Salthouse Farm Salters Lane, Werrington, Staffordshire, ST9 0DA

Client: Mr. Lee Brunton

Ecological Assessment

06/07/2016

Status	Issue	Name of Author/Reviewer	Date
Draft	1	Jason Guile FDSC BSc (Joint Hons)	04/07/2016
Review	1.1	Julie Powell MCIEEM, Technical Lead	05/07/2016
Final	1.2	Jason Guile FDSC BSc (Joint Hons)	06/07/2016
Update	2.0		

Guidelines

This assessment has been designed to meet:

- Chartered Institute of Ecology and Environmental Management 'Guidelines for Preliminary Ecological Appraisal' (2013); and
- British Standard 42020 (2013) 'Biodiversity – Code of Practice for Planning and Development'.

Proportionality

> The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.
>
> This approach is enshrined in Government planning guidance, for example, paragraph 193 of the National Planning Policy Framework for England.
>
> The desk studies and field surveys undertaken to provide a preliminary ecological appraisal (PEA) might in some cases be all that is necessary.
>
> (BS 42020, 2013)

In consequence of the scale and intensity of the proposed development, the low impact on ecological receptors identified through both the site survey and search of local biological records, and the passive interface with the mitigation hierarchy, this plan-led report is considered adequate and proportionate. It communicates all relevant information necessary to determine a planning application, or support the recommendation for further survey.

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Site Details and Non-Technical Summary	
Site location and grid reference	Salthouse Farm, Salters Lane, Werrington, Staffordshire, ST9 0DA GR: SJ 940 465



Figure 1: Aerial photo of site [red line indicates perimeter of site] (Google, 2016)

Description of existing land use and habitat character (Appendix 1)

The site is in a rural setting surrounded by arable fields and pastoral grazing, with a scattering of woods and hedges in the local area.
Review of OS maps of the landscape within 500m reveals two ponds on site and two small streams within 500m of the site, with an additional two ponds just outside the 500m buffer.
The ponds on site are fishing ponds, well stocked with a number of different fish species and managed all year round.

[A2.1] Scrub
Located next to building B2 is a large bund comprising of farmland material that that has been placed there over the years. The bund has been self-seeded by local species and has become overgrown. The dominant species present are *Urtica dioica*, *epilobium spp.*, *Rubus fruticosus*, *Anthriscus sylvestris* and *Cirsium spp.*, with further species of *Vicia spp.*, *Ranunculus spp.*, *Gallium spp.*, *Hercleum spp.* and *Rumex spp*. (refer to photo 1)
Suitable habitat for foraging/nesting birds and reptiles.

[C3.1] Tall ruderal
Located along the western boundary of the site is a small patch of arable land that has been left to grow. . The species present are willowherb, nettle, dock, thistle and cow parsley. With *Deschapsia spp.* and *Anthoxanthum odoratum*. Suitable habitat for foraging/nesting birds and reptiles.

[G1] Standing water
There are two ponds located on the site.
The first is located in the southern section of the site, surrounded by arable land (refer to photo 2). The pond is approximate 2,800 sq metres. The pond is stocked with numerous fish species for sport and is maintained all year round.
The second pond is located closer to the buildings and road, along the inside of the western boundary of the site (refer to photo 3). The pond is approximately 500 sq meters. The pond is heavily shaded and surrounded by amenity grassland. The pond is used as a nursery for the fish stock of the main fishing pond and is maintained all year round.
The ponds on site are used heavily by water fowl including heron.
Due to the surrounding landscape and proximity of water bodies in the area a Habitat Suitability Index score was done for the ponds on site. Both scores showed the ponds to be of poor suitability of supporting a great crested newt population (refer below)

pond 1

Suitability Index	Factor	Notes	Score
SI 1	Location	Optimal	1.00

SI 2	Pond area	m2	0.80
SI 3	Pond drying		0.90
SI 4	Water quality		0.67
SI 5	Shoreline shade		1.00
SI 6	Fowl		0.01
SI 7	Fish		0.01
SI 8	No ponds/km^2*		0.67
SI 9	Terrestrial habitat		1.00
SI 10	Macrophytes		0.40
Multiplied together			1E-05
HSI			0.32

