FIELDOLOGY WORKS
RURAL GRANTS AND ECOLOGY EXPERTS

Preliminary Ecological Appraisal

Dilworth Brow, Longridge, Preston, PR3 2YX -

A Report To: Mr and Mrs Forshaw

Report No.: F118/6-1

Date: July 2026

Fieldology Works Ltd., The Conservatory, Badger Cottage,
The Long Causeway, Burnley, BB10 4RP

Quality Assurance			
Date	Version	Authors & Surveyors	Checked and approved by
14/07/26	Final	**Julie Wickington** Qualifying Member of CIEEM (Ecological Director) under the license of Mike Fisher (Bat Survey Licence Level 2 Class Survey Licence WML CL18 and Bat Roost Level 1 Class Survey Licence (WML CL15). **Sandy Bostock** (Ecological Assistant)	**Julie Wickington** Qualifying Member of CIEEM (Ecological Director)

Declaration of Compliance

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

Disclaimer

The contents of this report are the responsibility of Fieldology Works Ltd. It should be noted that, whilst every effort is made to meet the client’s brief, no site investigation can ensure complete assessment or prediction of the natural environment. Fieldology Works Ltd accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

Validity of Data

The findings of this study are valid for a period of 12 months from the date of survey. If works have not commenced by this date, it may be necessary to undertake an updated survey to allow any changes in the status of bats on site to be assessed, and to inform a review of the conclusions and recommendations made.

Non Technical Summary

Project Background

In June 2026, Mr and Mrs Forshaw commissioned Fieldology Works Ltd to undertake a Preliminary Ecological Appraisal (PEA) on land at Dilworth Brow. This assessment is required to inform a planning application for recreation - holiday pod construction.

Scope of Appraisal

To fulfil the above brief, an ecological desk study and a walkover survey (in accordance with Phase 1 Habitat Survey methodology) were undertaken. The survey was carried out on **20/05/2026** by Julie Wickington, Qualifying Member of CIEEM (Ecological Director) and Sandy Bostock (Ecological Assistant). An initial review of the ecological data was subsequently carried out to determine the features of ecological importance on site as well as a preliminary assessment of the potential impacts the proposed development could have on these features.

Material Considerations

Based on the current understanding of the site proposals and anticipated impacts the following ecological features have been identified as material considerations:

- Sites: None.
- Habitats: Improved permanent pasture (Modified Grassland g4), Dry stone wall and in proximity scrub.
- Species: Bats, Amphibians, nesting birds, terrestrial mammals (including hedgehog and badger).

Recommendations

In order to ensure compliance with wildlife legislation and relevant planning policy and to secure a net gain for biodiversity overall, the following recommendations are made (full details are provided in Chapter 7):

Nature Conservation Sites	See Management Plans and Strategies.
Further Ecological Surveys	None
Scheme Design	The proposed development should be designed in accordance with the ecological mitigation hierarchy as set out in the National Planning Policy Framework (NPPF), and the National Planning Practice Guidance (NPPG), and should seek to avoid/minimise losses of improved grassland, in the first instance, and incorporate the management of this feature in the scheme accordingly.
Management Plans and Strategies	A Construction Ecological Management Plan should be produced for the site, setting out the safeguards and appropriate working practices that will be employed to minimise adverse effects on biodiversity and ensure compliance with UK Wildlife Legislation. This will include safeguards for retained adjacent habitats; construction timetables to avoid sensitive periods such as nesting bird season; and, site protection measures to avoid harming commuting or foraging terrestrial mammals.

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1.0 Introduction

1.1 Project Background

On **1st May 2026**, Fieldology Works Ltd was commissioned by **Mr and Mrs Forshaw** to undertake a Preliminary Ecological Appraisal at **Dilworth Brow, Longridge, Preston, PR3 2YX,** (thereafter referred to as 'the Site'). This assessment is required to inform a planning application for recreation - holiday pod construction.

The purpose of the Preliminary Ecological Appraisal is to identify the features of ecological importance on Site and provide a preliminary assessment of the potential impacts the proposed development could have on these features.

1.2 Site Description and Context

Table 1.1 provides a brief summary of the site and its surroundings.

Attribute	Description
Site Location	Dilworth Brow, Longridge, Preston, PR3 2YX
National Grid Reference	SD 6201 3842
Site Area (ha)	0.04 ha (approx.)
Topography	Gently sloping to the southwest.
Land Cover (on site)	Improved permanent pasture (modified grassland, sheep grazed), dry stone walls.
Land Cover (site surrounds)	To the north Higher Road and beyond improved permanent pasture, to the east farm holdings and improved permanent pasture. To the south scrubland, residential development and to note a pond. To the west Higher Road, improved permanent pasture and Dilworth Upper Reservoir.

Table 1.1: Summary of Site and Surroundings

Figure 1 illustrates the site location, red-line boundary and surroundings at **Dilworth Brow**.

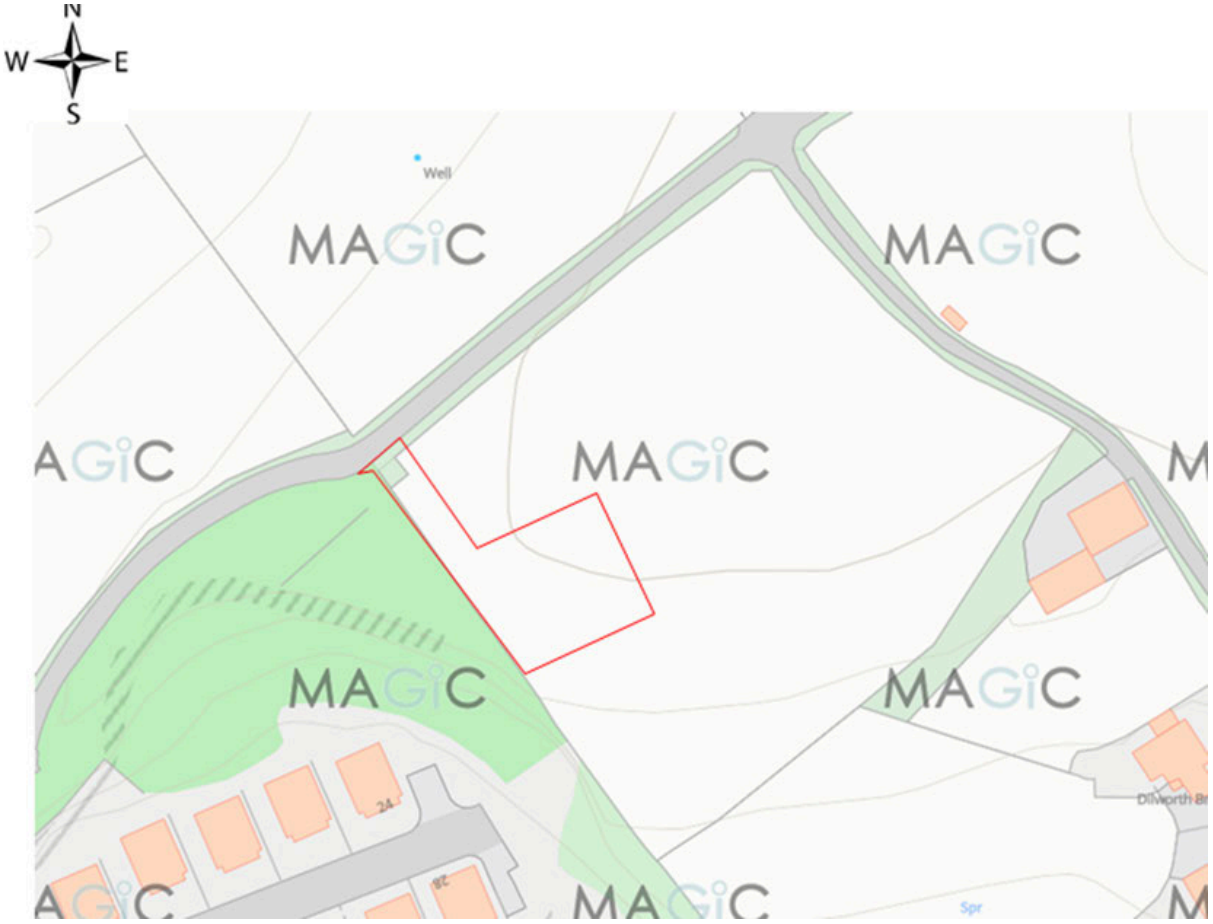


Figure 1: Site Location and context with surrounding area

1.3 Documentation Provided

The conclusions and recommendations made in this report are based on information provided by the client regarding the scope of the project. Documentation made available by the client is listed in Table 1.2.

