Ecological Constraints & Biodiversity Net Gain Assessment (BNG)

Oakwood Farm

Slinfold

July 2024

DEEPDENE
ECOLOGY

Client	George Potbury
Site	Oakwood Farm, Five Oaks Road, Slinfold, Horsham, West Sussex, RH13 0QW (the 'Site')
Author	Sally Dalrymple-Smith BSc MSc MCIEEM CEnv
Review	Nadine Clark BSc MSc MCIEEM
Associated reports	N/A
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Ecologist Contact details	
Sally Dalrymple-Smith	BSc MSc MCIEEM CEnv
Company	Deepdene Ecology Ltd
Email	sally@deepdeneecology.co.uk
Phone	07773 324955
Website	www.deepdeneecology.com
Registered Company Number	12074251

The report is provided for the sole and exclusive use of the Mr Potbury in response to his particular instructions for a planning application associated with 'Oakwood Farm, Five Oaks Road, Slinfold, Horsham, West Sussex, RH13 0QW'. This report has been prepared by an environmental specialist and does not purport to provide legal advice. You may wish to seek separate legal advice. All rights in this report are reserved. Any unauthorised reproduction or usage by any other person is prohibited.

The contents of this report have been produced with due consideration of current best practice guidance, and in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct.

Data within this report is valid for a maximum of 18 months from the date of the survey. After this period, an updated site visit will be required to determine a new ecological baseline. More up-to-date survey data may be required for a planning application or licensing, depending on conditions and impacts.

Whilst every effort has been taken to ensure the accuracy of this report and its contents, in view of potential ecological constraints to development or the likely presence or absence of species, it must only be viewed as a snap-shot in time and, therefore, not be viewed as definitive. Due to external factors, such as seasonality, weather etc, having the potential to affect survey results, no liability can be assumed for omissions or changes that may, or may not occur, after the date this report was produced.

SITE

- A small area of an existing farm which is the proposed location of a new agricultural barn, along with an access route.

PROPOSAL

- It is proposed for a new agricultural building to be constructed (30m x 12m) within the Site.
- No changes are proposed to the existing access route.
- A small area is proposed for compensatory planting adjacent to the barn.

STUDIES COMPLETED

- Ecological Constraints Assessment (desk study and walkover survey) in July 2024.
- Biodiversity Net Gain Assessment using the Statutory Metric.

KEY FINDINGS

- The Site was comprised of an existing access track which led up to the proposed location for the new barn, which was comprised of bare ground at the time of the survey.
- The enhancement area was comprised of tall ruderal vegetation.
- From the walkover survey and desk study assessment, the Site was predominantly of low biodiversity value dominated by artificial habitats (unvegetated, unsealed & developed land; sealed surfaces) and bare ground.
- There will be no impacts on any trees close to the Site.
- The Site has the potential to support foraging and commuting bats, individual reptiles & common amphibians, hedgehogs and badgers.
- Precautionary mitigation measures have been recommended for minimising potential impacts on protected/notable species during works.
- No irreplaceable habitat or priority habitat will be directly impacted by the proposals.
- No statutory or non-statutory designations apply to the Site. There are also no anticipated impacts on any sites nearby.
- The only works will be the creation of the barn which will impact the existing bare ground. The access track will not be modified in any way.
- An area of mixed scrub (hazel, willow & blackthorn) and rural tree planting (no. 9) is also proposed adjacent to the barn.
- The baseline habitat units within the Site before development total 0.23 habitat units within the Site.
- Post-development, there will be a total of 0.25 habitat units. This provides a gain of 0.02 units overall which equates to 10.44%
- The habitats to be introduced are anticipated to be of benefit to a variety of associated species including invertebrates, foraging/nesting birds and bats and are also considered to provide benefit to the wider landscape by providing habitat connectivity at a wider landscape scale.
- Enhancement ideas have been suggested which could be incorporated into the design proposals.

OVERALL FINDING

- The areas of impact within the Site were comprised of low value habitat that is common and widespread.
- Mitigation measures have been recommended to ensure the proposals will minimise any potential impacts on protected/notable species.
- Based on the current layout, with the native scrub and rural tree planting, the requirement of a +10% increase in area based biodiversity units can be met. In addition, all the trading rules are satisfied.
- As the land all falls within the Oakwood Farm ownership, a commitment to the 30 year management requirements has also been made.
- Enhancement measures have been recommended which, when implemented will result in an overall biodiversity gain at the Site.

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1 INTRODUCTION

1.1 Project background

Deepdene Ecology Ltd was instructed George Potbury, to undertake an ecological constraints survey and Biodiversity Net Gain (BNG) assessment in support of a planning application at 'Oakwood Farm, Five Oaks Road, Slinfold, Horsham, West Sussex, RH13 0QW' (from hereon in referred to as the 'Site'). It is proposed for a new agricultural building to be constructed within the farm with an area of compensatory planting adjacent.

An ecological constraints assessment, including a Preliminary Bat Roost Assessment (PRA) was undertaken by Deepdene Ecology in July 2024, which is detailed in this report and that has helped to inform this assessment. No activities have been undertaken prior to this date in relation to the proposals and therefore the baseline was accurate at the time of the walkover survey.

1.2 Report objectives

This report details the current habitats present on the Site and their condition, where appropriate, to allow an assessment of the pre-development biodiversity units using the Natural England Statutory Biodiversity Metric. This report has been produced to provide Horsham District Council with sufficient information to determine whether the proposals are able to meet the requirements of on-Site BNG.

In addition, the report provides an overview of any potential ecological constraints to the proposed project with a focus on protected/notable species or habitats.

1.3 Site setting

The Site (TQ13203058) comprises of a small portion of the Oakwood Farm which is located in a rural area to the south-east of Slinfold (see **Figures 1** & **2**). The Site is bound by the wider grounds of Oakwood Farm, which in its immediate vicinity is used as a Nordmann fir tree plantation. An existing access track leads off Five Oaks Road, passing through a small business park, before leading up to the location of the proposed barn.

Within the wider area, there are extensive areas of pasture, hedgerows, treelines and occasional residential/commercial plots.