* Not separated by major barrier

pond 2

Suitability Index	**Factor**	**Notes**	**Score**
SI 1	Location	Optimal	1.00
SI 2	Pond area	m2	1.00
SI 3	Pond drying		0.90
SI 4	Water quality		0.67
SI 5	Shoreline shade		0.80
SI 6	Fowl		0.01
SI 7	Fish		0.01
SI 8	No ponds/km^2*		0.67
SI 9	Terrestrial habitat		0.33
SI 10	Macrophytes		0.60
Multiplied together			6E-06

HSI	0.30

* Not separated by major barrier

[J1.1] Arable land
Surrounding the farm buildings and hard standing of the site. The arable fields are currently used to grow hay and haylage. The dominating grasses within the arable fields are *Deschapsia spp., Anthoxanthum odoratum*, *Dactilis glomerata* and *Poa spp.*, with vetch, nettle, docks and buttercup. *Silene dioica* is located around the edges of the fields. Suitable habitat for commuting/foraging reptiles and bats.

[J1.2] Hedgerow
Located along the western boundary of the site are hedgerow dominated by *Categus monogyna*, *Ilex aquifolium* and *Prunus spp.* species, with immature *Quercus spp.*, *Tilia spp.* and *Acer spp*. Suitable habitat for foraging/nesting birds and commuting/foraging bats.

[J3.6] Buildings
There are six buildings on site, four breeze block barns with corrugated metal/asbestos roofs, the main farm house and a converted garage.
Please refer to the accompanying Preliminary Roost Assessment for a more detailed description of the buildings that will be impacted due to the proposed works.

Building B1
Breeze block barn with dual pitch roof of corrugated metal/asbestos roof. Along the northern elevation of the building is a half storey extension, comprising breeze block walls and a corrugated metal roof that appears to have warped. Nesting birds observed within the building. Based on the external survey, the building has negligible likelihood of supporting roosting bats.

Building B2
Breeze block barn with dual pitch roof of corrugated metal/asbestos roof. The building is split into two sections. The western section is open plan with no separate loft space. Nesting birds were observed within this space. The eastern section of the building is split into 4 individual rooms with a false ceiling. The roof space is open throughout the eastern section of the building. Based on the external survey, the building has negligible likelihood of supporting roosting bats.

Building 3
Breeze block barn with wooden slats between the top of the walls and roof edge. The roof comprises corrugated metal/asbestos

	and is dual pitch. The internal of the structure is open plan is currently being used to train horses. Based on the external survey, the building has negligible likelihood of supporting roosting bats. Building 4 Breeze block barn with dual pitch roof of corrugated metal/asbestos roof. Based on the external survey, the building has negligible likelihood of supporting roosting bats. Building B5 – Farm House A brick-built property with hip and valley roof of clay tiles. Based on the external survey, the building has low/moderate likelihood of supporting roosting bats; however the building is sufficient distance from the proposed works and does not require further surveys. Building B6 – Converted garage A brick-built property with dual pitch roof of clay tiles. The building is currently undergoing renovation and conversion. Based on the external survey, the building has negligible likelihood of supporting roosting bats. **[J4] Bare ground** The driveways of the site comprise stone and pebble. **[J5] Hard standing** The farm area surrounding the barns is dominated by this habitat. Appendix 1 (*the current site conditions*) contains a Phase 1 habitat map, and target notes with photographs.
Description of proposed development (Appendix 2)	It is proposed for a change of use for two of the existing barns on site to boarding kennels; the existing extension on the northern elevation of building B1 is to be demolished; and part of the arable land is to be cleared in construction of a new driveway on the northern section of the site, extending the existing entrance. Appendix 2 (*the proposed development*) contains a site plan, which has been used to inform the conclusions and recommendations of this report.
Client	Mr. Lee Brunton
Ecologist	Jason Guile Accredited Agent on Licence number-CLS01073