Document / Drawing Number	Author
Landscape layout and planting plan	Penny Bennett

Table 1.2: Documentation Provided by Client

2.0 Methods

2.1 Desk Study

An ecological desk study was undertaken to determine the presence of any designated nature conservation sites and protected species in proximity to the site. This involved contacting appropriate statutory and non-statutory organisations which hold ecological data relating to the survey area. Fieldology Works Ltd then assimilated and reviewed the desk study data provided by these organisations.

The consultees for the desk study were:

- Natural England - MAGIC website for statutory conservation sites; and,
- Lancashire Environment Record Network (Records Centre).

The desk study included a search for:

- European statutory nature conservation sites in the UK (now referred to as the 'National
- Site Network') within a 2 km radius of the site (extended to 10 km for any statutory site designated for bats);
- UK statutory sites within a 2 km radius; and,
- Non-statutory sites and protected/notable habitats and species records within a 2 km radius.

The data collected from the consultees are discussed in Chapter 3. In compliance with the terms and conditions relating to its commercial use, the full desk study data are not provided within this report.

The desk study also included a review of relevant local planning policy with regard to biodiversity and nature conservation.

2.2 Field Survey

2.2.1 Phase 1 Habitat Survey

A field survey was conducted referring to the Phase 1 Habitat Survey methodology of the Joint Nature Conservation Committee[1] and the Institute of Environmental Assessment[2]. UKHab has been used as the standard technique for classifying and mapping British habitats. The aim is to provide a record of habitats that are present on site[3].

During the survey, the presence or potential presence of protected species was noted where observed. This included a review of suitable habitat opportunities or field signs of notable

[1] Joint Nature Conservation Committee (2010). Handbook for Phase 1 Habitat Survey: A technique for environmental audit (reprint). Joint Nature Conservation Committee, Peterborough.

[2] Institute of Environmental Assessment. (1995). Guidelines for Baseline Ecological Assessment. Institute of Environmental Assessment. E&FN Spon. An Imprint of Chapman and Hall. London.

[3] UKHab (2023) The UK Habitat Classification Version 2.0

species. groups (amphibians, bats, birds, terrestrial and aquatic invertebrates, terrestrial and aquatic mammals, plants and reptiles).

The assessment was conducted on **20th May 2026** by Julie Wickington, Qualifying Member of CIEEM (Ecological Director). Weather conditions were recorded and are presented in Table 2.1.

Parameter	Condition
Temperature (°C)	16
Cloud (%)	30%
Wind (Beaufort)	5
Precipitation	Slight drizzle

Table 2.1: Weather Conditions During Field Survey

2.2.2 Field Survey - Amphibians

Following current best practice considering the partial roll out of District Level Licencing (DLL) across England and based on likely effects, a proportionate assessment of the water bodies (range within 250m from Site) has been applied. Where a development is anticipated to affect Great crested newt (GCN) (*Triturus cristatus*) the search can be extended up to 500m or more. As the development is not anticipated to affect GCN the assessment area is 250m. The GCN Habitat Suitability Index (HSI) has also been applied as a quantitative measure of habitat quality evaluating the suitability of habitat for GCN. This methodology is presented in Appendix 2.

2.2.3 Field Survey Constraints and Limitations

No significant constraints were encountered during the survey of the site, note field was grazed by sheep.

2.3 Preliminary Evaluation

The Preliminary Evaluation is an initial review of the ecological data to determine which features are likely to be a material consideration for the proposed development at the site. A material consideration is an ecological feature that by virtue of its legal status, its inclusion in any national policy or plan, rarity or contribution to local ecological networks, is worthy of further consideration in the planning system. Typical material considerations include statutory or non-statutory nature conservation sites, species protected by law, Habitat and Species of Principal Importance in England as defined by the Natural Environment and Rural Communities (NERC) Act 2006 or other ecological corridors and biodiversity opportunities areas outlined in local policy.

3.0 Desk Study

3.1 Landscape Initiatives

MAGIC Maps identifies the Site within a Countryside Stewardship Target Area for Curlew and Lapwing.

The closest records in the 2 km search area for each priority species are:

- Curlew, 5 records, with the closest record located approx. 1.01 km southwest in 2022.
- Lapwing, 2 records, with the closest record located approx. 1.52 km northwest in 2022.
- Corn Bunting - no records returned.

Great Crested Newt (GCN) Risk Zones (Lancashire): Amber Zone. Amber zones have great crested newt populations, habitats and dispersal routes – developers can use district level licensing in these zones.

The Site is not located within the Green Belt as designated in the Ribble Valley Local Plan.

3.2 Nature Conservation Sites

The Site is not located within 10 km of any statutory nature conservation sites designated for the presence of bats. Statutory and non-statutory nature conservation sites located in proximity to the survey area are summarised in Table 3.1.

Site Name	Designation	Proximity to the Survey Area	Description
Statutory Sites			
Forest Of Bowland	Area of Outstanding Natural Beauty	Within the development footprint	803 square kilometers. Important for heather moorland, blanket bogs, and rare birds.
Non -statutory Sites			
Longridge Fell	BHS	1.86 km northeast	265.74 ha Guideline(s) for Site Selection: Heathland (He1) Flowering Plants and Ferns (Ff4a) Butterflies and Moths (Le4)?
Hoardsell Meadow	BHS	1.74 km east	4.46 ha Guideline(s) for Site Selection: Grassland (Gr3)
Cutlers and Dale House Quarries, near Chipping	LGS	1.30 km northwest	Disused Pendleside limestone quarries
Spade Mill Reservoirs	BHS	0.62 km south	28.18 ha Guideline(s) for Site Selection: Birds (Bi8)
Key: LGS: Local Geodiversity Site BHS: Biological Heritage Site			

Table 3.1 Summary of Nature Conservation Sites

3.3 Habitats

Table 3.2 summarises known priority or notable habitats within a 2 km radius of the site as sourced from the data search and MAGIC Maps (accessed July 2026).

Habitat Type	No. of Records	Location of Nearest Record
Deciduous Woodland	23	0.41 km northwest
Upland heathland	8	0.63 km northeast
Upland calcareous grassland	1	0.79 km northeast
Good quality semi improved grassland	2	0.80 km southeast
Ancient Woodland	8	0.93 km east
Traditional orchard	3	0.96 km southwest
Lowland fens	1	1.04 km north
Grass moorland	1	1.99 km northeast

Table 3.2: Summary of Priority/Notable Habitats

3.4 Species Records

The data search was carried out in **May 2026** by Lancashire Environment Record Network (LERN). It should be noted that the absence of records should not be taken as confirmation that a species is absent from the search area.

3.4.1 Veteran Trees

The data search holds no record of veteran trees within the proposed development footprint or within a 2 km radius of the site.

3.4.2 Vascular Plants

The data search holds no record of vascular plants within the proposed development footprint. Table 3.3 provides a summary of protected and notable vascular plants species records.

Species	No. of records	Most Recent Record (Date & Location)	Closest Record (Date & Location)	Location Observed (closest record)	Conservation Status
Bluebell (Hyacinthoides non-scripta)	10	[redacted]			Schedule 8 of the WCA 1981 (as amended).
Columbine (Aquilegia vulgaris)	2				

Common Spotted-orchid (Dactylorhiza fuchsii)	1	[redacted]	ECCITES-B
Northern Yellow-cress (Rorippa islandica)	1		LBAP
Petty Spurge (Euphorbia peplus)	2		ECCITES-B
Reflexed Saltmarsh-Grass (Puccinellia distans)	1		
Snowdrop (Galanthus nivalis)	13		ECCITES-B
Welsh Poppy (Meconopsis cambrica)	6		

Key:
LBAP: Lancashire BAP priority species.
WCA: Schedule 5 of Wildlife and Countryside Act 1981 (as amended). Schedule 8 of the WCA 1981 (as amended). Protected animals (other than birds) and Schedule 6 of Wildlife and Countryside Act 1981 (as amended). Animals which may not be killed or taken by certain methods.
NERC: Section 41 of the NERC Act 2006
IUCN Red List (VU) - Vulnerable, NT - Near Threatened
ECCITESB: European Commission CITES Annex B

Table 3.3: Summary of Priority/Notable Vascular Plants

3.4.3 Invertebrates

The data search holds no record of invertebrates within the proposed development footprint. Table 3.4 provides a summary of protected and notable invertebrate species records.

