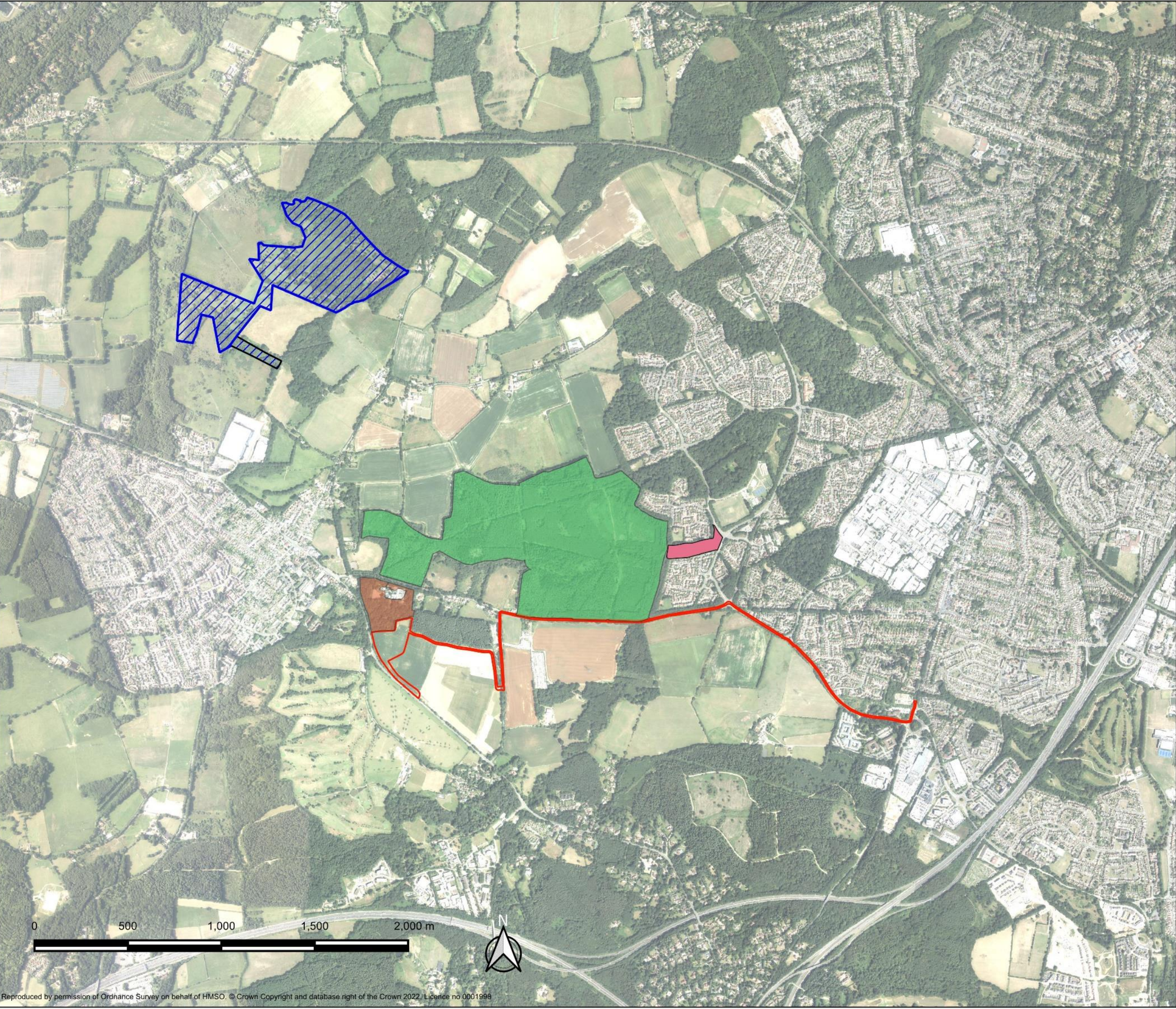
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- Legend**
- Valley Park Woodlands LNR
 - Great Covert SINC
 - Wren's Copse SINC
 - Emer Bog SAC
 - Baddesley Common and Emer Bog SSSI
 - Assessment site

Title: Map 1. Nearby statutory and non-statutory nature conservation sites

Project: Missilebrook BESS

Checked by: CDH Version: 01
Date: 05/01/2023



4. Legislation and Policy used to assess ecological receptors

4.1. Planning policy

National Planning Policy Framework, 2021

The National Planning Policy Framework sets out the Government's planning policies for England and how these are expected to be applied. It contains a number of policies relating to ecology including "minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures".

Section 15 Conserving and enhancing the natural environment includes the following:

- 174. Planning policies and decisions should contribute to and enhance the natural and local environment by:
 - a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
 - b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
 - c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
 - d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
 - e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
 - f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.
- 175. Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework⁵³; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.
- 180. When determining planning applications, local planning authorities should apply the following principles:
 - a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

- b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity

National Planning Practice Guidance 2014

This online resource provides guidance on the Natural Environment and its place with the planning process, including:

- The statutory basis through which planning should seek to minimise impacts on biodiversity and provide net gains in biodiversity where possible.
- How local planning authorities should set about planning for biodiversity and geodiversity.
- Information on ecological networks
- Evidence based ecology
- The legal obligations on local planning authorities and developers regarding European sites designated under the Birds or Habitats Directives, protected species and Sites of Special Scientific Interest
- Why Local Sites are important
- Taking ecosystems services into account in planning
- Nature Improvement Areas
- Taking biodiversity into account in preparing a planning application
- How development can protect and enhance biodiversity
- What questions should be considered in applying policy to avoid, mitigate or compensate for significant harm to biodiversity
- Ensuring mitigation or compensation measures can be delivered where significant harm to biodiversity is unavoidable.