Date of survey	22 June 2016
Site area	5.4ha
Access and works areas	Along existing road network
Designated sites and habitats of principal importance	The site is situated within 2km of Hulme Quarry National Nature Reserve and falls within a SSSI Impact Risk Zone – to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites. The requirement to consult Natural England will depend on the scale and nature of the development. The site is also on Green Belt land. The following sites designated for nature conservation are found within 1km of the site: • Wetley Moor Site of Special Scientific Interest (SSSI), designated for DWARF SHRUB HEATH - Lowland The Magic database shows there is no notable habitat within or in close proximity to the site, although small blocks of the following notable (PH and BAP) habitats are found within 1km of the site: • Lowland fens, approximately 800m to the southwest • Deciduous and broadleaved woodland (Priority)
Weather	Wind 1/8,no rain, 40% cloud.
Summary of desk study data	Biological records have been requested from Staffordshire Ecological Record and will be added to this report as soon as available. The magic database shows no previously granted European protected species licences.
Non-technical summary of assessment	Overall, taking into account the habitats and surrounding area, the site is assessed as being within the site only. Many of the habitats on site, notably the arable land, the hedgerow and scrub, are likely to support protected species. As such, they are considered to be of importance within the site. The site in conjunction with the wider landscape may provide suitable habitat for commuting and/or foraging reptiles, bats and nesting birds. Therefore, further surveys are recommended to determine the presence or likely absence of protected species. The proposed plans are unlikely to impact the population of any protected species on site.

Assessment Methodology: the desk study and the site survey

Existing records relating to the site and a surrounding 2km radius (the study area) were requested from the Staffordshire Ecological Record. Freely available information *on designated sites, habitats and species of Principal Importance was also* reviewed, including a search on *Magic.gov.uk*, and *OS OpenData* (2010). Information obtained from the desk study included, where available:

- Landscape structure;
- Habitats and species of Principal Importance (as listed on S41 of the Natural Environment and Rural Communities (NERC) Act 2006 (Habitats and Species of Principal Importance);
- Information on designated sites;
- Information on the surrounding area, including water bodies; and
- Reports of previous ecological assessments.

An extended Phase 1 habitat survey of the site (the survey area) was undertaken. The survey area comprised all land that will be impacted by the proposals. The methodology for the Phase 1 habitat survey was based on the best practice publication Phase 1 habitat survey methodology (JNCC, 2010). All land parcels were described and mapped according to JNCC Phase 1 habitat classification (Appendix 1). Where appropriate, target notes provide supplementary information on habitat conditions, features too small to map to scale, species composition, structure and management (Appendix 1). During the survey, habitats were assessed for their suitability to support protected species and notable species assemblages, and field signs indicating their presence or absence recorded. The subsequent assessment took into consideration the findings of the desk study, the habitat conditions on site and in the context of the surrounding landscape, and the ecology of the species. The likelihood of occupancy (of protected species) is ranked; the habitats on site were evaluated as to their likelihood to provide sheltering, roosting, foraging, basking or nesting habitat.

The ecological value of the survey area has been assessed based on the Guidelines for Ecological Impact Assessment (IEEM, 2006), and the Handbook of Biodiversity Methods: Survey, evaluation and monitoring (David Hill, 2005), using geographic frames of reference. The biodiversity value of any identified designated sites, habitat types and associated species/assemblages has been considered. Finally, the distribution and extent of invasive species listed on Schedule 9 of the Wildlife and Countryside Act (1981) were also noted throughout the survey area.

Refer to Appendix 3 for full evaluation methodology and survey limitations.

Site Photos



Figure 2: Site photo collage. Clockwise from top left: The entrance to the proposed site looking west; the northern elevation of B1 and western elevation of B2 looking east; the site looking north; the site looking west.