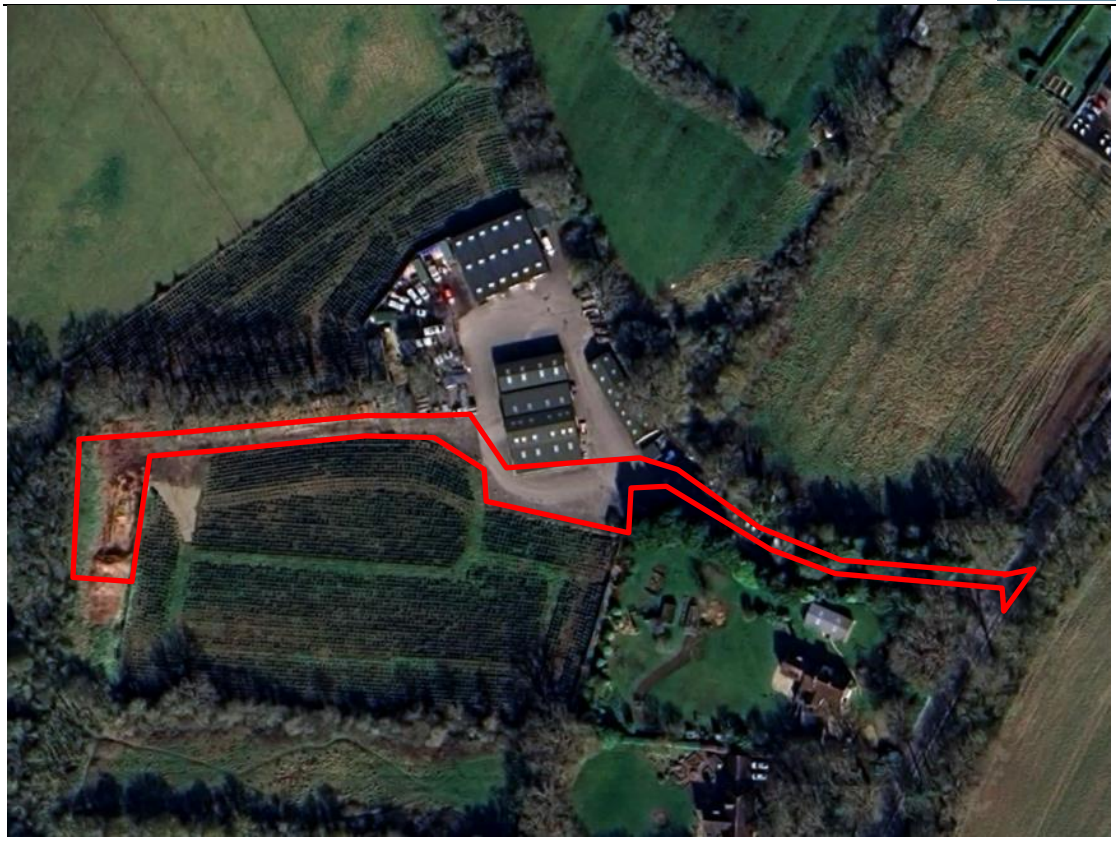


Figure 1: Site boundary (indicative only). Image taken from Google Earth.



Figure 2: Site boundary (indicative only). Image taken from Google Earth.

1.4 Proposed development

A planning application has been submitted for the construction of an agricultural building (30m x 12m) which will be used to house farm machinery.

A full set of drawings will be provided with the planning application with the block plans provided in **Appendix D**.

1.5 Biodiversity Net Gain: Overview

The requirement for BNG is set out within legislation (The Environment Act 2021) and the National Planning Policy Framework (NPPF) 2021. Both require that planning applications for new developments will need to demonstrate a 10% BNG and the Government 25-year Environment Plan states that government will "*embed environmental net gain principle for development*".

Biodiversity Net Gain is the end result of a process which is designed to ensure that there is an increase in biodiversity when the value of habitats prior to and post-development are considered. The assessment calculates the change in ecological value at a Site by comparing the number of habitat units within the Site pre- and post-construction for both linear habitats such as hedgerows and area based habitats such as grassland. The ecological value of the Site is expressed as a percentage change in units following the proposed development. This is an indicator of the proposed development's impact on the Site's existing ecological value and establishes if there will be net gain, net loss or no net loss of biodiversity following the completion of the development and any subsequent management regime.

The process of BNG is designed to align with the mitigation hierarchy to ensure that firstly loss is avoided, secondly, loss is minimised and thirdly lost habitats are restored or mitigated for on-Site. Where this is not possible, and as a last resort, remaining losses must be compensated for off-Site.

1.6 Scope of the report

In order to inform the assessment, an ecological constraints assessment was undertaken which presents ecological information obtained during a desk study and walkover survey undertaken in July 2024.

The walkover survey included a brief assessment of the potential of the habitats within the Site to support any relevant protected or notable species to ensure that no valuable habitats/protected species are adversely affected by the proposed development.

The purpose of the appraisal is to satisfy the requirements of the National Planning Policy Framework (NPPF) by identifying the potential impacts of the proposed development on protected species and features of ecological value.

This report identifies the need for any measures to avoid or mitigate damage and disturbance to species, and provides recommendations for further ecological surveys, as required.

This report aims to describe the ecological baseline of the Site and the biodiversity changes that will be introduced by the proposed development.

The methods, results and recommendations of the BNG assessment are detailed, the scope of which is:

- Assess the ecological baseline of the Site by identifying the habitat types and features of potential ecological value including the potential presence of protected species.
- To establish the total number of area-based habitat units and linear hedgerow units (if present) within the Site.
- To establish the total number of units which will be retained, reinstated or created under the proposed landscape mitigation plan;
- To determine whether the proposed development will result in a net loss, no net loss or a net gain for biodiversity, with a focus on Habitats of Principal Importance (HPI).
- If necessary, and depending on the outcome of the above calculations, it will propose biodiversity improvements in order to achieve an overall net gain of at least 10% and adhere to the BNG trading rules on habitat distinctiveness and condition.

2 LEGISLATION AND POLICY

There is a framework of national and local legislation along with planning policy guidance that exists to protect and conserve wildlife and habitats. The following core legislation exists to protect habitats and species of nature conservation importance:

- Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019;
- Wildlife and Countryside Act 1981 (as amended) (WCA);
- Natural Environment and Rural Communities (NERC) Act 2006;
- The Countryside and Rights of Way Act 2000;
- The Hedgerow Regulations 1997; and
- Protection of Badgers Act 1992.

The following national planning policies are relevant to assessing the impacts of development on nature conservation:

- National Planning Policy Framework (NPPF)4 (MHCLG, 2021);
- ODPM Circular 06/2005 (Defra Circular 01/2005)5; and
- Horsham District Council Local Plan (2015).

Further details of the legislation and policy can be found in **Appendix C**.