Test Valley Local Plan 2011-2029

The local plan states:

The Council will seek to avoid any net loss of biodiversity across the Borough and will pursue opportunities to enhance the environment in line with the objectives of the Natural Environment White Paper 'The Natural Choice'. It will also be important to ensure that regard is given to the implications of a changing climate, to ensure that habitats are protected and enhanced to support their resilience to such changes.

4.2. Nature Conservation Legislation

[European Habitats and Species Directive \(CEC, 1992\)](#)

The main aim of the Habitats Directive is to promote the maintenance of biodiversity by requiring Member States to take measures to maintain or restore natural habitats and wild species listed on the Annexes to the Directive at a favourable conservation status, introducing robust protection for those habitats and species of European importance.

[The Wildlife and Countryside Act \(WCA\) 1981 \(as amended\)](#)

This Act is the primary legislation that protects animals, plants and certain habitats in the UK. This includes the designation and protection of some of the best areas of natural environmental as Sites of Special Scientific Interest (SSSI).

[The Conservation of Habitats and Species Regulations 2017](#)

The Conservation of Habitats and Species Regulations 2017 consolidate all the various amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994 in respect of England and Wales. The 1994 Regulations transposed Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) into national law.

The Regulations place a duty on the Secretary of State to propose a list of sites which are important for either habitats or species. These sites form a network termed Natura 2000 and include Special Areas of Conservation (SAC) and Special Protection Areas (SPA).

[Protection of Badgers Act 1992](#)

The Protection of Badgers Act 1992 consolidated and improved previous legislation. Under the Act it is an offence to kill, injure or take a Badger, or to damage or interfere with a sett used by a Badger unless a licence is obtained from a statutory authority.

[The Hedgerow Regulations 1997](#)

The Hedgerows Regulations 1997 protect certain hedgerows from being removed (uprooted or destroyed) if they meet certain criteria.

[The Countryside and Rights of Way \(CROW\) Act 2000](#)

This Act increases measures for the management and protection for Sites of Special Scientific Interest (SSSI) and strengthens wildlife enforcement legislation.

[Circular 06/2005 Biodiversity and geological conservation – statutory obligations and their impact within the planning system](#)

This circular provides administrative guidance on the application of the law relating to planning and nature conservation as it applies in England. It complements the national planning policy in the National Planning Policy Framework and the Planning Practice Guidance.

[Natural Environment and Rural Communities Act 2006](#)

The Act made amendments to the both the Wildlife and Countryside Act 1981 and the Countryside and Rights of Way (CROW) Act 2000. For example, it extended the CROW biodiversity duty to public bodies and statutory undertakers.

4.3. Biodiversity strategies

UK Post-2010 Biodiversity Framework, 2012

The 'UK Post-2010 Biodiversity Framework', published in July 2012, succeeds the UK BAP and 'Conserving Biodiversity – the UK Approach', and is the result of a change in strategic thinking.

The natural choice: securing the value of nature (2011) (Natural Environment White Paper)

This White Paper outlines the Governments vision for the future of landscape and ecosystem services.

Biodiversity 2020

This is a national strategy for England's wildlife and ecosystem services based on the White Paper.

County Level

The Biodiversity Action Plan for Hampshire has applied the principles of the UK Priority Habitat and Species Plan at county level and has published lists of Priority Species and Priority Habitats for the area. The listed species and habitats are those which will be the target of conservation actions.

Local Wildlife Sites

These are not statutory designation like SSSIs, and they do not have any legal status. The National Planning Policy framework (NPPF) requires local authorities to identify and map locally designated sites of biodiversity importance (such as Local Wildlife Sites) as part of the Local Plan process and to draw up criteria based policies against which proposals for development affecting them will be judged. LWS recognition does not demand any particular actions on the part of the Landowner and does not give the public rights of access. However, it may increase eligibility for land management grants.

5. Ecological baseline

5.1. Desktop Study

Statutory nature conservation sites

There are two statutory sites of nature conservation value that are located within 2 km of the site (Map 1).

Emer Bog SAC

Emer Bog lies 1700m to the NW and comprises a wet infilled hollow on the developed eastern hinterland of the New Forest. Apart from scattered willow *Salix* scrub, it is largely open, and dominated by bottle sedge *Carex rostrata* and marsh cinquefoil *Potentilla palustris*, with frequent common cottongrass *Eriophorum angustifolium*, and occasional pools with bogbean *Menyanthes trifoliata*. White sedge *Carex curta* and the bog-mosses *Sphagnum fimbriatum* and *S. squarrosum* become common at the edge of the bog, with the rushes *Juncus effusus* and *J. acutiflorus*. There are also patches of common reed *Phragmites australis*. The basin is surrounded by more mature willow *Salix* woodland and open heathland.

Receptor evaluation: Emer Bog SAC is of International (European) value.

Baddesley Common and Emer Bog SSSI

This site is 1700m to the north west and comprises an extensive valley bog together with associated damp acidic grassland, heathland and developing woodland over Bracklesham Beds in the Hampshire Basin.

The assessment site is not within a SSSI impact risk zone for the type of development proposed here. Baddesley Common and Emer Bog SSSI underpins Emer Bog SAC.

Receptor evaluation: Baddesley Common and Emer Bog SSSI is of National value.

Valley Park Woodlands Local Nature Reserve (LNR)

This LNR is located 280m to the north of the cable route and comprise ancient woodlands which cover approximately 40 hectares feature a mix of restored coppice, woodland rides, open glades, ponds and rough grassland. The woods are a valuable resource of flora and fauna.

Receptor evaluation: Valley Parks LNR is of County (Hampshire) value.

Non-statutory nature conservation sites

Woodland to the north of the battery site is part of Wren's Copse Site of Importance for Nature Conservation (SINC), whilst woodland to the north of the cable route is part of Great Covert SINC (Map 1).

Receptor evaluation: SINC are of County (Hampshire) value.

