

Biodiversity Assessment – *Final report*

Gibbet Farm, Fen Lane, Donington

June *2026*

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Report Overview	
Scheme reference	Gibbet Farm, Fen Lane, Donington
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EXECUTIVE SUMMARY

Archer Ecology Ltd was commissioned by JB Architectural Design Services to complete a Biodiversity Assessment in support of proposals to construct an agricultural workers' bungalow within a parcel of land at Gibbet Farm (hereafter referred to as the 'application site'). The application site is situated north of Fen Lane, to the west of Donington in the South Holland district of Lincolnshire.

This Biodiversity Assessment appraises the extent of habitat loss/modification required to facilitate the proposed works and determines the potential for positive biodiversity credits to be achieved as a result of implementing the development and landscaping proposals.

The Biodiversity Assessment involved a desk study and review of ecological data. This included a UKHabs walkover completed by Senior Ecologist Lea Nightingale BSc (Hons) on 29th May 2026. During the walkover, baseline data were recorded on the site's current habitat composition, condition, area and floral species, as well as the presence of any invasive non-native species, where observable.

The Statutory (official) Biodiversity Metric calculation tool was used to generate a pre-works and post-works comparison of biodiversity units. With reference to the general arrangement plans, the calculator has indicated a **GAIN** in habitat (area) biodiversity units of **+0.04 (+16.01%) change post works**. This meets the standard National biodiversity net gain expectations mandated as part of the Environment Act 2021 (i.e., +10%).

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1.0 INTRODUCTION

NB: This Biodiversity Assessment has been prepared in accordance with the accompanying Statutory Biodiversity Metric Calculation Tool and Condition Assessment sheets and should be read alongside these supporting deliverables.

1.1 Background

1.1.1 Archer Ecology Ltd was commissioned by JB Architectural Design Services to complete a Biodiversity Assessment in support of proposals to construct an agricultural workers' bungalow within a parcel of land at Gibbet Farm (hereafter referred to as the 'application site'). The application site is situated north of Fen Lane, to the west of Donington in the South Holland district of Lincolnshire.

1.1.2 The location of the application site, centred at Ordnance Survey Grid Reference (OSGR) TF 19006 35806, in context with the local landscape is shown in Figure 1, below.



Figure 1 – Location of the application site in context with local landscape

1.2 Objectives

1.2.1 The purpose of this Biodiversity Assessment is to determine a pre-works and post-works comparison of biodiversity units through applying the Statutory (official) Biodiversity Metric calculation tool. This is achieved using information pertaining to the onsite habitat condition, area and species composition, which are assessed against the predicted impacts arising from the works.

1.3 Proposed Works

1.3.1 In line with the proposed block plan issued by Clarke Group Construction Ltd at the time of being commissioned (see Appendix I – Site layout and Location Plans; Drawing No. SLP-01, dated November 2024), it is understood that the proposals will include the construction of one dwelling. The proposed vehicular access from Fen Lane utilises an existing access track which runs from the south of the application site. Measurements for the areas on site are as follows:

- Building – 153m^2 / 0.0153ha
- Gravel Driveway – 435m^2 / 0.0435ha
- Rear Garden – 286m^2 / 0.0286ha

1.3.2 Please note that as part of these proposals, an area of 290m^2 / 0.029ha is to be enhanced from on-site modified grassland to species-rich grassland alongside the planting of 4no. small native trees.

2.0 METHODOLOGY

2.1 Field survey

UK Habitat Classification Survey

2.1.1 A UK Habitat Classification Survey was completed on 29th May 2026 by Senior Ecologist Lea Nightingale BSc (Hons) of Archer Ecology Ltd.

2.1.2 The habitats at the application site, and where considered appropriate adjacent to the application site, were assessed and classified in accordance with the UK Habitat Classification system (UKHab Ltd, 2023). The habitats were mapped using Quantum Geographical Information Systems (QGIS). A UKHabs plan of the application site is included under Appendix II.