3 METHODOLOGY

3.1 Desk study and walkover survey: Baseline

The baseline ecology of the Site was assessed using the following sources of information:

- Publicly available Open Source Natural England datasets for HPI, ancient woodland (classed as irreplaceable habitat), and statutory designated sites for nature conservation within 2km.
- Horsham District Council Planning Map[1]- to identify non-statutory designated sites (Sites of Nature Conservation Importance (SNCI) and potential (p)SNCIs) within 1km.
- Development proposals through assessing the Layout Plan (**Appendix D**) – White & Sons.

A walkover survey of the Site was undertaken in July 2024 by Deepdene Ecology which informed the existing habitats on Site and assessed the potential for notable fauna to occur in or adjacent to the Site. The walkover was undertaken in line with the JNCC and CIEEM guidelines. The survey results confirmed the UKHab types. UKHab supersedes previous systems such as Phase 1 Habitat Survey, allowing for direct interpretation of baseline habitat survey data into HPI and Annex I Habitat[2] types.

In particular, the survey assessed the suitability/potential of the habitat to support: badgers, bats (roosting, foraging/commuting), dormice, hedgehogs, nesting birds, reptiles and invertebrates.

All habitat types were mapped (**Appendix A**). A fine scale Minimum Mapping Unit (MMU) was deemed an appropriate level for mapping habitats i.e. a habitat area was only mapped if the habitat was greater than 25m^2 or 5m in length.

Each habitat was assigned a Primary Code of the Professional Edition of the UKHab Field Key[3] at a minimum of the Level 3 hierarchy, using the UKHab Habitat Definitions[4] for reference. Secondary Codes (SC) were then applied to provide additional context to the habitats, with no more than three SC being assigned.

The survey was undertaken by Sally Dalrymple-Smith. Sally is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM and CEnv) and has over 16 years' experience of undertaking ecological surveys. She holds survey licences for bats (Level 2: 2023-11738-CL18-BAT & Level 1: 2018-34389-CLS-CLS), great crested newts (Licence: 2015-17014-CLS-CLS), dormice (2016-22745-CLS-CLS) and barn owls (Licence:CL29/00455).

3.2 The Mitigation Hierarchy

The information obtained during the walkover survey considered the Mitigation Hierarchy when assessing the ecological constraints and opportunities associated with the proposed development, and this fed into the design of the scheme. The Mitigation Hierarchy requires that firstly steps are taken to avoid and then to minimise impacts on biodiversity. Only after

[1] Horsham District Council Planning Map https://horsham.maps.arcgis.com/apps/webappviewer/index.html?id=f8cab77b5b72485abe9b30d4349c0047 Accessed July 2024.
[2] Habitats listed in Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora.
[3] Carey. P., Butcher. B. (2018) *UK Habitat Classification Field Key*.
[4] UK Habitat Classification Working Group (2018). *UK Habitat Classification Definitions V1.0* at https://ukhab.org/ukhab- documentation/

these steps are taken, should compensation be considered for losses that cannot be avoided. Finally, if compensation within the development footprint is not possible or does not generate the most benefits for nature conservation, the losses should be offset elsewhere.

3.3 Biodiversity Net Gain Assessment and Evaluation

The Site has been assessed using Natural England's Statutory Biodiversity Metric with the User Guide and technical supplements[5].

With the Metric, the habitats on Site are converted into 'biodiversity units' which are calculated using the size of the habitat parcels and their quality. The metric uses area (hectares) as its core measurement except for linear habitats (hedgerows, lines of trees, rivers and streams) where habitat length (kilometres) is used.

In order to assess the quality of a habitat, the metric scores the following:

a) Distinctiveness: how common/rare the habitat is, with scarce or declining habitats scoring higher than common and widespread types.
b) Condition: the biodiversity value of a habitat relative to others of the same type.
c) Strategic significance: habitats that are linked or joined to other key areas are considered more important than isolated habitat islands.

For habitats, the Statutory Metric provides a distinctiveness score automatically and for some habitats a condition assessment score is required to be chosen by the User. The Biodiversity Metric Condition Sheets in Excel format were used to assess each habitat type requiring a condition assessment against the appropriate condition to determine whether the habitat was of a poor, moderate or good condition.

There are three options for strategic significance which must be chosen and these are:

1) Area/compensation not in local strategy/ no local strategy;
2) Location ecologically desirable but not in local strategy; and
3) Formally identified in local strategy.

In order to determine the baseline units, a separate score is calculated for the area habitat units, linear river/stream units and the linear hedgerow/line of trees units. The three distinct unit types are unique and cannot be merged/traded or converted. Any gains or losses for each of the three scores must be reported separately.

The strategic significance for the assessment was determined by reviewing the Local Planning documents and using MAGIC (Natural England 2024) to identify any strategic policy relating to the Site, habitats on-Site or nearby.

The findings of the desk study and field surveys have been used to identify habitats and potentially significant ecological features at the Site currently. This information was then digitised and the resulting information was fed into the Statutory Biodiversity Metric.

[5] Defra, 2024. *The Statutory Biodiversity Metric User Guide*. Published February 2024.

3.3.1 Rural trees

Scattered trees in an rural setting are classed as 'rural trees' for the purposes of BNG. When rural trees are recorded within a Site, the area of habitat that falls within the Root Protection Area (RPA) is recorded as its corresponding habitat type e.g. the modified grassland beneath a canopy, along with the RPA of the tree which is recorded in the rural tree category.

The area calculations for the scattered rural trees on the Site for the purposes of the current BNG assessment have been based on the Tree Helper.

3.3.2 Limitations and Assumptions

UKHab Classification surveys can be undertaken at any time of year, with the optimal season being between March and September when most plant species are visible. Field surveys usually fail to record all species present for various reasons, including the seasonal absence of some species, and short survey duration. Rare or cryptic species are often missed in short surveys. However, based on the fact that the broad habitat types found were common and widespread, it is not considered likely that the surveys missed any valuable species.

3.3.3 Post-development Limitations and Assumptions

It is assumed that all habitats to be lost can be reinstated in their current position and can be subject to suitable management to achieve a condition identical to that which was achieved pre-development.

All habitat management has been secured for a minimum period of 30 years.

4 DESK STUDY & WALKOVER SURVEY FINDINGS: ECOLOGICAL BASELINE

4.1 Sites of Nature Conservation Interest and valuable habitats

There is one statutory designated site within 2km of the Site. This is described in more detail in **Table 1** below.

Table 1: Statutory designated sites within 2km of the Site.