Records of notable Species

The biological records search found a number of notable species within the geographical parameters of the search (1km). Due to the broad scale of many records, it is not possible to determine if they relate to the Site.

Table 2. Notable species (LBAP, Principal Importance, Amber and Red Birds (BoCC), NERC Act or protected species)

Species group	Common name	Number of records
Birds	Barn Owl	12
	Black Redstart	1
	Brambling	9
	Common Redpoll	2
	Crane	1
	Crossbill	7
	Cuckoo	2
	Dotterel	1
	Firecrest	18
	Goshawk	2
	Golden Plover	1
	Grasshopper Warbler	2
	Great Black-backed Gull	1
	Greenshank	1
	Grey Heron	6
	Grey Wagtail	4
	Hawfinch	1
	Hen Harrier	1
	Herring Gull	3
	Hobby	7
	Honey Buzzard	1
	House Sparrow	8
	Kingfisher	7
	Lapwing	5
	Lesser Black-backed Gull	2
	Lesser Redpoll	8
	Lesser Spotted Woodpecker	3
	Little Egret	2
	Little Ringed Plover	1
	Linnet	3
	Marsh Harrier	1
	Marsh Tit	4
	Mediterranean Gull	1
	Mistle Thrush	7
	Nightjar	9
	Nightingale	2
	Peregrine Falcon	7
	Ortolan Bunting	1
	Osprey	3
	Oystercatcher	2
	Purple Heron	1
	Reed Bunting	7
	Red Kite	10
	Redstart	3
	Redwing	12
	Siskin	14
	Song Thrush	9
	Spotted Crake	1
	Spotted Flycatcher	6
	Skylark	3
	Starling	9
	Tree Pipit	7
	Turtle Dove	1
	Wheatear	4
	Whinchat	1
	Whitethroat	1

	Woodcock	13
	Wryneck	1
	Yellowhammer	1
	Yellow Wagtail	2
Invertebrates	Alder Leaf Beetle	1
	Apple-blossom Weevil	2
	Barred Umber	1
	Blood-vein	2
	Bordered Gothic	1
	Brindled Beauty	2
	Broom Bent-wing	1
	Broom Moth	1
	Buff Ermine	3
	Centre-barred Sallow	1
	Cinnabar	7
	<i>Coeliodes ruber</i>	2
	Common Darter	3
	Dark Green Fritillary	1
	Deep-brown Dart	1
	<i>Demetrias imperialis</i>	2
	Downy Emerald	1
	Double-line	1
	Dusky Brocade	1
	Ear Moth	2
	<i>Elodes minutus</i>	2
	Engrailed	3
	False Cacao Moth	1
	Festoon	2
	Figure of Eight	1
	Forester	2
	Ghost Moth	1
	Gold-four Argent	1
	Grayling	1
	Green-brindled Crescent	1
	Grey Dagger	1
	<i>Gyrophana hanseni</i>	2
	Hedge Rustic	2
	Knot Grass	5
	Lackey	1
	Lead-coloured Drab	1
	Minor Shoulder-knot	2
	Mint Bent-wing	1
	Mottled Rustic	3
	Mouse Moth	1
	Narrow-bordered Bee Hawk-moth	1
	Oak Hook-tip	3
	Ochreous Pug	1
	<i>Ophonus ardosiacus</i>	2
	Poplar Lutestring	1
	Powdered Quaker	2
	Purple Emperor	3
	Red Wood Ant	2
	<i>Rhagonycha lutea</i>	2
	Rivulet	2
	Rosy Rustic	3
	Rustic	3
	Sallow	2
	Scarce Grass-veneer	2
	Scarce Umber	1
	September Thorn	2
	Silver-washed Fritillary	15

	Slender-horned Leatherbug	1
	Small Emerald	2
	Small Heath	2
	Small Phoenix	5
	Shoulder-striped Wainscot	3
	Small Square-spot	2
	Spinach	1
	Sprawler	2
	Stag Beetle	3
	<i>Telmatophilus typhae</i>	2
	Wall	1
	White Admiral	11
	White Ermine	3
	White-shouldered Sober	1
	Woundwort Pearl	1
	Yellow-barred Gold	1
Mammals	Brown Long-eared bat	5
	Common Pipistrelle	7
	European Water Vole	2
	Eurasian Otter	1
	Long-eared Bat species	2
	Roe Deer	1
	Pipistrelle Bat species	8
	Noctule Bat	4
	Serotine	3
	Soprano Pipistrelle	2
	West European Hedgehog	7
	Western Barbastelle	1
Plants	Bent-leaved Beard-moss	1
	Butchers-broom	4
	Common Cottongrass	1
	Corn Marigold	1
	Large-flowered Hemp-nettle	1
	Lesser Spearwort	9
	Lesser Striated Feather-moss	1
	Lousewort	1
	Pennyroyal	1
	Prince-of-Wales Feather-moss	1
	<i>Ranunculus flammula</i> subsp. <i>flammula</i>	1
	Stinking Chamomile	2
	Strawberry Clover	1
	Tall-clustered Thread-moss	1
Lichens	Lepraria nivalis	1
Reptiles	Adder	8
	Common Lizard	2
	Grass Snake	2
	Slow worm	3

5.2. The need for an appropriate assessment

An appropriate assessment is required by Regulation 48 of the Habitats Regulations 1994 implementing Article 6(3) of the Habitats Directive (92/43/EEC) in the event that it is considered a plan or project, not connected with the management of that site, is likely to

have a 'significant effect' on any European (Natura) site, i.e. Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar sites.

The purpose of appropriate assessment is to ensure that protection of the integrity of European sites is a part of the planning process at a regional and local level. Permission can only be granted if it can be ascertained that the plan or project will not affect the integrity of the European site.

It is appropriate to use the information assembled for this EclA when carrying out the appropriate assessment under the Habitats Regulations.