2.2 Biodiversity Assessment

2.2.1 The Biodiversity Assessment was undertaken following guidance contained within CIRIA publication *Biodiversity Net Gain – Good Practice Principals for Development*[1] and involved the following components:

- A desk-based assessment using Multi Agency Geographic Information for the Countryside (MAGIC) website[2], to identify statutory protected nature conservation sites, such as Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs) and Special Area of Conservation (SACs) occurring on or within significant proximity to the site.
- The assessment also included a review of pre-existing ecological data for the works area, including the findings of the UK Habitat Classification completed on 15th April 2026, together with data on statutory designated nature conservation sites and priority habitats.
- Measuring habitat parcels on the ground, combined with the use of online measuring tools (including Google Maps Area Calculator Tool[3]) and QGIS.
- A review of the expected impacts of the proposed development works referred to within the respective plans, including the extent of habitat loss/modification.

[1] Baker, J., Hoskin, R. and Butterworth, T. (2019). *Biodiversity net gain - Good practice principles for development*. CIRIA

[2] www.magic.gov.uk accessed June 2026

[3] Google (2021) *Daft Logic – Google Maps Area Calculator V6.20* [online]. Google. Available at: https://www.daftlogic.com/projects-google-maps-area-calculator-tool.htm [Accessed June 2026].

- Identifying habitat distinctiveness and undertaking a condition assessment based upon *The Statutory Biodiversity Metric - Technical Annex 1: Condition Assessment Sheets and Methodology* and other appropriate condition criteria.
- Application of the biodiversity mitigation hierarchy.
- Identification of any irreplaceable habitats (with reference to Technical Note 4.0 of CIRIA guidelines) and/or invasive, non-native species occurring within the works footprint.
- An assessment of predicted direct and indirect impacts arising from the works, including habitat clearance, disturbance and retention. This would take into account any offset activities, where applicable.
- An assessment of habitat degradation which has occurred on the application site since 30th January 2020. The assessment involved a review of historic satellite imagery of the application site to determine the pre-existing habitat composition and condition relative to the findings of the baseline survey. Where habitat degradation has occurred, the presence of existing or pre-existing habitats providing the highest biodiversity unit scoring (based upon the outcome of habitat distinctiveness and condition of each habitat parcel) was used to represent the current habitat baseline (as represented in the UKHabs map featured under Appendix II of this report).
- Inputting existing habitat data into the '*Statutory (official) Biodiversity Metric calculation tool'*, issued July 2025, in addition to data pertaining to predicted post-works habitat types and condition as a result of completing the scheme. This would be used to determine a biodiversity unit scoring.
- A review of changes in biodiversity units as a result of carrying out the works.

This Biodiversity Assessment was undertaken by Senior Ecologist Lea Nightingale BSc (Hons) of Archer Ecology Ltd who is a qualifying member of CIEEM and has over seven years of ecological experience, including undertaking and assisting with numerous biodiversity assessments.

2.3 Survey Limitations

2.3.1 The UKHabs survey methodology aims to characterise the habitat on site and is not intended to give a complete list of plant species present.

3.0 RESULTS

3.1 Desk Based Assessment

Statutory designated sites for nature conservation

3.1.1 The application site does not fall within the boundary of any nationally or internationally statutory designated sites. No European/internationally designated sites occur within a 10km radius, and no nationally designated sites occur within a 2km radius of the application site. Subsequently, the application site is considered as being within an *'Area not in local strategy'* with respect to these designated sites.

Priority Habitats

3.1.2 A search using MAGIC identified no parcels of Priority Habitat within a significant distance to the application site. The application site is therefore considered as falling within an '*Area not in local strategy'* with respect to Priority Habitats.

Local Nature Recovery Strategy

3.1.3 At the time of preparing this report, no Local Nature Recovery Strategy (LNRS) for Greater Lincolnshire (which would cover South Holland) has been published; this is scheduled for publication in June 2026. In advance of the publication of the LNRS, an interactive map detailing areas that could be of particular importance for biodiversity (ACB) and areas that are of particular importance for biodiversity (APIB) has been published, and the application site does not fall within either area type. It is, therefore, currently considered as falling within an '*Area not in local strategy'* with respect to LNRS.