Species	No. of records	Most Recent Record (Date & Location)	Closest Record (Date & Location)	Location Observed (closest record)	Conservation Status
Butterflies					
Brimstone (Gonepteryx rhamni)	1	[redacted]			
Comma (Polygonia c-album)	2				
Green Hairstreak (Callophrys rubi)	8				

Moths			
Hawthorn Tip Moth (Argyresthia bonnetella)	1	[redacted]	LBAP
Insect - true fly (Diptera)			
Xylota jakutorum	2		

Key:
LBAP: Lancashire BAP priority species.
UK BAP Priority species.
WCA: Schedule 5 of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds) and Schedule 6 of Wildlife and Countryside Act 1981 (as amended). Animals which may not be killed or taken by certain methods.
NERC: Section 41 of the NERC Act 2006
IUCN Red List

Table 3.4: Summary of Priority/Notable Invertebrates

3.4.4 Bat records

The data search holds no record of bats roosts within the proposed development footprint. Table 3.5 provides a summary of bat roosts.

Species	No. of records	Most Recent Record (Date & Location)	Closest Record (Date & Location)	Location Observed (closest record)	Conservation Status

Bats Other Signs

The data search holds no records of bat activity within the proposed development footprint. Table 3.6 provides a summary of the bat records. Signs of bat activity included bat presence, casualties, foraging and commuting.

Species	No. of records	Most Recent Record (Date & Location)	Closest Record (Date & Location)	Location Observed (closest record)	Conservation Status
Bat (Chiroptera)	2	[redacted]			LBAP, IUCN Red List NERC WCA
Common Pipistrelle (Pipistrellus pipistrellus)	5				WCA
Nyctalus/Eptesicus agg.	1				WCA
Pipistrelle sp.	4				LBAP, WCA

Key:
LBAP: Lancashire BAP priority species.
WCA: Schedule 5 of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds) and Schedule 6 of Wildlife and Countryside Act 1981 (as amended). Animals which may not be killed or taken by certain methods.
NERC: Section 41 of the NERC Act 2006
IUCN Red List CR (Critically endangered)

Table 3.6: Summary of Bat records

3.4.5 Amphibian records

The data search holds no record of amphibians within the proposed development footprint. Table 3.7 provides a summary of protected and notable amphibian species records.

Species	No. of records	Most Recent Record (Date & Location)	Closest Record (Date & Location)	Location Observed	Conservation Status
Great Crested Newts (Triturus cristatus)	4	[redacted]			LBAP, WCA, NERC
Common Frog (Rana temporaria)	7				LBAP, WCA,

Common Toad (Bufo bufo)	1	[redacted]	LBAP, WCA, NERC
Palmate Newt (Lissotriton helveticus)	1		WCA
Smooth Newt (Lissotriton vulgaris)	6		WCA

Key:
LBAP: Lancashire BAP priority species.
WCA: Schedule 5 of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds) and Schedule 6 of Wildlife and Countryside Act 1981 (as amended). Animals which may not be killed or taken by certain methods.
NERC: Section 41 of the NERC Act 2006

Table 3.7: Summary of Amphibian records

MAGIC Maps identifies no priority ponds within the Site (of proposed development) or within a 2km radius of the Site. No Surveyed Priority Ponds Points or OS Priority Ponds with Survey Data have been returned. Magic Maps further identifies a GCN Strategic Opportunity Area – Fringe 3 0 at approx. 1.60 m west of the Site.

MAGIC Maps identifies one pond within a 250 m radius of the red-line boundary. Pond 1 is located approx. 160 m southwest of the Site. An issue is also present to the southwest, and a drain is located to the northeast.

An additional three ponds are present within a 500 m radius, to the northeast and southwest of the Site. The issue continues to flow southwards, and the drain continues from the northeast to the southeast of the Site.

Within the 500 m to 1,000 m radius, an additional four ponds are present. Cowley Brook flows to the east, and the drain continues through the wider area to the southeast. A ford and a number of Issues are present to the northwest.

In total, eight ponds are located within a 1,000 m radius of the proposed development. Figure 2b illustrates the locations of these ponds and associated watercourses.