Emer Bog SAC is located 1700m from the assessment site and is underpinned by Baddesley Common and Emer Bog SSSI.

The assessment site is not within a SSSI impact risk zone for the type of development proposed here. Adverse effect on Emer Bog SAC can be discounted and an Appropriate Assessment is not required.

5.3. Habitats of the site

Habitats within the assessment site have been assessed for their biodiversity value this is given in Table 3. A habitat map is provided in Appendix I.

Table 3. Phase 1 habitats

Habitat type	Description	Receptor evaluation
Broad-leaved woodland (bordering site)	The site borders several areas of woodland, including ancient woodland and replanted ancient woodland. Further east along the proposed cable route, the woodland reduces into strips and into scattered trees bordering the road as it enters Chandlers Ford. Species include Oak, Ash, Hawthorn, Birch, Gorse, Blackthorn, Bracken, Ivy, and Hazel.	Local Habitat of principal importance and local biodiversity action plan priority habitat Included on the Ancient Woodland register.
Intact hedge and trees, native species rich Intact hedge, species poor	The main field that encompasses the battery site is surrounded with hedgerow of varying quality and composition. The hedgerow bordering the cable route is similarly varied, with hazel stands along the cycle track and more traditional hedgerow with scattered trees bordering farmland to the south. As the cable route enters Chandlers Ford, the hedgerow gradually turns more ornamental. Species include Oak, Plum, Blackthorn Ash, Bramble Nettles, Ivy, Elder, Bracken, Hazel, Rose, Turkey Oak, Leyland Conifer, Hogweed, Horse Chestnut, Common Dogwood, Beech, Field Maple, Holly, Cherry Laurel, Pussy Willow, Sweet Chestnut, Privet, Cotoneaster, Austrian Pine and Snowberry.	Local Habitat of principal importance and local biodiversity action plan priority habitat
Tall ruderal	Some tall ruderal is present at the entrance to the field in the east and surrounds the track that bisects the field. There is also some ruderal growth along the edge of the southern/western part of the main field and surrounding some spoil heaps which are found on the southern entrance to the bisecting field track. Species include Curly	Site

	Dock, Field Thistle, Bristly Ox-tongue, Common Bent, Autumn Lady's Tresses, Creeping Buttercup, Nettles, False Oat and Yorkshire Fog.	
Improved grassland	The main field is grassland which is cut for turf. The grass was cut quite short at time of survey and few species were recorded within. Species include Perennial Rye-grass, False Oat, Yorkshire Fog, Yarrow and Creeping Buttercup.	Negligible
Scrub	There is scrub close to the eastern entrance of the field and is growing into the hedgerow and is matching its height in places. Species include Buddleia, Bramble, Dog Rose, Nettles, Dock, Hawkbitt, Rowan, Field Maple, Ash and Horse Chestnut.	Site
Roadside verges	Areas of maintained grassland and herbs at roadside verges. These include some planted areas of wildflowers. Species include Yarrow, Dandelion, Perennial Rye-grass, Yorkshire For, Meadowgrass, Cocks-foot, Ribwort Plantain, Common Poppy, Lambs Quarters, Knapweed, Birds-foot Trefoil and Fennel. Scattered within the verges were occasional bramble and Bracken.	Site
Introduced shrubs	Areas of ornamental shrubs and trees used as amenity landscaping in front of residential and business properties. Species include Cotoneaster, Snowberry, Fuchsia, Austrian Pine and Privet.	Negligible

5.4. Species of nature conservation importance

Habitats have been assessed from the results of the field survey for their potential to support the following protected species. Where there is no potential for a species or species group to be present within the site, or where habitats with the potential to support this species or species group will not be impacted by the proposals, they may be scoped out at this stage.

Table 4. Potential for species of nature conservation importance

Species/Taxon	Assessment	Assessment site value
Amphibians	GCN has been recorded less than 1km to the north of the westernmost extent of the cable. No ponds lie within the site boundary but there is one within woodland just to the north of the battery site area. It is possible that GCN are present in boundary vegetation, ruderal-dominated roadside verges, woodland, and hedgerow.	Site
Badgers	No setts or evidence of Badger activity was found. However, it likely that Badgers use the site for commuting and foraging.	Site
Bats	Tree and hedgerow habitats surrounding the main body of the site provide opportunities for foraging and commuting bats, with the local surroundings providing good foraging and commuting habitat for bats that is largely unlit. Managed grassland habitat has little potential for foraging bats. The cable route leads into suburban areas and increasing light and noise disturbance will reduce the number and frequency of bat populations using the hedgerows and trees.	Site
Birds	Hedgerows, scrub and trees offer suitable nesting habitat to common and widespread species. Ground nesting birds are unlikely to be present in managed grasslands as the field size is limited and the ground is regularly disturbed	Site

Common Dormouse	Dormice have been recorded within a kilometre of part of the site. While the hedgerows found bordering the site vary in quality and with some parts very close to highways, there is potential for dormice to be present in some of the hedgerows.	Site
Reptiles	The managed grassland habitat is cut and managed, with little potential for reptiles. Reptiles are unlikely to be present within the battery site. The cable route will pass along the existing road. Reptiles are unlikely to be present associated with the cable route. The hedgerows have the potential to provide habitat for reptiles, but the population size would likely be low. These habitats will be retained, and no impact is predicted.	Negligible
Otter	No habitat present.	Negligible
Water Vole	No habitat present.	Negligible
Notable invertebrates	Habitats at this Site are likely to support common and widespread invertebrates.	Negligible
Notable plants	Habitats within the Site provide little potential for notable or rare plants and they do not need to be considered further.	Negligible
Invasive non-native plants	No plants listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) as invasive non-native with respect to England and Wales were noted at the time of survey.	Absent

5.5. Ecological evaluation of receptors

The ecological receptors to be considered for significant effects are given in Table 5. These are of local or higher value; those ecological receptors that have less than local value are not considered further unless they are European Protected Species and there is potential for them to be present (in which case the regulatory context i.e. the Habitats Regulations 2010 is considered), or they are the subject of national legislation (i.e. Wildlife and Countryside Act 1981).