Map showing designated sites

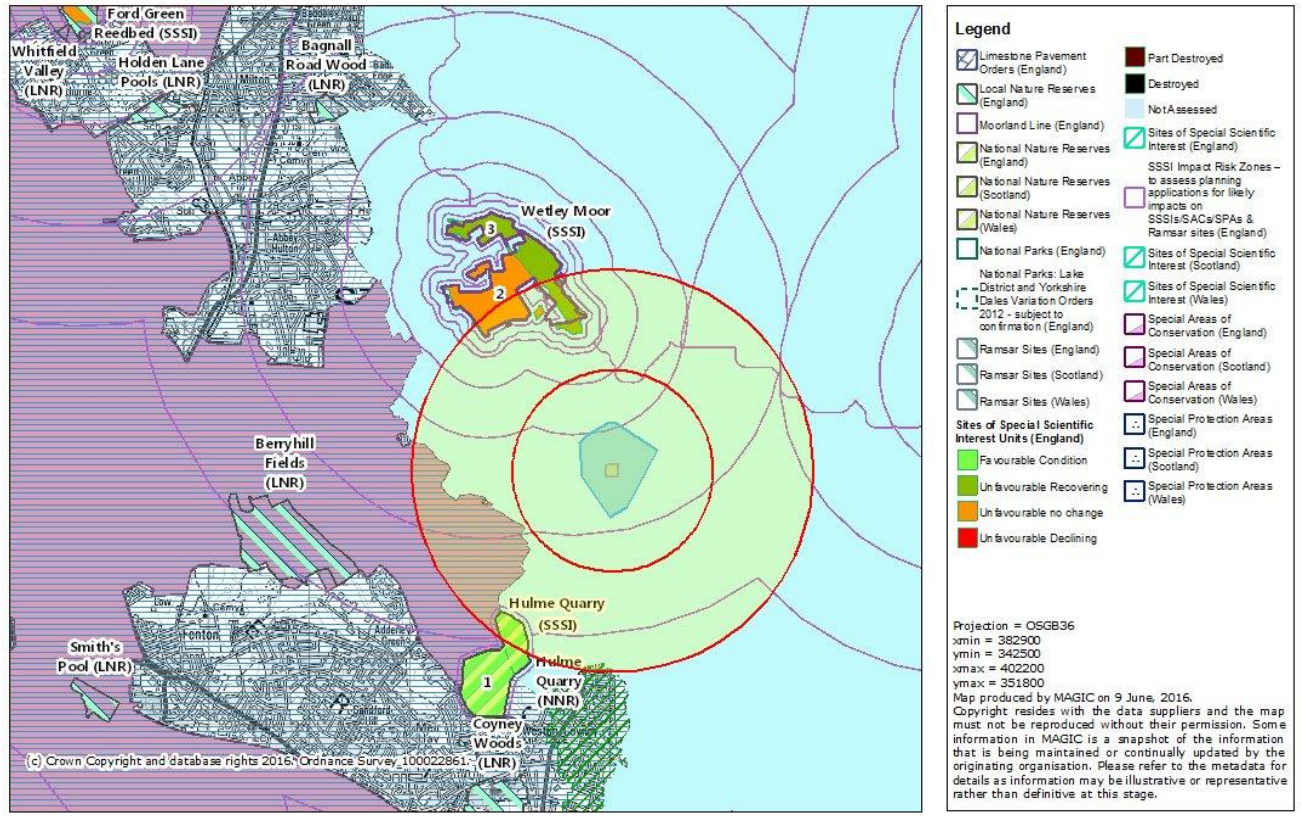

Figure 3: Magic.gov.uk Map showing designated sites in the wider landscape (buffer showing 2km radius: magic.gov.uk, accessed June 2016).