Habitat Degradation

3.1.4 A review of Ordnance Survey maps and historic aerial imagery has shown that the proposed site of works has been degraded or significantly altered since 30th January 2020. Subsequently, this has been taken into consideration within Section 3.2 of this report.

3.2 UKHabs Survey

3.3 The application site is located 1km to the west of Donington with Fen Lane situated to the south. Within the wider landscape arable fields flank the application site on all sides.

3.4 All habitats recorded within the application site boundary are described below and are shown within the UKHabs map with their reference numbers under Appendix II.

Polygon reference	**-**	**P1**
Habitat type	**-**	**Modified Grassland**
UKHabs code	**-**	**g4**
Habitat value	**-**	**Of site value**

3.4.1 P1 constitutes the main area of the application site and comprises a parcel of modified grassland (see Photographs 1-4, Appendix III). This area was characterised by a sward dominated by meadow foxtail *Alopecurus pratensis*, with rare occurrences of perennial ryegrass *Lolium perenne*, cock's foot *Dactylis glomerata,* false-oat grass *Arrhenatherum elatius,* Yorkshire fog *Holcus lanatus* and very rare notations of red fescue *Festuca rubra*. The grassland was structurally simple and supported a low diversity of forbs, herbs and ruderal species including rare observations of broad-leaved dock *Rumex obtusifolius*, spear thistle *Cirsium vulgare*, common dandelion *Taraxacum officinale* and very rare notations of oxeye daisy *Leucanthemum vulgare*. The sward contains 2-3 species per m^2 and did not appear to receive any current management interventions which had resulted in the formation of a consistently high sward c.1m. There are a few exceptions to this, including occasional areas of bare ground and evidence of sporadic vegetation removal resulting from vehicular/plant movements. It should be noted that this grassland does not meet the required criteria to classify the sward as other neutral grassland or lowland meadow, namely that this parcel contains <8 species per m^2 and has <20% cover of broadleaved herbs and sedges.

3.4.2 A review of historic satellite imagery using Google Earth indicated this area formerly comprised cropland which was subjected to clearance post 2024. In view of historic satellite images (2024) (see Figure 2, overleaf), it has been determined that this parcel formerly comprised cereal crops as per that sown to the east of the application site.



Figure 2 - Historic satellite imagery of the application site 04/10/2024 - Google Earth, 2026

3.4.3 *NB: In line with guidance contained within The Statutory Biodiversity Metric: User Guide*[4] *areas that have been subjected to clearance have been classified as 'modified grassland' as there is no increased habitat distinctiveness scoring between the two habitats.*

[4]Department for Environment Food and Rural Affairs (2026) *The Statutory Biodiversity Metric: User Guide* [online] available at https://assets.publishing.service.gov.uk/media/6a1d98e9c7335e2ca6daadd5/The_Statutory_Biodiversity_Metric_-_User_Guide_-_June_2026.pdf (Accessed 18/06/2026)

3.5 Baseline Survey

3.5.1 An overview of all on-site habitats and predicted impacts is given in Table 1, below, which encompasses a total, combined footprint of 0.1153ha.

3.5.2 For simplicity, proposed and existing linear habitats offering negligible ecological value, including fences and walls, have been omitted from this appraisal as these do not contribute significantly to the algorithm of the DEFRA calculator.

Table 1: Overview of Habitats and Predicted Impacts

Existing UKHabs (Archer Ecology Ltd, 2025)	**Biodiversity Metrics calculator – Habitat equivalent (Crosher *et al.*, 2024)**	**Total area/ Length (ha)**	**Lost (ha)**	**Retained / enhanced (ha)**
Modified grassland – g4 **(P1)**	Grassland – Modified grassland	0.1153	0.0863	0.029 (Enhanced)

3.5.3 No irreplaceable habitats were recorded within the works footprint, and no evidence of invasive non-native species was recorded.