Site Name	Distance & direction	Description
Slinfold Stream and Quarry Site of Special Scientific Interest (SSSI)	0.9km north-west	This site is designated for reasons of geological interest.

There is one SNCI within 1km of the Site which is described in more detail below in **Table 2**.

Table 2: Non-statutory designated sites within 1km of the Site.

Site Name	Distance & direction	Description
Holmbush Manor Farm Meadow, Slinfold, SNCI	0.9km south-west	Damp neutral grassland with botanical interest and notable rarity of rush pasture.

There are small pockets of Priority Deciduous Woodland (Section 41 NERC Act habitats of principal importance) and Ancient Woodland in all directions in the wider landscape with the closest approximately 85m north.

There are no anticipated impacts on statutory or non-statutory designated sites or woodland habitats due to their distance from the Site and the small scale of the proposed works. Therefore, they will not be considered any further in this assessment.

4.2 Walkover survey findings

4.2.1 Habitats

The habitats found within the Site were all common and widespread (bare ground) with no notable, priority or irreplaceable habitats found. Tall ruderal vegetation was found within the area proposed for compensatory planting.

Photographs from the survey are provided in **Appendix E** and further detail on the habitats is provided in **Section 6**.

4.2.2 Protected/notable species

Badgers: The Site and buffer zones, where access was possible, were searched for evidence of badgers. No badger setts and no badger signs were observed during the walkover survey. The Site is in a rural location which means that it is likely that badgers may be present. Mitigation has been recommended in **Section 5** below to minimise potential impacts.

Bats: There are no structures or mature trees within the Site that will be impacted by the works. A treeline with mature oaks is located close to the existing access track, however, there are no proposed works to the track and no tree works are required. The Site is considered likely to support foraging and commuting bats and precautionary mitigation has been outlined.

Hedgehogs: The wider Site is likely to support habitat for foraging/commuting hedgehogs and the Site is accessible to the wider area. Precautionary mitigation has been outlined.

Nesting birds: The vegetation within the Site has the potential to support low numbers of common and widespread species of nesting birds. Common species of bird were noted within the Site during the walkover survey. There are no impacts on any trees or buildings and therefore mitigation is not required.

Reptiles and amphibians: The tall ruderal habitat offered some potential to support individual amphibians and reptiles since it offered some opportunities for sheltering/foraging. There are three waterbodies within 500m of the Site. The main area of impact is the bare ground habitat, which is not suitable for reptiles or amphibians. Given the very small size of suitable habitat for reptiles and amphibians, the risk of encountering these species is very low. The small area of compensatory planting has some suitability to support individuals and therefore, precautionary mitigation has been recommended during planting.

5 RECOMMENDATIONS FOR MITIGATION DURING THE WORKS

A summary of the recommended mitigation for minimising any potential impacts on ecological features during the works is provided in **Table 3** below.

Table 3: Recommendations for mitigation

Receptor	Recommended mitigation
Sites and habitats	
Designated Sites of Nature Conservation Interest	• No mitigation is required.
Habitats - General	• Minimise impacts on natural habitats wherever possible. This can be achieved through, for example, minimising vegetation clearance required, ensuring that the volumes of material required is calculated to minimise any necessary stockpiles, ensuring that any temporary stockpiles for materials required are placed on geotextile matting to minimise impacts etc. • All mature trees close to the working area should be protected through the use of root protection zones following best practice guidelines (i.e. BS5837:2012 Trees in Relation to design, demolition and construction – Recommendations).
Protected/notable species	
Badgers and hedgehogs	• All contractors and site personnel should be briefed on the potential presence of badgers (and other mammals) and will remain vigilant for any signs of badger activity. • Any trenches or deep pits that are left open overnight should be provided with a means of escape should a badger (or any other mammal) fall in. This could simply be in the form of a roughened plank of wood placed in the trench as a ramp to the surface. • The trenches/pits should be inspected each morning by a nominated member of staff to ensure that no badgers (or other mammals) have become trapped overnight. Should a badger become trapped an ecologist should be contacted immediately for further advice. • No topsoil or other soft materials should be stored on Site to minimise the risk of badgers creating setts within it. • There should be no storage of any chemicals or fires on Site.

Bats: foraging and commuting	• No night-time working or operational lighting ideally.
	• If required, the Bat Conservation Trust guidance 'Bats and artificial lighting at Night' (2023) should be followed. This includes:
	  • Avoid artificial lighting close to any mature trees, hedgerows or woodland within the Site or close to the boundary;
	  • Directing any task lighting used during construction away from vegetation;
	  • White and blue wavelengths of the light spectrum should be avoided and the brightness should be kept as low as feasibly possible;
	  • All luminaires should lack UV elements and metal halide fluorescent sources should not be used;
	  • LED luminaires are preferred due to the lower intensity, sharp 'cut-off', colour rendition and dimming capability;
	  • A warm white light source (2700Kelvin or lower) should be adopted to reduce the blue light component;
	  • Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be used;
	  • Luminaires should always be mounted horizontally, with no light output above 90° and/or no upward tilt;
	  • Any necessary security lighting should be set on short timers (e.g. 1 minute) with a sensitivity to large moving objects only;
	  • Lighting times will be limited to provide dark periods; and
	  • The height of columns will be carefully considered to avoid light spill.

Reptiles and amphibians	• Ensure that the tall ruderal vegetation within the working area is carefully strimmed prior to works to a height of no less than 10cm. • Handsearch of the area prior to works which will include a destructive search of any debris or other features on Site. • Any animals found would be safely moved out of the area. • If a great crested newt was found at any point (considered unlikely), all works would cease with no further works undertaken until an ecologist was contacted for advice.

6 BIODIVERSITY NET GAIN ASSESSMENT

This section discusses the habitat values on the existing Site and post-development. The habitats have been mapped and are shown in **Appendix A** & **B**. The Biodiversity Metric calculations are provided in the accompanying document.

6.1 Baseline survey validity

The walkover survey confirmed the current on-Site habitats and there was no evidence of recent changes, works, ground disturbance or vegetation clearance in advance of the walkover survey that has resulted in any changes or degradation to the on-Site biodiversity value. The

photographs in **Appendix E** confirm this. As such, the baseline survey data from the July 2024 walkover is considered to be an accurate depiction of the habitats on Site and appropriate to use as the baseline for the BNG assessment.

6.2 Consideration of the mitigation and biodiversity net gain hierarchy

Table 4 below considers how the mitigation and biodiversity net gain hierarchy are being considered for this project.