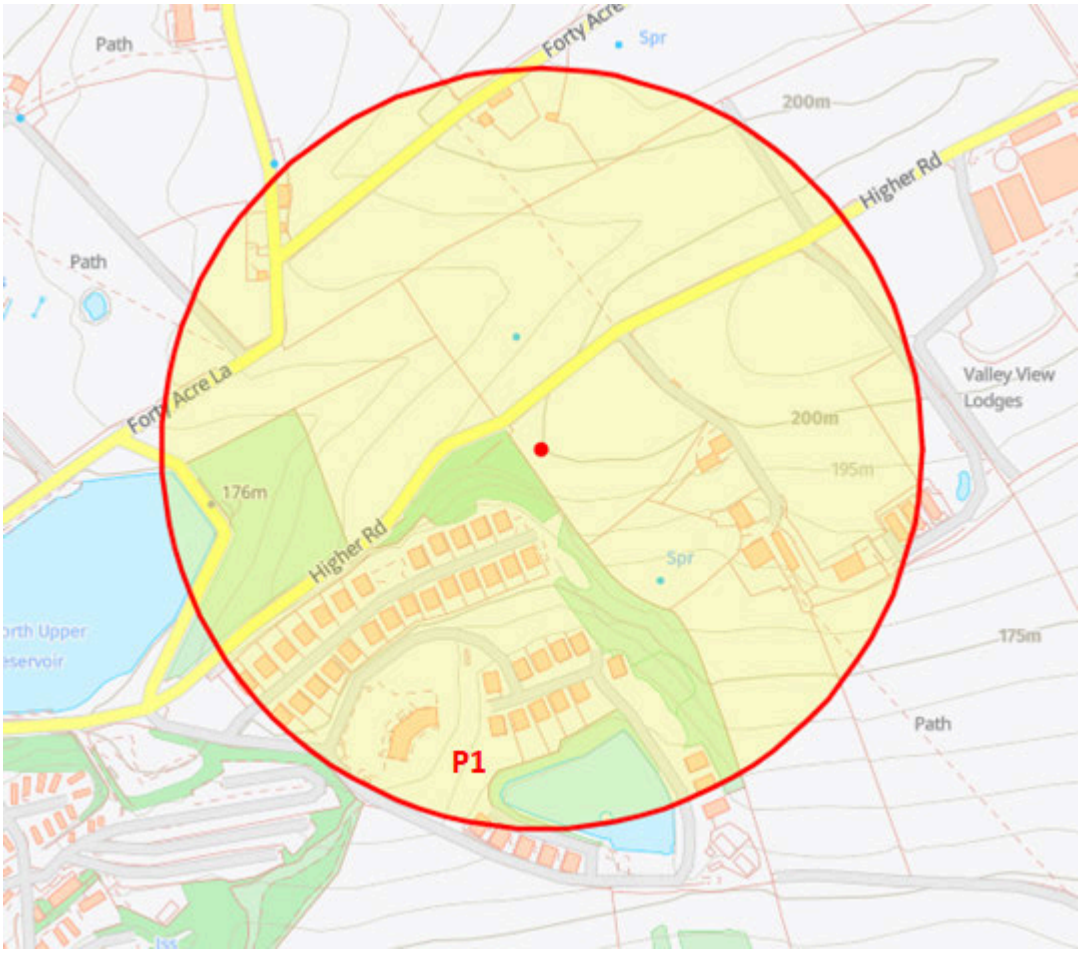


Figure 2a: Ponds in a 250m radius

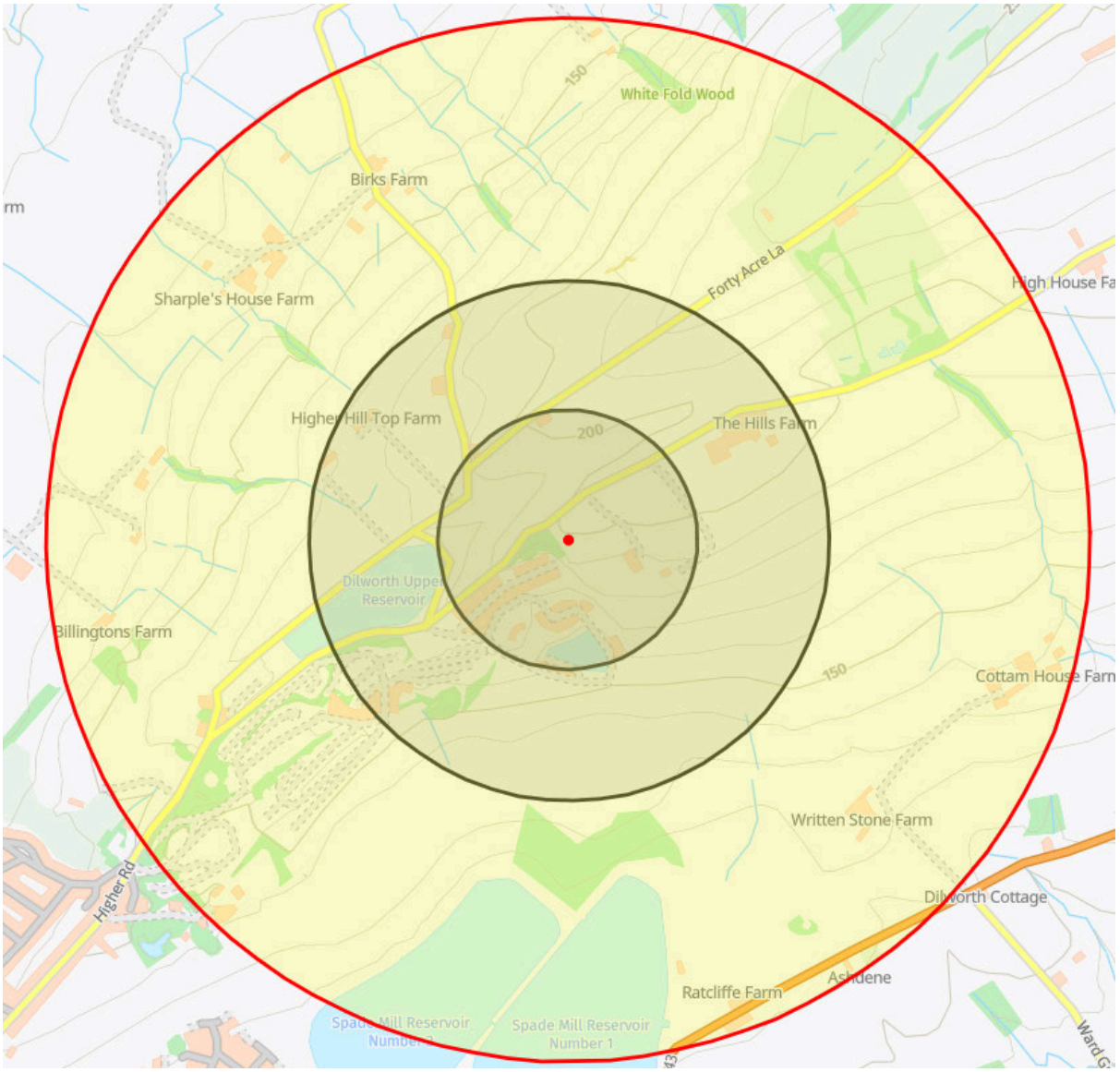


Figure 2b: Ponds in a 1000m radius

3.4.6 Bird records

Collectively, the data search holds no record of birds within the proposed development footprint.

The data search provides 32 records (12 species) of protectable or notable birds within a 2km radius of the Site. All species are listed in Table 3.8 with prescribed legal protection and nesting preference.

- The closest record is Curlew, located at approx. 1.01 km southwest in 2022.
- The most frequently recorded bird species observed within a 2 km radius are Pheasant - 11 records, followed by; Curlew - 5 records and Skylark 3 records (2017).
- The least recorded bird species observed within a 2 km radius are for single Black Swan (2013), Cuckoo (2021), House Sparrow (2022), Meadow Pipit (2017), Red legged Partridge (2017) and Black Headed gull (2022).

Common Name	Scientific Name	Records	Date Range	Distance	Direction	Habitat Preferences	Conservation Status
Barn Owl	Tyto alba	2	[redacted]		w	BP	Green, 1981
Black Swan	Cygnus atratus	1			sw	WF, GN	
Cuckoo	Cuculus canorus	1			nw	P, PB	Red, NERC (41)
Curlew	Numenius arquata	5			sw	GN, W, OW	Red, P 2010, NT (Red list)
House Sparrow	Passer domesticus	1			nw	P, OW	Red, NERC (41)
Kestrel	Falco tinnunculus	3			nw	BP	Amber
Lapwing	Vanellus vanellus	2			nw	GN, PB / PCs W	Red, Near threatened
Meadow Pipit	Anthus pratensis	1			ne	GN, OW, PB	Amber
Pheasant	Phasianus colchicus	11			w	GN, OW	
Red-legged Partridge	Alectoris rufa	1			ne	GN	Near threatened
Skylark	Alauda arvensis	3			ne	GN	Red, NERC (41)
Black-headed Gull	Chroicocephalus ridibundus	1			nw	DB, GN, OW	Amber

Habitat Pref Key
Passerine - **P**
Birds of Prey - **BOP**
Over Wintering: **OW**
Wading: **W**
Ground Nesting: **GN**
Passage Birds: **PB**
During breeding season **DBS**
Peak Counts - Spring/Autumn **PCs SA**
Peak Counts Autumn / Winter **PCs AW**
Peek Counts Winter **PCs W**

Table 3.8: Summary of bird records

Field survey bird observations are summarised in Table 3.9.

Species	No. of records	Most Recent Record (Date & Location)	Location Observed	Conservation Status
Blue Tit (Cyanistes caeruleus)	3 seen in 30 minutes	[redacted]		Green, WCA
European Robin (Erithacus rubecula)	1 seen in 30 minutes			Green, WCA
Blackbird (Turdus merula)	2 in 30 minutes			Green, WCA
Wood pigeon (Columba palumbus)	2 in 30 minutes			Green, WCA

Key:
Green, Amber : UK Birds of Conservation Concern (Green: Low Conservation Priority, Amber: unfavourable conservation status).
WCA: Schedule 5 of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds) and Schedule 6 of Wildlife and Countryside Act 1981 (as amended). Animals which may not be killed or taken by certain methods.
IUCN Red List

Table 3.9: Field Bird Survey Observation

3.4.7 Other mammals

The data search holds no record of mammals within the proposed development footprint. Table 3.10 provides a summary of protected and notable mammal species records.

Species	No. of records	Most Recent Record (Date & Location)	Closest Record (Date & Location)	Location Observed	Conservation Status
		[redacted]			
Brown Hare (Lepus europaeus)	4				LBAP, NERC
Hedgehog (Erinaceus europaeus)	3				LBAP, WCA, NERC
Otter (Lutra lutra)	1				LBAP, IUCN Red List NERC, WCA
Rabbit (Oryctolagus cuniculus)	3				
Roe Deer (Capreolus capreolus)	3				

Key:
LBAP: Lancashire BAP priority species.
WCA: Schedule 5 of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds) and Schedule 6 of Wildlife and Countryside Act 1981 (as amended). Animals which may not be killed or taken by certain methods.
NERC: Section 41 of the NERC Act 2006

Table 3.10: Summary of Priority/Notable Mammals

3.4.8 Reptiles

The data search holds no record of reptiles within the proposed development footprint or within a 2km radius of the Site.

3.4.9 Bony Fish

The data search holds no record of bony fish within the proposed development footprint. Table 3.11 provides a summary of bony fish species.

Species	No. of records	Most Recent Record (Date & Location)	Closest Record (Date & Location)	Location Observed	Conservation Status
Bullhead (Cottus gobio)	2	[redacted]			LBAP
Brown/Sea Trout (Salmo trutta)	1				LBAP, NERC
Key: LBAP: Lancashire BAP priority species. NERC: Section 41 of the NERC Act 2006					

Table 3.11: Summary of Invasive Non-native species

3.4.10 Invasive Flora and Fauna

The data search holds no record of Invasive non-native species (INNS) within the proposed development footprint. Table 3.12 provides a summary of INNS records.

Species	No. of records	Most Recent Record (Date & Location)	Closest Record (Date & Location)	Location Observed	Conservation Status
Butterfly-bush (Buddleja davidii)	3	[redacted]			
Himalayan Balsam (Impatiens glandulifera)	11				INNS
Japanese Knotweed (Fallopia japonica)	4				INNS
Japanese Rose (Rosa rugosa)	1				INNS
Lamiastrum galeobdolon subsp. Argentatum (Lamiastrum galeobdolon subsp. argentatum)	4				INNS
Montbretia (Crocosmia	8				INNS

pottsii x aurea = C. x crocosmiiflora)		[redacted]	
Common Carp (Cyprinus carpio)	1		INNS
Grey Squirrel (Sciurus carolinensis)	1		INNS
Key: Invasive Non-native species (INNS)			

Table 3.12: Summary of Invasive Non-native species (INNS)

4.0 Survey Results

4.1 Introduction

A UKHab Habitat Survey drawing in Section 8.0 (UKHab Habitat Map), illustrates the location and extent of all habitat types recorded on site. Detailed habitat descriptions and photographs are illustrated below.

MODIFIED GRASSLAND (g4)

There are 0.0545 ha of Modified Grassland (g4, 102 (grazed by sheep) located in the site. Species present across the parcel: Abundant: Annual Meadow-Grass (Poa annua), Perennial Rye Grass (Lolium perenne), Frequent: Common Couch (Elymus repens), Occasional: Creeping Buttercup (Ranunculus repens), White Clover (Trifolium repens). Five species present in grassland representative of an improved permanent pasture. Images can be seen in figures 3 to 5.