Priority Habitats and Habitats of Principal Importance

MAGIC **Notable habitats with 1km and 2km buffer**

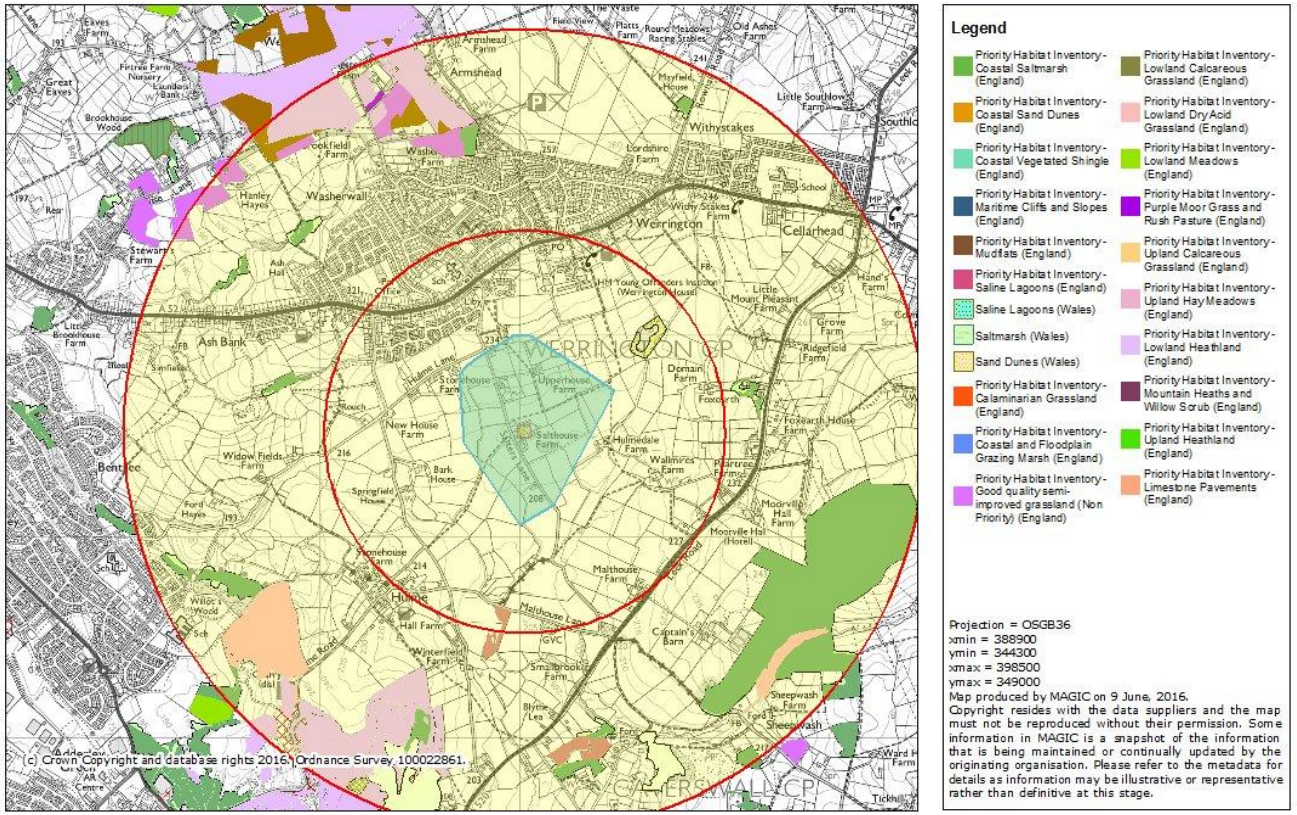

Figure 4: Magic.gov.uk Map showing Priority Habitats and Habitats of Principal Importance in the wider landscape (buffer showing 2km radius: magic.gov.uk, accessed June 2016).

Impacts and the biodiversity mitigation hierarchy[1]	
Assessment of likely significant effects	**Avoidance, mitigation, and compensation**
Designated sites	
The site is not subject to any designation, and there are no designated sites nearby with the potential to be affected by the development proposals in any way.	
Protected species	
Reptiles As the proposals include the removal of a section of the arable land and scrub – suitable habitat, the works would impact any population present. If present on site, this would be in the form of loss of suitable habitat for foraging and basking, injury and possible killing of reptiles. **Breeding birds** Any works which affect the trees and hedgerow on site could have an impact on nesting birds, in the form of destruction of nests along with permanent loss of nesting and foraging resources. No other impacts on protected species are anticipated.	**Reptiles** If present, suitable mitigation would most likely comprise hand searched and topsoil stripping supervised by an ecologist. Exclusion fencing would be required around the construction footprint to ensure no reptiles move into the site during the development. Monitoring surveys would be required. **Breeding birds** Since all active bird's nests and their contents are protected from damage or destruction, works within the buildings, scrub and tree removal should be undertaken outside the period March to August. If this timeframe cannot be avoided, a close inspection of trees and shrubs to be removed should be undertaken prior to clearance. All active nests will need to be retained until the young have fledged. All habitats suitable for nesting and of high value for foraging birds should be replaced; native and fruiting/flowering species can be included in landscape plans and incorporated in the boundary planting.

[1] "The overarching aims of ecological work used to inform the planning process are to minimize harm and to maximize benefits for biodiversity resulting from development. The generally accepted way of doing this, now embedded within the planning system, is to follow the 'mitigation hierarchy'. This seeks as a preference to avoid impacts then to mitigate unavoidable impacts, and, as a last resort, to compensate for unavoidable residual impacts that remain after avoidance and mitigation measures." (BS 42020, 2013).

Notable habitats and species (e.g. ancient woodland)	
Direct impacts on priority habitats (refer to figure 4) are unlikely to arise as the works would be a sufficient distance to avoid dust, noise and visual effects on the habitats. The affected grassland, hedgerow and trees are not expected to contain rare or otherwise notable floral assemblages.	
Invasive and non-native species (e.g. Japanese knotweed)	
No invasive and non-native species recorded on site.	

Recommendations

Proposed biodiversity enhancement

The following recommendations are proposed on this site to maximise the biodiversity value of the site post-development:

1. Bird and bat boxes could be installed on the retained trees and new buildings.
- An example of a suitable bird box is the Schwegler 2H open fronted bird nest box; four of these would be appropriate for the size and location of the site.
- An example of a suitable bat box is the Schwegler 2F general use bat box; three of these would be appropriate for the site.