Table 4: Mitigation and biodiversity net gain hierarchy

Hierarchy step	Site Considerations
Avoid	The development is avoiding all impacts on any statutory designated sites, ancient woodland or other irreplaceable habitat. The pre-development use of the Site was already bare ground and ruderal vegetation, which has a low habitat distinctiveness and is widespread both locally and nationally. The scheme design avoided impacts on any nearby mature trees through the use of the existing access track for the construction phase of the project in order to reduce impacts on other areas of natural habitat within the Site. There will be no impacts on habitats which have medium, high or very high distinctiveness.
Minimise	The proposed project is minimising impacts on biodiversity since it is impacting areas of the Site that are limited to poor condition, low distinctiveness habitats (modified grassland). As recommended in **Table 3**, measures to avoid harm to nesting birds and other fauna during site clearance should be followed at all times.
Compensate/offset	Detailed habitat compensation measures have been identified through the use of the Statutory Metric, see following section. The scheme design does not allow for the enhancement of onsite habitats due to the restricted size of the Site. Therefore, post-construction, the loss of the low distinctiveness habitats will be compensated through planting of new onsite habitats: mixed scrub and tree planting with ecological habitats of equal or greater distinctiveness. The landscape planting proposals will comprise native species (to provide pollen/nectar/fruit/seed etc) to ensure that connectivity and foraging opportunities are not lost, but increased for invertebrates, badger, bats and birds. Artificial hibernacula, bat and bird boxes will be installed in the retained boundary landscaping, such as log piles, to increase opportunity for invertebrates, reptiles, amphibians and other mammals such as hedgehogs.

6.3 Strategic significance

The Site is not located within any biodiversity opportunities area (BOA) and is therefore not of high strategic significance.

6.4 Baseline habitats and biodiversity value

The existing, baseline habitats that are present are summarised in **Table 4** and shown in the figure in **Appendix B**.

Developed land, sealed surfaces

The eastern section of the existing access route was comprised of predominantly tarmac. No proposed changes. This habitat type is a very low distinctiveness habitat in terms of the biodiversity metric and does not have a condition score.

Artificial, unvegetated

The existing access track continued into an area of more compacted hardcore. This will be used for the construction project. There are no proposed changes or alterations to the access route. This habitat type is a very low distinctiveness habitat in terms of the biodiversity metric and does not have a condition score.

Bare ground

The location of the proposed barn was comprised of bare ground and was covered in large piles of woodchips. Small amounts of ruderal vegetation lined the mounds. However, these were not large enough for inclusion for mapping purposes. In terms of condition, it only passed one criteria (C) with respect to no invasive non-native species and therefore was in poor condition.

Ruderal/ephemeral vegetation

The entire area of proposed planting was comprised of tall ruderal vegetation. This passed two of the condition criteria (B & C). Therefore, was in moderate condition.

Irreplaceable or priority habitats

No HPI or irreplaceable habitat were found within the Site boundary.

6.5 Post-development biodiversity value

The post-development habitats expected on Site after construction are based on the Site Plan (see **Appendix D**). The habitats drawing (see **Appendix B**) illustrates the habitats proposed across the Site and these are described in more detail below with calculations in **Table 4**.

The proposals are for the construction of an agricultural barn. The existing access route will remain as it currently is with no upgrades or alterations proposed. Landscape planting will be undertaken including the planting of 9 small rural trees and 202m^2 of mixed scrub.

Lost habitats

The project will result in the loss of 0.036ha of bare ground and 0.0207ha of ruderal vegetation.

Retained habitats

The project will result in the retention of the existing access route (developed land: and artificial unvegetated (0.1755ha).

Enhanced habitats

It is not proposed for any of the baseline habitats within the Site to be enhanced.

Created habitats

0.036ha extra of developed land; sealed surfaces will be created. This is the footprint of the proposed barn. This habitat is a very low distinctiveness habitat in terms of the biodiversity metric and does not have a condition score.

As compensation for the loss of the bare ground (and tall forbs within the enhancement area), an area of mixed scrub planting (hazel *Corylus avellana*, willow *Salix sp.* & gorse *Ulex europaeus*) will be undertaken (0.0207ha). This habitat type will comprise of a mixture of the three species (Criteria A), there will not be invasive non-native species included (Criteria C), the grassland will be allowed to develop as an edge habitat (Criteria D). This will ensure passing of three criteria and moderate condition can be achieved.

As compensation for the loss of the bare ground, scattered tree planting (no.9) (hornbeam *Carpinus betulus*, bird cherry *Prunus padus* & silver birch *Betula pendula*) will be undertaken around the eastern boundary of the Site. The trees will all be native (Criteria A), and it is assumed they will develop a continuous canopy (Criteria B) and there would not be an adverse impact on the tree health (Criteria D). This will ensure a moderate condition is achieved.

Table 4 Baseline and proposed habitats, along with the associated condition assessment and also a summary of how this assessment was derived.

	Existing		Proposed				
Habitat	**Baseline area (ha)/units**	**Assessment/Comments**	**Lost area/units**	**Retained area/units**	**Enhanced area/units**	**Created area/units**	**Assessment/comments**
Artificial, unvegetated, unsealed track (u1c 839)	0.0514ha 0.00 units	The existing access track which is comprised of compacted hardcore. This had very little encroachment by vegetation.	N/A	0.0514ha 0.00 units	N/A	N/A	The access track will be utilised in the same way post-development with no proposed alterations or upgrades. This is assigned a very low distinctiveness and no condition assessment is required.
Developed land, sealed surfaces (u1b5)	0.1241ha 0.00 units	The eastern end of the existing access track.	N/A	0.1241ha 0.00 units	N/A	0.036ha 0.00 units	The access track will be utilised in the same way post-development with no proposed alterations or upgrades. The barn will be constructed and fall under the same habitat type. This is assigned a very low distinctiveness and no condition assessment is required.

Bare ground (u 810)	0.036ha 0.14 units	The existing area of the proposed barn which was covered in mounds of woodchips.	0.036ha 0.14 units	N/A	N/A	N/A	The development involves the construction of a barn building. This is assigned a very low distinctiveness and no condition assessment is required.
Ruderal/ ephemeral vegetation (u 81)	0.0207ha 0.08 units	An area of tall ruderal vegetation which will be retained and planted with as an enhancement area.	0.0207ha 0.08 units	N/A	N/A	N/A	The area will be planted post-development with hazel/willow scrub and rural trees as compensation for the loss of bare ground on-site.
Mixed scrub (h3h)	N/A	N/A	N/A	N/A	N/A	0.0207ha 0.14 units	Planting of hazel/willow/hawthorn scrub will be undertaken post-development. Will achieve moderate condition: will pass 3 criteria (3 species, absence of invasive species & development of an edge habitat)
Rural trees (u32)	N/A	N/A	N/A	N/A	N/A	0.0366ha 0.11 units	A total of 9 small native rural trees will be planted. Area calculated using the tree helper. They are assumed to reach moderate condition.