3.6 Predicted Impacts and Compensation

3.6.1 With reference to the scheme descriptions under Section 1.3 of this report, the site preparatory activities are expected to result in the removal of existing onsite habitat, including modified grassland, as reflected in Table 1. In line with the proposed plans, an overview of created habitats is given in Table 2, overleaf.

Table 2: Overview of Habitat Creation/Enhancement

Created Habitat	Biodiversity Metrics calculator – Habitat equivalent (Crosher *et al*., 2023)	Total area (ha)
Building	Urban – Developed land; sealed surface	0.0153
Gravel driveway	Urban – Artificial unvegetated, unsealed surface	0.043
Rear garden	Urban – Vegetated garden	0.0196
	Urban – Unvegetated garden	0.0084
4no. small native trees	Individual trees – Rural tree	0.0163

3.7 Pre-works and Post-works Comparison of Biodiversity Units

3.7.1 The information contained within Tables 1 and 2 was input into the Statutory (official) Biodiversity Metric calculation tool, in addition to information pertaining to the condition, distinctiveness and strategic significance of each habitat type.

3.7.2 The Statutory (official) Biodiversity Metric calculation tool was used to generate a pre-works and post-works comparison of biodiversity units. With reference to the general arrangement plans, the calculator has indicated a **GAIN** in habitat (area) biodiversity units of **+0.04 (+16.01%) change post works.** This meets the standard National biodiversity net gain expectations mandated as part of the Environment Act 2021 (i.e., +10%).

Proposed grassland

3.7.3 An area measuring 290m^2 / 0.029ha of the modified grassland is to be enhanced within the application site. This area will be sown with a floristically rich seedmix such as the EM2 Standard General Purpose Meadow Mixture by Emorsgate. This comprises 15% native wildflowers and 85% slow growing grasses.

3.7.4 Manufacture guidance will be followed on ground preparation, sowing and aftercare for areas of introduced grassland to ensure that this habitat establishes successfully; these measures are available on Emorsgate website. The grassland is best sown in spring (March to May) or early autumn (September to mid-October).

3.7.5 In the first year a scheduled mowing regime will be implemented to ensure it is maintained at a 10cm sward until the end of March. The meadow can then be left uncut for the spring and summer months. The second-year cuts can be reduced, and the grass can be cut by the end of summer and again in autumn using a strimmer/mower in October. All sub-optimal species, including docks, thistles and nettle should be maintained at <5% of the overall footprint.