Table 5. Table of ecological receptors to be considered for significant effects

Receptor	Relevant legislation/policy	Value
Emer Bog SAC	Conservation of Habitats and Species Regulations (2017)	European
Baddesley Common and Emer Bog SSSI	Wildlife and Countryside Act 1981	National
Valley Park Woodlands Local Nature Reserve	National Parks and Access to the Countryside Act 1949	County
Wren's Copse SINC	Local Plan	County
Great Covert SINC	Local Plan	County
Hedge and trees, native species rich & Intact hedge, species poor	Habitat of Principal Importance, LBAP	Local
Semi-natural broadleaved woodland	Habitat of Principal Importance, LBAP, Ancient Woodland register	Local
Badgers	Protection of Badgers Act 1992	Site
Bats	European Protected Species, Species of Principal Importance	Site
Breeding birds	Wildlife and Countryside Act 1981, Priority BAP species	Site
Great crested newt	European Protected Species, Species of Principal Importance	Site

Common Dormice	European Protected Species, Species of Principal Importance	Site
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6. Assessment of ecological impacts

6.1. The development

A battery site, access road and cable route are proposed.

The cable route will pass along nearby roads, connecting the battery site to an electrical substation.

6.2. Construction phase impacts

During the construction phase, there is predictable adverse effects which are generally unavoidable; many are short term and can be minimised as part of the construction management, but some have the potential for more lasting effect. The cable route is considered a construction phase impact.

The potential for adverse effects is largely short term impacts associated with noise and vibration, airborne and waterborne, pollutants, short term habitat loss or disturbance. The potential for adverse impacts would be minimised as far as possible through the application of good practice techniques and adherence to well-designed method statements; these would be managed through a Construction Environmental Management Plan (CEMP).

Statutory nature conservation sites

Adverse effect can be discounted for all statutory nature conservation sites due to separation distance resulting in no realistic pathway of effect on their interest features.

Assessment: It is near-certain that construction would have a negligible adverse effect on statutory nature conservation sites.

Non-statutory nature conservation sites

Wrens Copse SINC

This area of woodland is of County value and located 45m to the north of the proposed battery site.

The primary pathway of effect would be accidental damage due to vehicle movements, pollution and material storage.

Assessment: It is unlikely that unmitigated construction would have an effect on Wrens Copse SINC. An effect were it to occur would likely be associated with accidental damage, and would be minor, short term adverse.

Great Covert SINC

This area of woodland is of County value and located adjacent to the road along which the cable route will pass.

The primary pathway of effect would be accidental damage due to vehicle movements, pollution and material storage.

Assessment: It is near-certain that unmitigated construction would have an adverse effect on Great Covert SINC. The effect would likely be associated with accidental damage, and would be minor, short term adverse.

Valued habitats of the Assessment Site

Intact hedge with trees, native species rich & Intact hedge species poor

The primary pathway of effect would be accidental damage due to vehicle movements, pollution and material storage. The cable route will not pass through hedgerows.

Assessment: It is unlikely that unmitigated construction would have an effect on hedgerow habitat. An effect, was it to, occur would likely be associated with accidental damage, and would be minor, short term adverse.

Semi-natural broadleaved woodland

The primary pathway of effect would be accidental damage due to vehicle movements, pollution and material storage. The cable route will not pass through woodland.

Assessment: It is unlikely that construction would have a negligible effect on woodland habitat. If an effect were to occur, it would likely be associated with accidental damage and would be minor, short term adverse.

Protected and notable species

Badgers

The assessment site is of Site value for Badgers.

The primary pathway of effect would be through impacts to foraging habitats and animals becoming trapped within the worksite.

Assessment: Unmitigated construction phase is unlikely to have an adverse effect on Badgers. The effect would be short term, minor adverse.

Bats

Boundary habitats are Site value for foraging and commuting bats.

The primary pathway of effect would be through impacts to mature broadleaved trees, and habitat features used by foraging bats, such as direct habitat loss and damage. There will be a short-term loss in grassland habitat associated with construction due to storage areas/compounds, although these habitats are of little value for bats.

No night-time works are planned during the construction phase and mature trees will be retained. Short term disturbance to grassland habitats associated with the cable route are unlikely to affect local bat populations.

Assessment: The construction phase is near certain to have a negligible effect on bats.

Birds

Boundary habitats are Site value for nesting birds.

The primary pathway of effect would be through accidental damage to hedgerows and woodland at the site boundary.

Assessment: It is unlikely that unmitigated construction would have an effect on nesting birds. An effect, was it to occur, would likely be associated with accidental damage, and would be minor, short term adverse.

There is potential to impact birds in a way that could be considered an offence under relevant wildlife legislation.

[Great crested newt](#)

The application site is of Site value for great crested newt.

The primary pathway of effect would be through impacts to ponds, woodlands, hedgerows, semi-natural grassland and scrub. Construction will be limited to grassland managed to provide commercial turf and sealed road surfaces, both largely unsuitable for great crested newt.

Assessment: It is near-certain that unmitigated construction would have a negligible effect on great crested newt.

Disturbance, harm or injury to great crested newt or damage of resting or breeding place could be considered an offence under relevant wildlife legislation.

[Common dormice](#)

Boundary habitats are Site value for common dormouse.

The primary pathway of effect would be through accidental damage to hedgerows and woodland at the site boundary.

Assessment: It is unlikely that unmitigated construction would have an effect on common dormouse. An effect, was it to occur, would likely be associated with accidental damage, and would be minor, short term adverse.

Disturbance, harm or injury to common dormouse or damage of resting or breeding place could be considered an offence under relevant wildlife legislation.