Totals	**0.23ha** **0.23 units**		**0.06ha** **0.23 units**	**0.18ha** **0.00 units**	**N/A**	**0.06ha** **0.25 units**	

6.6 Summary of habitat units

A summary of the habitat units post- development is provided in **Table 5**. This considers the habitats that will be lost during construction and any habitats that will be created in the long-term. The net change in units is used in the BNG calculations.

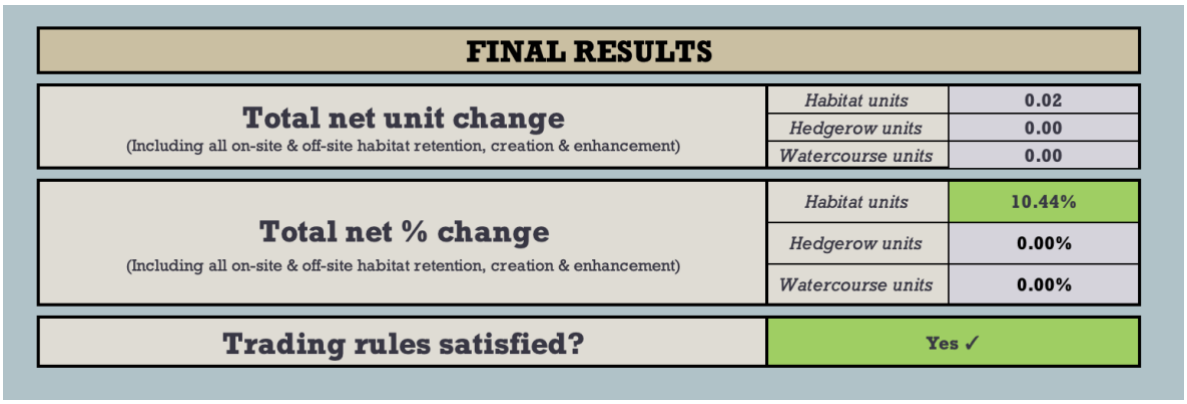
Table 5: Habitats present post-development

	Habitat units	Hedgerow units
Biodiversity units (baseline)	**0.23**	**N/A**
Units lost	(-) 0.23	N/A
Units retained	0.00	N/A
Units enhanced	0.00	N/A
Units created	0.25	N/A
Biodiversity units (rounded & post-development)	**0.00**	**N/A**
Net change	**+0.02 units (10.44%)**	**N/A**

6.7 Biodiversity Net Gain Conclusions

Following this assessment of the Site and the calculation of biodiversity units, the biodiversity balance between the baseline and the post intervention situation has been calculated using the Statutory Metric. The key worksheets of the Calculation Tool are provided as a separate document.

The total change in habitat units has been calculated to be +0.02 units. This delivers a total net % change of 10.44% in habitat units. In addition, the trading rules have also been met since the loss of the low distinctiveness habitat (bare ground) has been compensated with medium distinctiveness habitats (mixed scrub & rural trees).



FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	0.02
	Hedgerow units	0.00
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	10.44%
	Hedgerow units	0.00%
	Watercourse units	0.00%
Trading rules satisfied?	Yes ✓	

This is considered to be a good BNG for the proposed development, which meets the minimum goal of 10%. This is largely a function of the low value of impacts from the proposed development but also reflects the commitment to accommodate habitat creation of

higher value habitats. The commitment to planting mixed scrub and rural trees within the Site boundary has ensured significant gains.

The habitats to be introduced are anticipated to be of benefit to a variety of associated species including invertebrates and foraging/nesting birds. The post intervention habitats are also considered to provide benefit to the wider landscape by providing stepping stone habitats which will aid in supporting district wide wildlife corridors and habitat connectivity at a wider landscape scale, particularly for mobile species tolerant of suburban/rural environments such as a wide range of invertebrate and bird species.

6.8 Long-term management

Part of the requirement of BNG is to ensure the long term management of habitats on-Site with a management plan for the implementation of measures to ensure the long term value of the habitats are maintained. This management plan is normally recommended to cover a 30 year period and the financial mechanisms to ensure the management plan is implemented will need to be considered.

7 BIODIVERSITY ENHANCEMENTS

The NPPF states that local planning authorities should aim to conserve and enhance biodiversity where possible when determining planning applications. The development plan should maximise opportunities for enhancement (see **Table 7**), in order to achieve a net increase in biodiversity. This is in accordance with the NERC Act (2006) which requires that "*every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity. Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat.*"

Table 7: Recommendations for enhancements

Habitats
• New tree or shrub planting will include a diverse mix of native species, and a suitable list has been provided in **Appendix C**. • Native tree planting should be undertaken around the boundaries of the Site. This would also help contribute to biodiversity net gain targets.
Bats
• At least two bat boxes should be installed on mature trees around the wider Site. • Good models include the Large Multi Chamber WoodStone Bat Box or the Schwegler 2f, which are a multipurpose box designed a range of bat species including pipistrelles, noctules and brown long-eared bats. • The boxes should be positioned on mature trees in a shady position, 3-5m above ground level, and face in a south/south-westerly direction with a clear flight path to and from the entrance.





Nesting birds
• At least two bird boxes should be installed on mature trees around the wider Site. Suitable boxes include the Vivara Pro Seville bird box with a 32mm hole or the Schwegler 2GR nest box. These boxes are suitable for species commonly found within habitats such as those in the immediate vicinity of the Site. • Boxes should be installed at least 2 meters above ground level, away from possible sources of predation and away from direct strong sunlight and in proximity to vegetation where possible.