Figure 3: Modified grassland (viewed to the south)

Figure 4: Modified grassland (viewed to the north)

Figure 5: Modified grassland (viewed to the northwest including dry stone wall)

4.2 Great Crested Newts - Habitat Suitability Index.

The HSI of pond P1 is presented in Appendix 3, the pond is assessed as poor.

4.3 Protected / Notable Species

Table 4.1 summarises the suitability of the site for protected/notable species and any species/evidence of species that were recorded during the survey. The time of year at which the survey is undertaken will affect species or field signs directly recorded during the survey.

Species/Group	Description
Plants	The Site contains managed improved grassland, the impact on the grassland is anticipated to be minimal as this is of low ecological value. The in proximity scrub to the west, requires protection during the project.
Invertebrates	Overall, the presence of notable invertebrates can be discounted due to the lack of habitats on the Site. The PHI deciduous woodland (0.41km northwest), upland calcareous grassland (0.79km) northeast and Good quality semi improved grassland (0.80km southeast) from the Site.
Bats	The site and wider site is managed improved grassland. The surrounding area consists of fields with hedgerows, providing linear corridors of trees. These habitats will remain. Lighting to the proposed property and surroundings may have the potential to discourage bats from using the elevations and foraging corridors.
Amphibians	The Site has a watercourse in proximity to potentially provide suitable aquatic and breeding opportunities for amphibian species. The Site contains sheep grazed improved permanent pasture that offers little to no refuge opportunities. To the southeast the issues and ravines run to Cowley Brook and Longridge Fell BHS contains heathland that is more likely to provide more suitable opportunities for terrestrial refuge.
Birds	A range of common and generalist bird species were recorded on or adjacent to the site including Wood pigeon (Columba palumbus), European Robin (Erithacus rubecula), Blackbird (Turdus merula) and Blue Tit (Cyanistes caeruleus). The pockets of deciduous woodland to the south, provide potential nesting opportunities, predominantly for generalist bird species. Spade Mill Reservoir (0.62km south) is a BHS for summer breeding birds and wintering birds. During the PEA survey adult birds were seen flying through the Site.

Terrestrial mammals (brown hare, badger and hedgehog)	No evidence of terrestrial mammals was observed on site during the assessment. The woodlands, openfields and residential setting to the southwest of the Site are likely to provide habitat for brown hare and hedgehogs.
Bony Fish	The presence of notable Bony fish can be discounted

Table 4.1: Summary of Species/Species Evidence Recorded on Site.

4.4 Invasive Species

There were no invasive non native species observed on the site.

5.0 Preliminary Evaluation

5.1 Landscape Initiatives

The site is in an Amber Zone for Great Crested Newts (Lancashire Map). Therefore, landscape initiatives are identified as a material consideration in relation to the proposed works.

5.2 Nature Conservation Sites

European Statutory Sites

In accordance with the Conservation of Habitats and Species Regulations 2017 (As amended) all European Sites have the potential to be a material consideration for a proposed development where there is potential direct or indirect connectivity between the development site and the feature for which the European site is designated.

There are no European Statutory Sites located within 5 km of the Site; these statutory sites are therefore not a material consideration for the proposed works.

UK Statutory Sites

The Forest of Bowland (AONB) is allocated within the development footprint and therefore is capable of being a material consideration for the proposed works.

Non-Statutory Sites

The desk study identified four non-statutory sites (BHSs) situated within a 2 km search radius. No sites were present on or immediately adjacent to the site. Spade Mill reservoir BHS (selected for birds) is located >500m south of the site. The site comprises two adjacent reservoirs situated on the eastern side of Longridge. There is some connectivity to the site, however, the site is dissected by residential properties to the southwest and the surrounding area is intensively farmed. Considering the proximity of Spade Mill reservoir, the limited connectivity between the habitats and the Site, this BHS is currently deemed not a material consideration for the proposed works.

The remaining 47 non-statutory sites (Priority/Notable Habitats) are isolated from the survey area through transport corridors and farmed grassland. Therefore, no adverse impacts on these sites are currently anticipated. These sites are not discussed further within this report.

5.3 Habitats

An evaluation of the importance of each habitat recorded on site and in proximity to the site is summarised in Table 5.1.

Habitat Type	Material Consideration?	Rationale
Grassland, poor improved & managed grassland.	No	This habitat is common, widespread with low ecological value, and which can easily be replaced in the short to medium term.
Dry Stone Wall	No	This refuge feature is common, widespread with low ecological value, and which can easily be replaced in the short to medium term.

Table 5.1: Preliminary Evaluation of Habitats

5.4 Protected / Notable Species

An evaluation of the potential presence or protected / notable species on site is summarised in Table 5.2.

Species / Species Group	Material Consideration?	Rationale
Vascular plants	No	The desk and field surveys did not return records of notable and protected species. However, the scrub to the west of the Site will require protection.
Invertebrates	No	Notable invertebrates are unlikely to be present in significant numbers due to limited floral diversity and adopted management of the improved grassland.
Bats	Yes*	The linear habitats surrounding the site support suitable foraging/dispersal routes. Several bat species are afforded full protection under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended).
Amphibians	Yes	The desk study returned a small number of records for common amphibian species, the nearest of which were Great Crested Newt, Palmate and Smooth newt records, [redacted] in 2006. No records for great crested newt were provided and reference to MAGIC Map found no records of mitigation licences, licence returns or pond surveys within 2 km of the site. However aquatic habitat is present in proximity to the Site, 1 watercourse >150m southwest and the HSI for the

		pond is poor. Whilst the site contains limited terrestrial habitats for amphibians, there is a low - medium likelihood that the habitat surrounding the Site could be used for commuting or feeding.
Birds	Yes	The scrub to the west of the Site offers suitable habitat for a range of common and generalist bird species, as well as some potentially more interesting species associated with the nearby woodland habitat. All nesting birds afford protection under the Wildlife and Countryside Act 1981 (as amended) whilst in the nest. The Site is in a Wading Zone Area (Curlew Level 5 and Lapwing Level 4). There are limited records of these species using the Site, the improved grassland does not offer a sward length and diversity for ground nesting birds to shelter and nest in.
Terrestrial Mammals (badger and hedgehog)	Yes	No evidence of badgers or hedgehogs was observed during the survey and the grounds surrounding the site provide very limited opportunities for terrestrial mammals. The open areas of grassland are suitable for individuals to pass through and forage on occasion, with records of Brown Hare in proximity to the Site in 2020 [redacted] Brown Hares and Hedgehogs are a Species of Principal Importance (NERC) and are afforded limited protection under the Wildlife and Countryside Act 1981 (as amended).
Bony Fish	No	No suitable habitat present on the Site.
Key: * Features assessed as material consideration based on available evidence such as existing records or habitat suitability. Conclusions should be evaluated if and when further information about the status of the species becomes available.		

Table 5.2: Presence or protected / notable species

5.5 Invasive Species

An evaluation of the potential presence or protected / notable species on site is summarised in Table 5.3.

Species / Species Group	Material Consideration?	Rationale
Flora	No	None observed or recorded on Site.
Fauna	No	

Table 5.3: Presence of notable invasive non - native species

6.0 Preliminary Impact Assessment

6.1 Summary of proposals

Proposals include the siting of holiday pods, access and landscaping.

Construction Phase

The following activities are likely to be associated with the proposed development during the construction phase.

- Site, Building clearance and ground preparation;
- Use and movement of heavy goods vehicles and machinery;
- Storage of plant, materials and waste; and,
- Presence of and movement of site personnel.

Operational Phase

The following activities are likely to be associated with the operational phase of the proposed development.

- Use of lighting associated with the new facilities and refurbished building
- Permanent siting of the potential new facilities;
- Presence of and movement of site personnel; and,
- Maintenance of landscaping.

6.2 Nature Conservation Sites

European and UK Statutory

The Forest of Bowland (AONB) is allocated within the development footprint, the site does not contain priority habitats and the nature of the construction is anticipated to be prefabricated pods) and the scale of the works proposed on site is small impacting primarily modified grassland. Additionally, the site is not situated within the SSSI impact risk zone, the current proposals do not trigger any of the associated SSSI risk categories. It is considered very unlikely that the proposed works would have an adverse effect on the AONB. No further recommendations are made.

Non-Statutory Sites

The proposed development work will not directly impact upon Spade Mill Reservoirs BHSs. Given the small scale of the proposals and little-to-no connectivity between these local wildlife sites and the proposed development site. It is considered very unlikely that the proposed works would have an adverse effect on these wildlife sites. No further recommendations are made.