[6.3. Operational phase impacts](#)

[Overview](#)

During the operational phase, effects may arise from the following activities within the solar farm:

- Maintenance;
- changes in land-management: these can be positive, associated with changes in agricultural practices.
- loss of habitat, habitat fragmentation and disturbance to valued receptors.
- additional habitat creation.

No operational activities are predicted for the cable route.

Statutory nature conservation sites

Adverse effect can be discounted for all statutory nature conservation sites due to separation distance resulting in no realistic pathway of effect on their interest features during the operational phase.

Non-statutory nature conservation sites

Wrens Copse SINC

This area of woodland is of County value and located 45m to the north of the proposed battery site.

The primary pathway of effect would be direct habitat loss. No habitat loss is predicted.

Assessment: It is certain operational impacts would have no adverse effect on this SINC.

Great Covert SINC

This area of woodland is of County value and located adjacent to the road along which the cable route will pass.

The primary pathway of effect would be direct habitat loss. No habitat loss is predicted.

Assessment: It is certain operational impacts would have no adverse effect on this SINC.

Valued habitats of the Assessment Site

Intact hedge with trees, native species rich & Intact hedge species poor

The primary pathway of effect would be direct habitat loss. No habitat loss is predicted.

Assessment: It is certain operational impacts would have no adverse effect on hedgerow habitat.

Semi-natural broadleaved woodland

The primary pathway of effect would be direct habitat loss. No habitat loss is predicted.

Assessment: It is certain operational impacts would have no adverse effect on hedgerow habitat.

Protected and notable species

Badgers

The primary pathway of effect would be through permanent damage to setts. No badger setts were present.

Assessment: It is certain operational impacts would have no adverse effect on badgers.

Permanent damage or obstruction to set could be considered an offence under relevant wildlife legislation.

Bats

The primary pathway of effect would be through impacts to habitat features used by foraging bats, such as direct habitat loss or changes in management.

Boundary hedgerows and woodland will be retained and the development will result in the creation of permanent, species rich grassland habitat to its north as part of biodiversity net gain management. This is likely to improve its value for foraging bats.

No potential roosting habitats will be affected and there is negligible potential for disturbance, direct harm or injury.

Assessment: Changes in land management make it is near-certain that the development will have a minor positive effect on foraging bats for the period of its operation.

Birds

Boundary hedgerows and woodland will be retained. The primary pathway of effect would be associated with disturbance or destruction of nests during maintenance, and increased food items associated with changes in land management

No operational effects are predicted for the cable route.

Assessment: Changes in land management make it is near-certain that the development will have a minor positive effect on this receptor for the period of its operation.

There is potential to impact birds during management in a way that could be considered an offence under relevant wildlife legislation.

Great crested newt

The application site is of Site value for great crested newt.

The primary pathway of effect would be through direct habitat loss.

The development will result in the creation of permanent grassland habitat that is currently managed for commercial turf and is likely to improve its value for great crested newts.

Assessment: Changes in land management make it is near-certain that the development will have a minor positive effect on this receptor for the period of its operation

Common dormouse

Boundary hedgerows and woodland will be retained. The primary pathway of effect would be associated with disturbance, or destruction of nests during maintenance.

No operational effects are predicted for the cable route.

Assessment: It is near-certain operational impacts would have no adverse effect on common dormice. An effect, was it to occur, would be associated with hedgerow management and would be minor, short-term adverse.

There is potential to impact common dormice during management in a way that could be considered an offence under relevant wildlife legislation.

7. Mitigation

7.1. Construction phase

The following mitigation would be provided to minimise the unavoidable effects during the construction phase:

- Design and delivery of a Construction Environment Management Plan that incorporates ecological protections for all sensitive ecological features. This will include:
 - statement of responsibilities
 - duties of the ecological clerk of works
 - ecological mitigation during the construction phase
 - rigid control of worksite boundaries
 - control of waste
 - storage of materials
 - dust management plan
 - pollution prevention
- Topsoil and subsoil will not be mixed and will be replaced back in sequence once the cable is laid. Where necessary grassland will be re-sown or turf re-laid.
- Hedgerows associated with the battery site will be protected from all construction activities by a suitable buffer of 5 metres. Woodland associated with the battery site will be protected from all construction activities by a suitable buffer of 15 metres. The buffer will be delineated by a temporary fence and there will be no access, storage of materials, ground disturbance, burning or contamination within the fenced areas.
- Great Covert SINC - Prior to any works within 30 metres of woodland associated with the cable route, a toolbox talk on its status will be provided along with an ecological watching brief to ensure no adverse effect.
- Any deep trenches left open at night (>1m deep) will have some means of escape for Badgers, such as the placement of a scaffolding board at one end.

7.2. Operational phase

The following mitigation is provided for the operational phase:

- Hedgerows will be managed in winter months outside the accepted bird nesting season.

8. Residual impacts

Residual impacts on valued ecological receptors during the construction and operational phases are minimal, with no effect being significant at the level of assessment. Detail of potential impacts and their significance at the level of assessment are given in Table 6. Where no reasonable pathway of effect exists and pre-mitigation impact has been discounted, the receptor is not considered here.