8 CONCLUSION

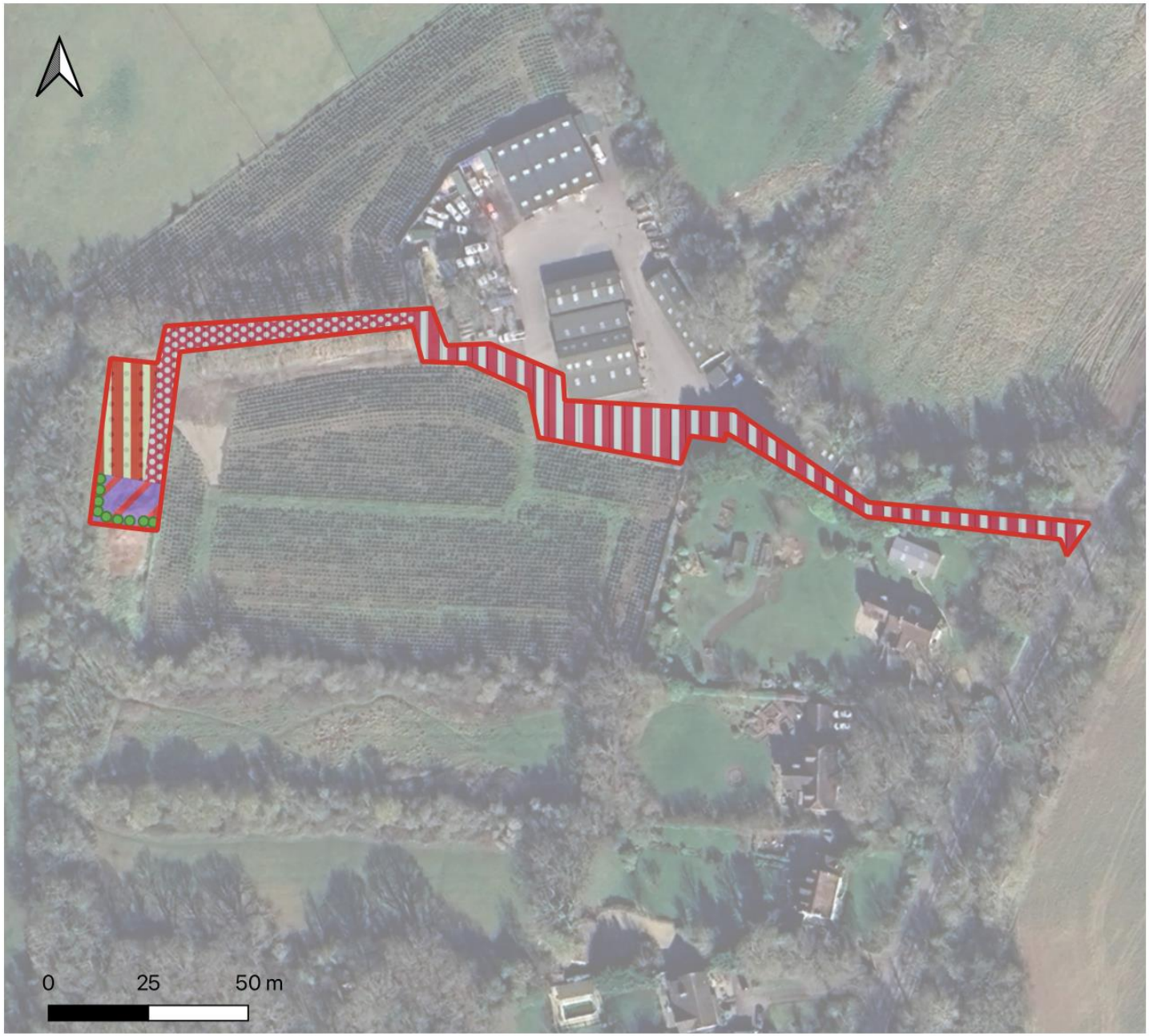
This report is based on an ecological desk study and a walkover survey undertaken in July 2024. Overall, the habitats within the Site were found to be common and widespread. The Site has potential to support individual reptiles, individual common amphibians, hedgehogs and foraging and commuting bats and badgers. No further surveys have been recommended for these species. Mitigation has been recommended to minimise potential impacts on protected/notable species.

The current proposals as outlined provide a gain of 10.44% habitat units at the Site which is achieved through mixed scrub and rural trees which will be of benefit to a wide range of wildlife. Enhancements have been recommended that should be incorporated into the design to improve the overall value of the Site for wildlife.

APPENDIX A – Habitats (Existing)



APPENDIX B - Habitats Post-development



Legend

- Red Line Boundary
- Proposed Small Rural Tree
- Artificial unvegetated, unsealed surface
- Developed land; sealed surface
- Mixed scrub

Project: Oakwood Farm

Title: Proposed Habitats (UKHabs)

Drawing No: 2247/002

Date: 4th December 2024

Version: 2

DEEPDENE ECOLOGY

Deepdene Ecology Ltd

APPENDIX C - Relevant Legislation and Policy

The following section summarises the relevant BNG legislation and policy. This includes the NPPF and local planning policy. As the implementation of the legislation is relatively current, the policy at the local level is currently being updated.

Environment Act 2021

The Environment Act 2021 makes a provision for BNG to be a condition of planning permission in England and planning applications need to demonstrate that a 10% BNG can be met.

National Planning Policy Framework (NPPF) July 2021

Planning policies and decisions should contribute to and enhance the natural and local environment by:

174 (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);

174 (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;

175 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;

179 promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

180 (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;

180 (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

180 (d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

LOCAL PLANNING POLICY

Local Planning policy – Horsham District Planning Framework (November 2015)

Policy 25: The Natural Environment and Landscape Character

The Natural Environment and landscape character of the District, including the landscape, landform and development pattern, together with protected landscapes and habitats will be protected against inappropriate development. The Council will support development proposals which:

1. Protects, conserves and enhances the landscape and townscape character, taking into account areas identified as being of landscape importance, the individual settlement characteristics, and maintains settlement separation.
2. Maintain and enhances the Green Infrastructure Network and addresses any identified deficiencies in the District.
3. Maintains and enhances the existing network of geological sites and biodiversity, including safeguarding existing designated sites and species, and ensures no net loss of wider biodiversity and provides net gains in biodiversity where possible.
4. Conserve and where possible enhance the setting of the South Downs National Park.