Proposed native trees

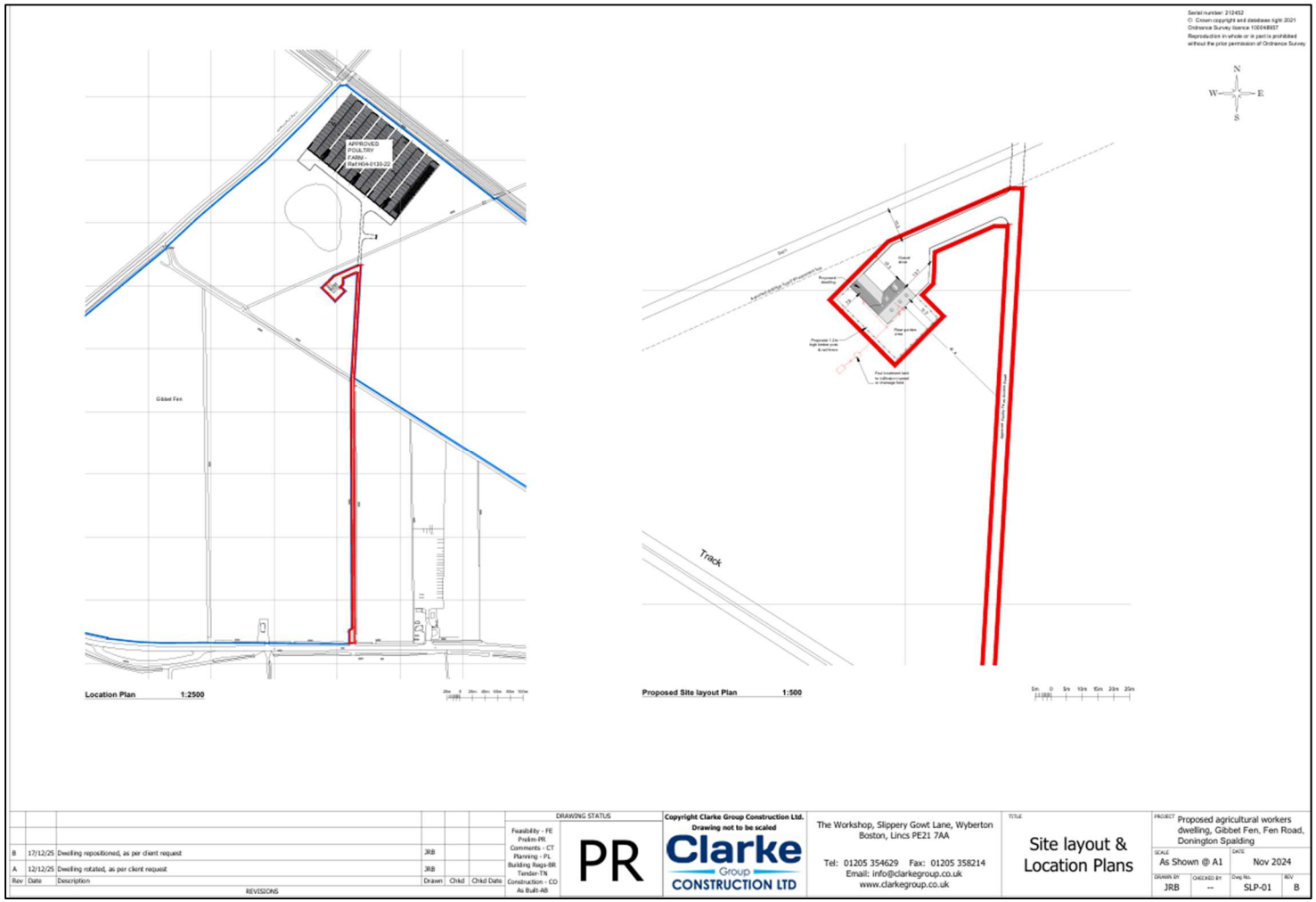
3.7.6 The proposed 4no. small trees will incorporate native, broadleaved tree specimens; These could include field maple *Acer campestre*, crab apple *Malus sylvestris*, silver birch *Betula pendula*, wild cherry *Prunus avium*, rowan *Sorbus aucuparia*, English oak *Quercus robar*, and/or ash *Fraxinus excelsior*.

3.7.7 The new trees will comprise small specimens (e.g., whips) sourced from local provenance. The ground will firstly be prepared by strimming. Once the ground preparations have been made, the whips will be planted between December and March (inclusive).

3.7.8 The planted specimens will be monitored initially during the following growing season (between May and August, inclusive) to ensure successful establishment.

3.7.9 The trees will then be continually monitored annually for a minimum of 30 years. Any failed specimen will be immediately replaced with a new whip of the same specimen.

APPENDIX I – PROPOSED SITE PLAN



APPENDIX II – UKHABS MAP



APPENDIX III – PHOTOGRAPHS



Photograph 1: The application site facing east at approximate OSGR TF 18949 35793, modified grassland (P1)



Photograph 2: Application site facing northeast at approximate OSGR TF 19006 35763, modified grassland (P1)



Photograph 3: Application site facing northwest at approximate OSGR TF 19071 35788, modified grassland (P1)



Photograph 3: Application site facing southwest at approximate OSGR TF 19048 35802, modified grassland (P1)



Photograph 5: Current access to the application site at approximate OSGR TF 19056 35808, modified grassland (P1)



Photograph 6: Access to the application site from Fen Lane facing south at approximate OSGR TF 19077 35794