6.3 Habitats

Table 6.1 below summarises the potential impacts on habitat features that are likely to occur as a result of the construction and operational activities of the proposed development described in Section 6.1 above. Impacts are considered before mitigation. Only habitats considered to be a material consideration in the planning system are included in the impact assessment.

Habitat Type	Summary of Potential Impacts
Improved permanent grassland (Modified grassland g4)	Damage or degradation of the habitat during construction works, lighting or inappropriate post-construction landscape management. Indirect impacts resulting from pollution in the form of dust, run-off, or illumination on the habitat, the linear edges and aquatic networks
Dry Stone Wall(s)	

Table 6.1: Summary of Potential Impacts on Notable Habitats

6.4 Protected / Notable Species

Table 6.2 below summarises the potential impacts on species/species groups that are likely to occur as a result of the construction and operational activities of the proposed development described in Section 6.3 above. Only species/species groups considered to be a material consideration in the planning system are included in the impact assessment.

Species / Species Group	Summary of Potential Impacts
Amphibians	In the absence of control measures, indirect impacts could occur as a result of pollution in the form of dust, run-off, or illumination.
Bats	Disturbance and illumination on the in proximity linear habitat.
Birds	● Killing or injury of breeding birds and/or damage/disturbance of a nest Birds during construction phase.
Terrestrial mammals	● Damage or loss of small areas of suitable habitat. ● Entrapment of mammals in open excavation/pipes during construction.

Table 6.2: Summary of Potential Impacts on Protected/ Notable Species.

7.0 Recommendations

All recommendations provided in this section are based on Fieldology Works Ltd current understanding of the site proposals, correct at the time the report was compiled. Should the proposals alter, the conclusions and recommendations made in the report should be reviewed to ensure that they remain appropriate.

R1 Scheme Design: The proposed development should be designed to minimise effects on bats in accordance with ecological mitigation hierarchy as set out in the National Planning
Policy Framework (NPPF) and the National Planning Practice Guidance (NPPG). The ecological mitigation hierarchy requires all development schemes to apply to following principles:

- Avoidance – the proposed development should seek to avoid/minimise losses of scattered trees and hedgerows, in the first instance and incorporate these features

in the landscaping layout of the scheme accordingly. This will help to further avoid and minimise impacts to protected and notable species.

- Mitigation – where significant harm cannot be wholly or partially avoided, adverse effects should be minimised by design or through the use of effective mitigation measures such as minimising light spill. • Compensation – where unavoidable losses occur and mitigation cannot be provided, compensation for significant residual harm will be required as a last resort or planning permission could be refused.

- Compensation should include the remediation of lost habitats and/or connectivity, the creation of new habitats of ecological value such as planting new scattered trees, native scrub planting or enhancing grassland areas where practicable, and providing novel compensation solutions to minimise effects on protected or notable species to ensure compliance with UK wildlife legislation.

In accordance with the principles of the Environment Act 2021 the development should also secure an overall net gain for biodiversity. Biodiversity Net Gain is a planning process that aims to leave biodiversity on site in a better state than it was before, going beyond solely avoiding, mitigating and compensating adverse effects on biodiversity and actively seeking to enhance the site's biodiversity value overall. A Biodiversity Metric tool should be used to help guide and quantify the baseline and proposed value of the scheme.

R2 **Construction Ecological Management Plan (CEcMP):** A Construction Ecological Management Plan should be produced for the site setting out the safeguards and appropriate working practices that will be employed to minimise adverse effects on biodiversity and ensure compliance with UK Wildlife Legislation. The details of the CEcMP will be informed by the final site design and ongoing ecological survey works but should include as a minimum:

- Development standoffs and safeguards for all retained habitats, including in proximity scrub and dry stone walls on site (including consideration to amphibians), the potential for commuting and refuge.
- Construction timetables to avoid sensitive periods such as peak nesting bird season,
- Site protection measures to avoid harming commuting or foraging terrestrial mammals,
- Vegetation management measures to minimise the risk to protected or notable species; and,
- Compliance with any specific mitigation measures that will be required to acquire a Development Licence for works affecting protected species (should this be required following completion of bat surveys). The CEcMP should be submitted to the Local Planning Authority for Approval and implemented in full thereafter.

R3 **Bats: Lighting**: In accordance with best practice guidance relating to lighting and biodiversity (Bat Conservation Trust and Institute of Lighting Professionals, 2023[4]; Gunnell et al, 2012[5]), any new lighting should be carefully designed to minimise potential disturbance and fragmentation impacts on sensitive receptors, such as bat species. Examples of good practice include:

[4] Bat Conservation Trust and Institute of Lighting Professionals (2023) Guidance Note 08/23: Bats and artificial lighting at night. ILP, Rugby

[5] Gunnell, K., Grant, G. and Williams, C. (2012) Landscape and urban design for bats and biodiversity. Bat Conservation Trust.

- Avoiding the installation of new lighting in proximity to key ecological features.

- Using modern LED fittings rather than metal halide or sodium fittings, as modern LEDs emit negligible UV radiation.

- The use of directional lighting to reduce light spill, e.g. by installing bespoke fittings or using hoods or shields. For example, downlighting can be used to illuminate features such as footpaths whilst reducing the horizontal and vertical spill of light.

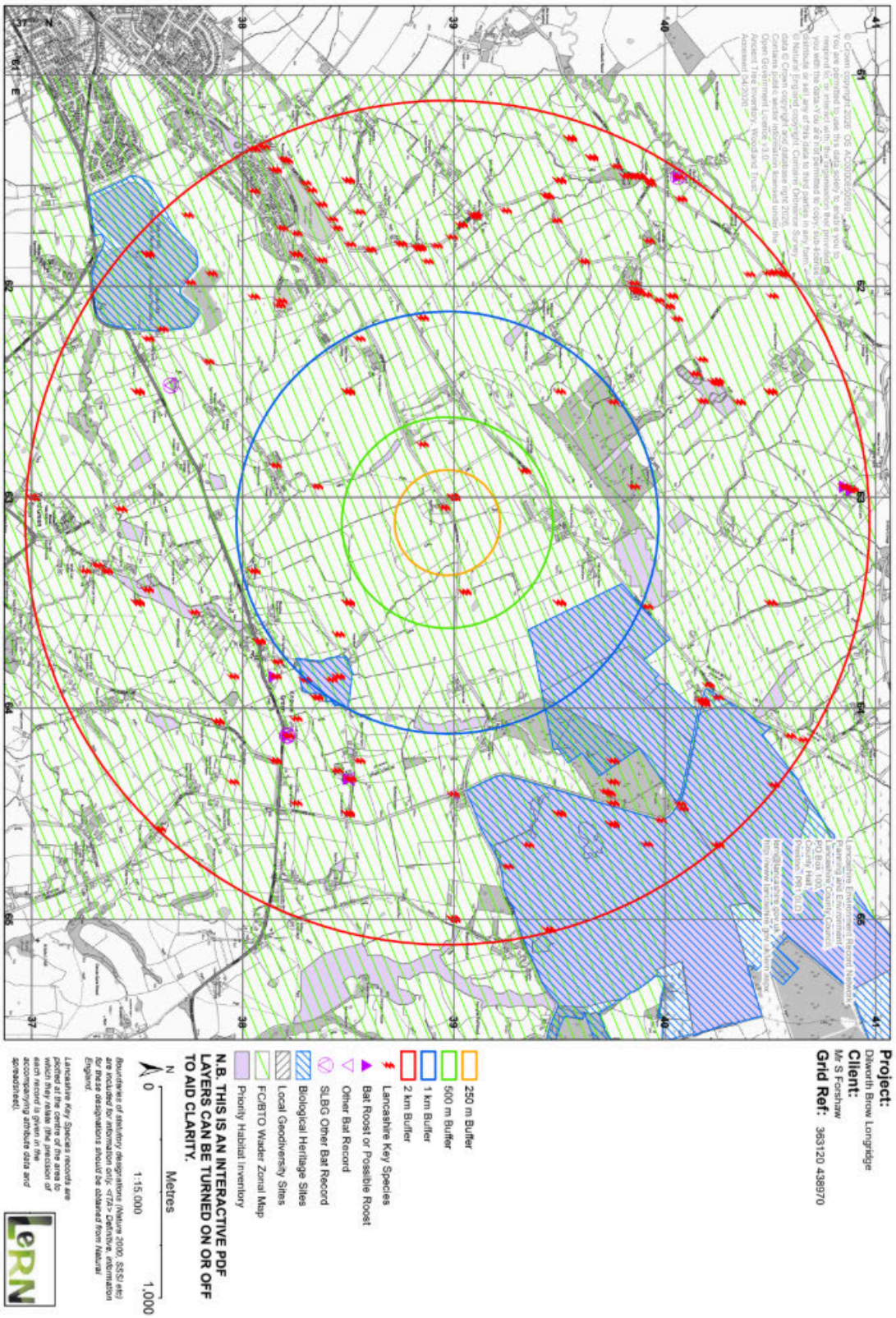
- Where the use of bollard lighting is proposed, columns should be designed to reduce horizontal light spill.