Policy 26: Countryside Protection

Outside built-up area boundaries, the rural character and undeveloped nature of the countryside will be protected against inappropriate development. Any proposal must be essential to its countryside location, and in addition meet one of the following criteria:

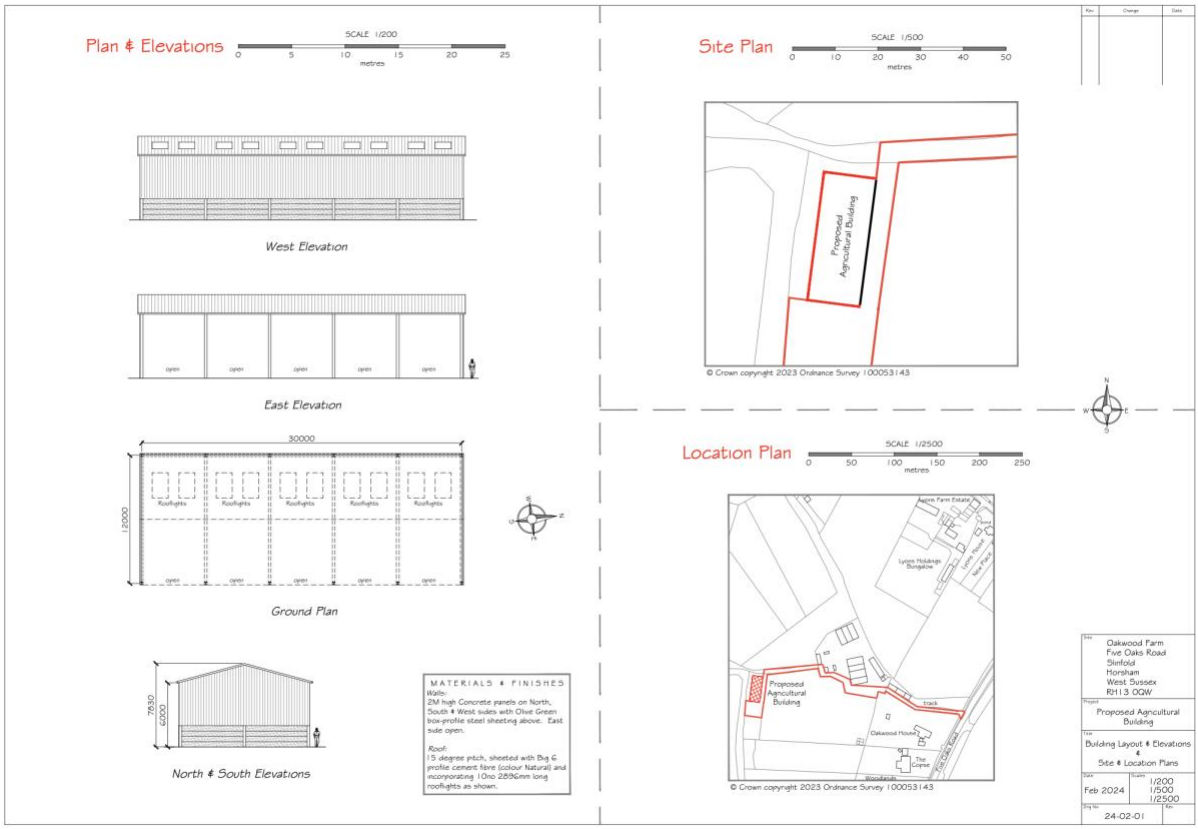
1. Support the needs of agriculture or forestry;
2. Enable the extraction of minerals or the disposal of waste;
3. Provide for quiet informal recreational use; or
4. Enable the sustainable development of rural areas.

In addition, proposals must be of a scale appropriate to its countryside character and location. Development will be considered acceptable where it does not lead, either individually or cumulatively, to a significant increase in the overall level of activity in the countryside, and protects, and/or conserves, and/or enhances, the key features and characteristics of the landscape character area in which it is located, including;

1. The development pattern of the area, its historical and ecological qualities, tranquillity and sensitivity to change;
2. The pattern of woodlands, fields, hedgerows, trees, waterbodies and other features; and
3. The landform of the area.

APPENDIX D

Figure 1: Site Plan & Location Plan (White & Sons, February 2024)



APPENDIX E

Site Survey Photographs



Photograph 1: Location of the proposed barn – bare ground used for storage of wood chip.



Photograph 2: Eastern end of the access track – developed land; sealed surfaces.



Photograph 3: Middle section of access track – developed land; sealed surfaces.



Photograph 4: Access track – western extent.



Photograph 5: Access track – western extent.



Photograph 6: Enhancement area: proposed for mixed scrub planting & small tree planting.

APPENDIX F

Wildlife Friendly Planting (Natural England, 2008. Gardening with Wildlife in Mind. London: Natural England)

Native and wildlife-friendly trees

Common Name	**Scientific Name**
Pedunculate oak	*Quercus robur*
Ash	*Fraxinus excelsior*
Wych elm	*Ulmus glabra*
Whitebeam	*Sorbus aria agg.*
Rowan	*Sorbus aucuparia*
Aspen	*Populus tremula*
Apple	*Malus domestica*
Bird cherry	*Prunus padus*
Common alder	*Alnus glutinosa*
Crab apple	*Malus sylvestris*
Crack willow	*Salix fragilis*
Downy birch	*Betula pubescens*
Field maple	*Acer campestre*
Hornbeam	*Carpinus betulus*
Juniper	*Juniperus communis*
Large-leaved lime	*Tilia platyphyllos*
Small-leaved lime	*Tilia cordata*
Pear	*Pyrus communis*
Scots pine	*Pinus sylvestris*
Sessile oak	*Quercus petraea*
Silver birch	*Betula pendula*
Sweet chestnut	*Castanea sativa*
Wild cherry	*Prunus avium*
Wild service-tree	*Sorbus torminalis*
Yew	*Taxus baccata*

Native and wildlife friendly shrubs

Common Name	**Scientific Name**
Hazel	*Corylus avellana*
Elder	*Sambucus nigra*
Goat willow	*Salix caprea*
Hawthorn	*Crataegus monogyna*
Dog rose	*Rosa canina*
Guelder rose	*Viburnum opulus*
Gorse	*Ulex europaeus*
Broom	*Cytisus scoparius*
Wayfaring tree	*Viburnum lantana*

Wild privet	*Ligustrum vulgare*
Bell heather	*Erica cinerea*
Bilberry	*Vaccinium myrtillus*
Black currant	*Ribes nigrum*
Blackthorn	*Prunus spinosa*
Buckthorn	*Rhamnus catharticus*
Butcher's-broom	*Ruscus aculeatus*
Cross-leaved heath	*Erica tetralix*
Dogwood	*Cornus sanguinea*
Field rose	*Rosa arvensis*
Holly	*Ilex aquifolium*
Midland hawthorn	*Crataegus laevigata*
Spindle	*Euonymus europaeus*