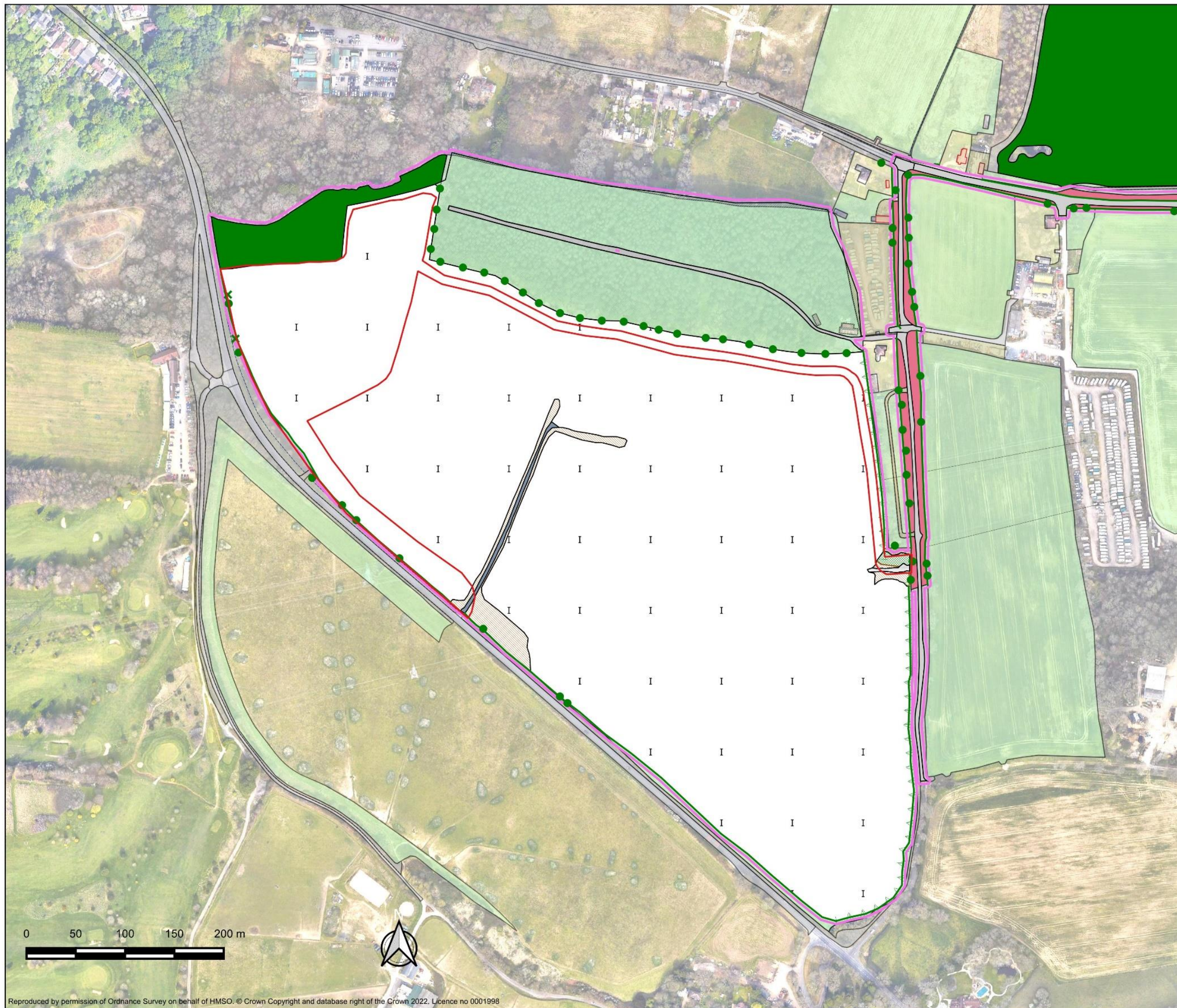
Table 6. Summary of residual impacts following mitigation

Receptor (valuation)	Description of impact	Magnitude of potential impact	Level of effect (incl: adverse or beneficial, short term or permanent, short, medium or long term)	Mitigation	Residual impact - Significant / not significant?
Construction phase					
Wrens Copse SINC (County)	Accidental damage due to vehicle movements, pollution and material storage	Minor	Short term, adverse	Woodland associated with the battery site will be protected from all construction activities by a suitable buffer of 15 metres Adoption of a suitable CEMP	Negligible
Great Covert SINC (County)	Accidental damage due to vehicle movements, pollution and material storage	Minor	Short term, adverse	Prior to any works within 30 metres of woodland associated with the cable route, a toolbox talk on its status will be provided along with an ecological watching brief to ensure no adverse effect Adoption of a suitable CEMP	Negligible
Hedge and trees, native species rich & Intact hedge, species poor (Local)	Accidental damage due to vehicle movements, pollution and material storage	Minor	Short term, adverse	Hedgerows will be protected from all construction activities by a suitable buffer of 5 metres. Adoption of a suitable CEMP	Negligible
Semi-natural broadleaved woodland (Local)	Accidental damage due to vehicle movements, pollution and material storage	Minor	Short term, adverse	Woodland will be protected from all construction activities by a suitable buffer of 15 metres. Adoption of a suitable CEMP	Negligible
Badgers (Site)	Loss of foraging habitats and animals becoming trapped within the worksite	Minor	Short term, adverse	Any deep trenches left open at night (>1m deep) will have some means of escape for Badgers	Negligible
Breeding birds (Site)	Accidental damage to hedgerows and woodland at the site boundary	Minor Potential for offence	Short term, adverse	Hedgerows and woodland will be protected from all construction activities by a suitable buffer. Adoption of a suitable CEMP	Negligible Offence avoided
Common Dormouse (Site)	Accidental damage to hedgerows and woodland at the site boundary	Minor Potential for offence	Short term, adverse	Hedgerows and woodland will be protected from all construction activities by a suitable buffer. Adoption of a suitable CEMP	Negligible Offence avoided
Operational phase					
Bats (Site)	Adverse effect can be discounted	Minor	Positive, long-term	Positive effect resulting from the creation of permanent, species rich grassland habitat as part of biodiversity net gain management	Negligible
Breeding birds (Site)	Disturbance or destruction of nests during maintenance (adverse), and increased food items associated with changes in land management (positive)	Minor	Short term, adverse (maintenance effects)	Hedgerows will be managed in winter months outside the accepted bird nesting season.	Negligible Offence avoided