- Implementing controls to ensure lighting is only active when needed, e.g. the use of timers or motion sensors.

- Use of floor surface materials with low reflective quality. This will ensure that bats using the site and surrounding area are not affected by reflected illumination.

8.0 Drawings

Data Results



UKHab Habitat Map

Dilworth Brows, Higher Road,

Longridge, PR3 2YX

PEA Habitat Map

June 2026

FIELDOLOGY WORKS

Proposed Site Layout Plan

Appendix 1 - Relevant legislation

Legislation relating to European Protected Species (e.g. Bats and GCN)

European Protected Species and their resting places (e.g. bat roosts) are protected under the Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way (CRow) Act 2000, and the Conservation of Habitats and Species Regulations 2017.

The conservation of Habitats and Species Regulations 2017 transpose the European Union's Habitat Directive (Council Directive 92/43/EEC) on the Conservation of Natural Habitats and of Wild Fauna and Flora (EC Habitats Directive) into UK law. The Regulations provide for the designation and protection of 'European Sites,' and protection of 'European Protected Species' (EPS), and the adaptation of planning and other controls for the protection of European Sites. EPS are listed on Schedule 2 of the Conservation of Habitats and Species Regulations 2017.

Under the Wildlife and Countryside Act 1981 (a amended) it is an offence to:

- Intentionally kill, injure or take certain animals listed in Schedule 5;
- Intentionally or recklessly damage or destroy any structure or place which any wild animal specified in Schedule 5 uses for shelter or protection;
- Intentionally or recklessly disturb any such animal while it is occupying a structure or place which it uses for shelter or protection;
- Intentionally or recklessly construct any access to any structure or place which any such animal uses for shelter or protection.

In addition, under this legislation there are offences relating to the sale, possession and control of wild animals listed in Schedule 5.

Under the Conservation of Habitats and Species regulation 2017 it is an offence to:

1. Deliberately capture, injure or kill any wild animal listed as a European Protected Species;
2. Deliberately disturb wild animals of any such species in such a way as to be likely; to impair their ability;
    a. To survive, to breed, to reproduce, or to rear or nurture their young, or;
    b. In the case of animals of a hibernating or migratory species, to hibernate or migrate;
3. To significantly affect the local distribution or abundance of the species to which they belong.
4. Deliberately take or destroy the eggs of such an animal, or;
5. Damage or destroy a breeding site or resting place of such an animal.

In addition, under this legislation there are offences relating to possession, control sale and exchange of an EPS.

Great crested newt and several species of bat are listed as a SoPI under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

Legislation for amphibians (other than great crested newt)

Under the Wildlife and Countryside Act 1981 (as amended) the four widespread amphibian species smooth newt (Triturus vulgaris), palmate newt (Triturus helveticus), common toad (Bufobufo) and common grog (Rana temporaria) receive limited protection through section

9(5) only makes selling, offering for sale, possessing or transporting for the purpose of sale (lice or dead animal, part of derivative) an offence.

Common toad is listed as a SoPI under Section 41 of the NERC Act 2006.

Legislation relating to reptiles

All native reptile species have some degree of protection in the UK, through section 9(1) and (5) (specified in Schedule 5) of the Wildlife and Countryside Act 1981 (as amended). There are two different levels of protection afforded to reptiles through this legislation according to species and this is described in more detail below.

Full Protection

Sand Lizard (Lacerta agilis) and smooth snake (Coronella austriaca) are afforded protection under The Conservation of Habitats and Species Regulation 2010 (are species of European importance) and are fully protected under the Wildlife and Countryside Act 1981 (as amended) and the CRoW Act (200). The Conservation of Habitats and Species Regulations 2010 implements the European Union's 'Habitat Directive' (Council Directive 92/43/EEC (a) on the Conservation of Natural Habitats and the Wild Fauna and Flora) in Great Britain. The relevant sections of this legislation make it an offence to:

- Intentionally kill, injure or capture or take a reptile;
- Possess or control (live or dead animal, part of derivative);
- Deliberately (intentionally) or recklessly damage, destroy or obstruct a access to a breeding site or any structure or place used for shelter or protection by a reptile;
- Disturb whilst the reptile is occupying such a structure or place; and
- Sell, offer for sale, possess, or transport for the purpose of sale (live or dead animal, part or derivative).

Sand lizard and smooth snake are listed asa SoPI under Section 41 of the NERC Act 2006.

Protection against killing, injury and trade

This level of protection under Section 9 (part 1 and 5) applies to the four widespread species of reptile, namely the common lizard (Zootoca vivipara), slow-worm (Anguis fragilis), grass snake (Natrix natrix) and adder (Viper berus). Only part of sub-section 9 (1) applies, which make it an offence to:

- Intentionally kill or injure, and
- Sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative).

Grass snake, slow worm and adder are all listed as SoPI under Section 41 of the NERC Act 2006.

Legislation relating to breeding birds

All birds, their nests and eggs are protected by the 'Wildlife and Countryside Act 1981 (as amended) and it is an offence, with certain exceptions, to:

1. Intentionally kill, injure or take any wild bird;
2. Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built;
3. Intentionally take or destroy the egg of any wild bird; and,
4. Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest

building or is on, on or near a nest with eggs or young; or disturb the dependent young of such a bird.

Schedule 1 of the Wildlife and Countryside Act 1981 provides further protection for selected species (including peregrine falcon (Falco peregrinus), barn owl (Tyto alba), little ringed plover (Charadrius dubious) and black redstart (Phoenicurus ochruros) during the breeding season. If any person intentionally or recklessly disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or disturb dependent young of such a bird. That person shall be guilty of an offence.

A number of bird species are listed as SoPI under Section 41 of the NERC Act 2006.

Conservation status - Birds of Conservation Concern (Eaton et al. 2015)

The UK's leading bird conservation organisations have worked together on the third quantitative review of the status of the birds that occur regularly in the UK, updating the last review in 2011. The status of birds within the UK have been regularly monitored through a series of surveys, including the national Breeding Bird Survey, Common Bird Census, sea bird monitoring programs and wetland monitoring programs. The result of this review and continued monitoring is The Population Status of Birds in the UK, Birds of Conservation Concern 4: 2015.

Birds are assessed against criteria to place each species on one of three alert lists, red, amber or green. Red list species are considered to be of high conservation concern, being either globally threatened, having historical UK population declines, having a rapid population decline or breeding range contraction of 50% or more in the last 25 years.

Amber list species are considered to be of medium conservation concern as they meet one or more of the following criteria (but none of the red list criteria). Red listed for historical decline in a previous review but with substantial recent recovery (more than doubled in the last 25 years), a UK breeding range contraction of between 25% and 49%, a reduction of breeding or non-breeding population of 25-49% in the last 25 years, a 5 year mean of 1-300 breeding pairs in the UK, an unfavourable European conservation status, at least 50% of the UK breeding population found in 10 or fewer sites, or where the breeding population in the UK represents 20% or more of the European breeding populations.

Green list species are considered to be of low conservation concern. They include all regularly occurring species that do not qualify under any of the red or amber criteria and are green listed. The green list also includes those species listed as recovering from Historical Decline in the last review that have continued to recover and do not qualify under any of the other criteria.

Legislation relating to Badger

Badgers are protected under the Protection of Badgers Act 1992 (as amended) which makes it an offence to:

1. Wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so;
2. Intentionally or recklessly damage, destroy or obstruct access to a badger sett; and,
3. Disturb a badger when it is occupying a sett.

These provisions have implications for construction and preparation works undertaken in the vicinity of an active sett and may be confounded by distance from a sett entrance. Any works resulting in ground penetration, vibration or noise near an identified badger sett entrance/s have the potential to disturb badgers and advice should be sought from a suitably experienced ecologist under such circumstances. If disturbance to an active sett is probable,

then a licence may need to be obtained from Natural England before any works commence.

Legislation relating to invasive plant species

Several non-native invasive plant species such as Himalayan balsam (Impatiens glandilifera), giant hogweed (Heracleum mantegazzianum), Japanese Rose (Rosa rugosa), variegated yellow archangel (Lamiastrum galeobdolon), rhododendron (Rhododenron ponticum) and Japanese Knotweed (Reynoutria japonica) are listed under Schedule 9 of the Wildlife and Countryside Act, 1981 (as amended), which makes it an offence to '....plant or otherwise cause the species to grow in the wild'. This includes spreading or transferring contaminated soil from one area to another.

Estate managers and landowners have a duty to pro-actively treat knotweed outbreaks. Under the Natural Environment and Rural Communities Act 2006 (NERC), subsection 14ZA (1), makes it an offence to sell, offer for sale, or to have in one's possession or transport for the purpose of sale, any Schedule 9 animal or plant or anything from which such an animal or plant can be propagated, including rhizomes of Japanese knotweed. Under subsection 14ZA (2) it is also an offence to publicise or cause to be published any advertisement for the sale or purchase of these animals or plants.

The Environmental Protection Act 1990 (EPA1990) contains a number of legal provisions concerning controlled waste. AnyJapanese knotweed contaminated soil or plant material that is intended for discard is likely to be classified as controlled waste.

The Environmental Protection (Duty of Care) regulations 1991 also imposes a 'duty of care' on persons concerned with controlled waste, which includes any materials incorporating Japanese Knotweed including soil, grass cuttings, general wastes and ash arising from the burning of knotweed. The duty applies to any person, who produces, imports, carries, keeps, treats or disposes of controlled waste. Failure to appropriately dispose of any material containing Japanese Knotweed may lead to prosecution under Section 33 and 34 of the EPA 1990 and Section 14 (2) of the Wildlife and Countryside Act 1981 (as amended).

If Knotweed stands are to be treated with herbicides, The Control of Pesticides Regulations (1986) applied. These regulations require any person who uses a pesticide to take all reasonable precautions to protect the health of human beings, creatures and plants, safeguard the environment and in particular avoid the pollution of water. If pesticides are to be used in or near to a watercourse, the Environment Agency should be contacted, and approval must be sought (application to use herbicides in or near water).

Waste leaving the site must be handled responsibility and in accordance with the law at all stages between its production and final recovery or disposal. Waste must be transferred to an authorised person, wipo is either a registered waste carrier or exempted from registration by the Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991.

Additional legislation regarding the transport of Japanese Knotweed contaminated materials is covered by the Hazardous Waste Regulations 2005 (HWR 2005). This contains provisions about the handling and movement of hazardous waste. Consignment notes must be completed when any hazardous waste is transferred, which includes details about the hazardous waste properties and any handling requirements. Untreated Japanese Knotweed is not classed as hazardous waste, but material containing Knotweed which has been treated with certain herbicides, may be classified as hazardous waste.

If any waste soil of knotweed is sent for landfill either before or after treatment, it must go to a landfill that is authorised to receive it.

Bluebells

Bluebells are protected by the Wildlife and Countryside Act 1981 (as amended). It prohibits anyone from digging up bulb in the countryside and landowners from removing bluebells from their land for sale. The species is also listed on Schedule 8 of the Act in 1998 which makes trade in wild bluebell bulbs or seeds an offence.

Appendix 2 - Great Crested Newt (GCN) Habitat Suitability Index (HSI)

The GCN Habitat Suitability Index (HSI) is a quantitative measure of habitat quality evaluating the suitability of habitat for GCN. The HSI outputs a result of between 0 and 1, derived from an assessment of ten habitat variables known to influence the presence of newts, with a result of 1 being optimal habitat (high probability of occurrence), while an HSI of 0 is very poor habitat (minimal probability of occurrence).

The HSI is calculated on a single pond basis but takes into account surrounding terrestrial habitat and local pond density. The tool is particularly useful in survey and mitigation; one benefit is that it can be undertaken in a single field visit (with supporting desk work) and at any time of the year (though some variables are more easily measured during spring and summer).

Its main uses are:

- In surveys, to assess habitat quality in a repeatable, objective manner. In particular, the HSI allows individual factors that influence newt presence to be easily identified. These factors could help explain a very high or very low count. A high HSI can justify employing additional survey effort or methods if no newts are found initially.

- In impact assessments, to allow a measure of how damaging a development could be. HSI might also be used as a screening tool to select no impact or minimal impact options.

- In risk assessments, helping to decide whether an offence might be committed, and therefore whether a licence should be applied for. If a pond has a very low HSI score (say <0.5) then there would typically be a minimal chance of GCN presence. Hence, with due care and in limited circumstances the HSI might be used in the absence of newt surveys to help conclude that an offence is highly unlikely and therefore work could proceed in that area without a licence. This application of the HSI should only be used where the predicted impacts - were newts to be present - would be low (e.g. development at least 100m from pond, permanent habitat loss <0.5ha or temporary habitat loss <5ha).

- The developer should be aware that there would still be a risk of committing an offence, but it would typically be so low as to be negligible. Obviously, note that if HSI >0.5, this is not confirmation of newt presence; a newt presence/absence survey would be required to confirm this.

- In habitat enhancement, HSI could be used to identify the low-scoring factors in an existing pond that need addressing to improve its quality for newts.

- In post-development monitoring, to allow an assessment of habitat condition.

GCN HSI Limitations:

The GCN HSI is not a substitute for undertaking newt surveys; it indicates but cannot confirm presence or absence of GCN. A licence application that infers GCN presence solely from HSI data (i.e. no newt survey data presented) will be rejected.
Very low HSI scores may be used along with scheme details to infer a minimal chance of committing an offence in low impact situations. This is on a risk assessment basis and developers should be aware of the potential hazards of this approach. Care should be taken when interpreting low HSI scores; for example, a low scoring pond close to an occupied newt pond may still support newts.

Appendix 3 - GCN HSI

Table A3.1: Pond 1 – description and overall suitability for use by amphibians, with included HSI score

Pond 1 (P1) [Reservoir]	
Pond 1 is positioned southeast of the development 171m away. The estimated area is 5319m2; it never dries and supports moderate water quality. Shade is 40%, there is evidence of waterfowl impact and anecdotal evidence records fish presence. There is a pond density of 8 ponds within a 1km radius and moderate opportunities for foraging and shelter. There is approx. 20% macrophyte cover at the pond surface (area). Based on the above, the HSI value of the pond has been calculated as pertaining to 0.49 – Poor See Table 3.2 below for further information on individual HSI category scorings.	*Aerial photograph shown for context* 

Table A3.2: Pond 1 – HSI quantitative assessment

GCN HSI Calculator		
Pond Name	*Example*	1
Grid Ref	*SK123456*	SD 6203 3820
SI Description	*SI Value*	
Geographic location	*1.00*	1
Pond area	*0.50*	0.8
Pond permanence	*0.90*	0.9
Water quality	*1.00*	0.67
Shade	*1.00*	1
Water fowl effect	*1.00*	0.01
Fish presence	*1.00*	0.67
Pond Density	*0.65*	0.7
Terrestrial habitat	*1.00*	0.67
Macropyhyte cover	*0.90*	0.5
HSI Score	***0.88***	***0.49***
uitability (see below)	*Excellent*	

Categorisation of HSI Score by Lee Brady	
HIS Score	**Pond Suitability**
< 0.50	Poor
0.50 - 0.59	Below average
0.60 - 0.69	Average
0.70 - 0.79	Good
> 0.80	Excellent

ARGUK advice note 5 - Great Crested New

TERMS OF BUSINESS

This fee proposal has been produced in good faith and in line with the specified details to Provide a fair reflection of our required involvement based upon our judgment and experience.

However, due to the nature of ecological survey work, this involvement may evolve should we encounter issues at the appraisal stage, if there is a significant departure from the original brief, or should unforeseen issues arise. Should this occur, we will notify you as soon as possible and prior to the addition of any further charges.

This cost estimate will remain valid for three months following the date of its production, after which we reserve the right to amend the document to reflect current market conditions. Our fee proposal includes various ecological assessment services aimed at ensuring compliance in your development project. The specific services are detailed within the fee estimate, and adjustments are noted where applicable.

The assessment works will be invoiced after the assessment/report has been produced when paid, the final report will be released to the client. Any additional services or disbursements required beyond the scope of this fee proposal will be reported to and agreed with the client, based on an hourly charge-out rate of £__/hour plus VAT and disbursements.

By accepting this fee proposal, the client confirms: The correct ownership details for the site, including details of any adjoining land in the applicant's ownership, have been supplied.

That with respect to the Local Planning Authority/Council for the site, the applicant is not one of the following: a member of staff, an elected member, related to a member of staff, or related to an elected member.

The general term of business for Fieldology Works Ltd apply to this fee proposal. A copy of these terms is attached to this fee proposal and can also be found using the following link: Fieldology Works Ltd Terms and Conditions. Fieldology Works (google.com) By accepting this fee proposal, you also accept the general terms of business for Fieldology Works Ltd.

Should you have any questions or require further clarification regarding this fee proposal, please do not hesitate to contact us