			Positive, long-term (changes in land management)		
Great crested newt (Site)	Improved foraging habitat associated with changes in land management (positive)	Minor	Positive, long-term	Positive effect resulting from the creation of permanent, species rich grassland habitat as part of biodiversity net gain management	Negligible
Common Dormouse (Site)	Disturbance or destruction of nests during maintenance (adverse), and increased food items associated with changes in land management (positive)	Minor	Short term, adverse (maintenance effects) Positive, long-term (changes in land management)	Hedgerows will be managed in winter months when common dormice are low down in the canopy hibernating.	Negligible Offence avoided

Legend

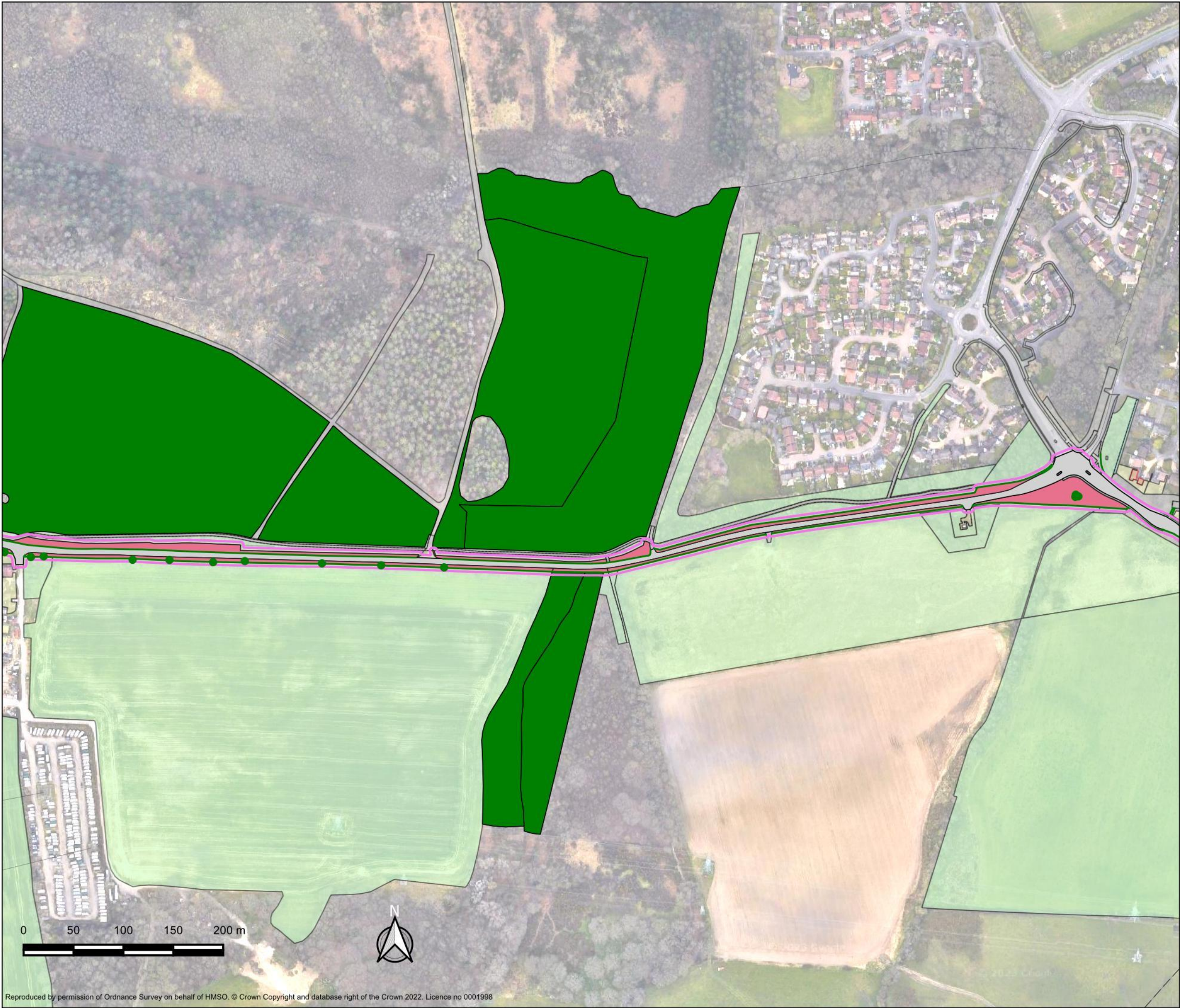
-  Scattered scrub
-  Scattered trees
-  Hedge and trees, native species rich
-  Intact hedge, species poor
-  Survey area (Approximate)
-  Tall ruderal
-  Scrub
-  Conifer plantation
-  Bare ground
-  Semi-natural broadleaved woodland
-  Tarmac
-  Track
-  Improved grassland
-  Roadside verge
-  Development boundary



Title: Map 3. Phase 1 habitats

Project: Land at Misselbrook Lane,
North Baddesley

Checked by: CDH Version: 01
Date: 09/01/2023



1 Geffery Close
Landrake
Saltash
Cornwall
PL12 5HA

Tel: 0800 622 6828
email: office@westernecology.co.uk

- Legend
- Scattered trees
 - Intact hedge, species poor
 - Survey area (Approximate)
 - Semi-natural broadleaved woodland
 - Tarmac
 - Roadside verge

Title: Map 3. Phase 1 habitats

Project: Land at Misselbrook Lane,
North Baddesley

Checked by: CDH Version: 01
Date: 06/01/2023



- Legend
- Conifer tree
 - ✕ Introduced shrubs
 - Scattered trees
 - Intact hedge, species poor
 - Survey area (Approximate)
 - ▨ Introduced shrubs
 - Tarmac
 - Roadside verge

Title: Map 4. Phase 1 habitats

Project: Land at Misselbrook Lane,
North Baddesley

Checked by: CDH Version: 01
Date: 06/01/2023