2. Inclusion of plant species of known value to wildlife in any landscape design proposals.

3. Recommended ecological input to landscape plans and the production of a constraints and opportunities plan and strategy.

Recommendations for further survey effort

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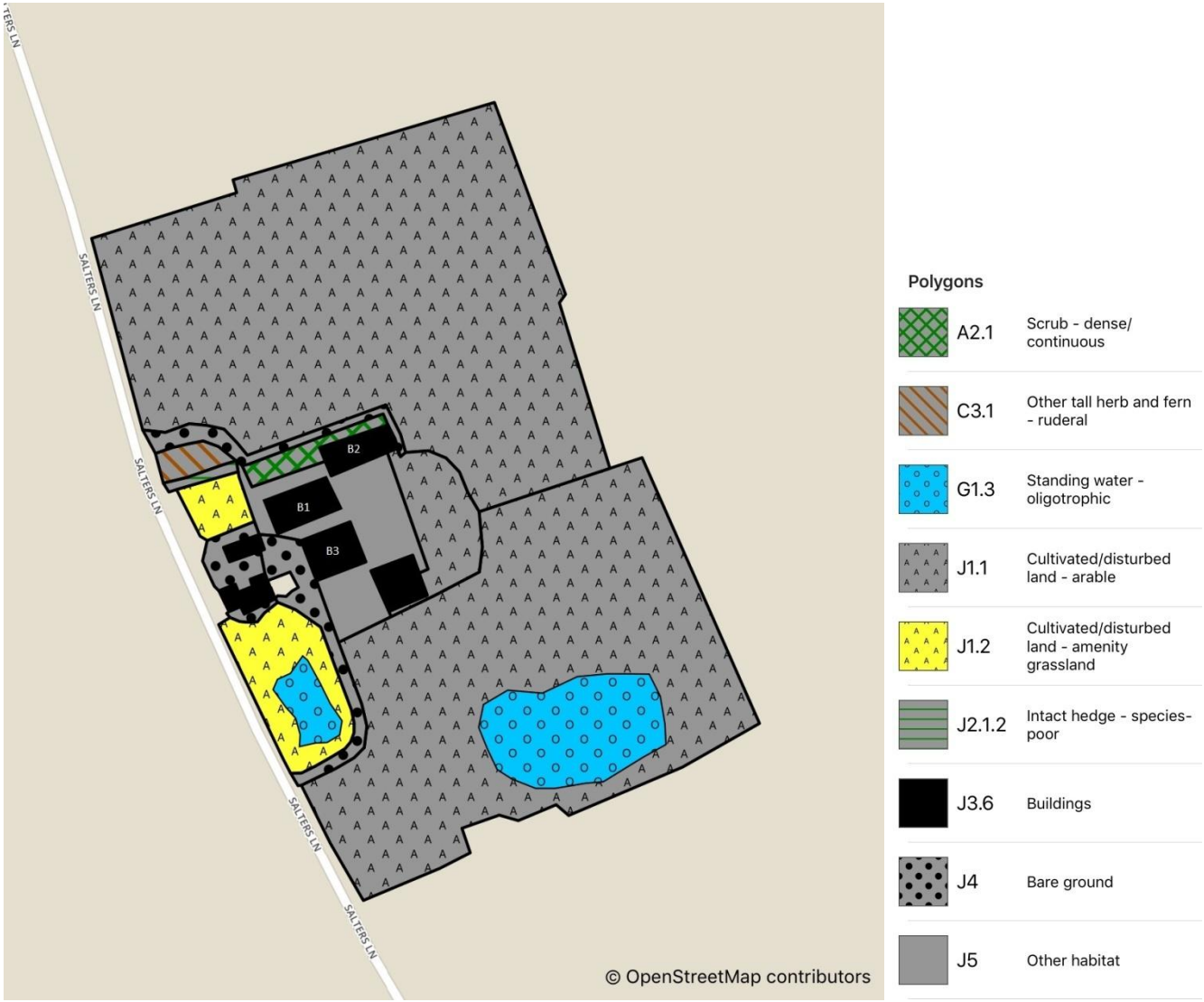
Appendix 1: Phase 1 Habitat Map (*current site conditions*)



Photographs



Photo 1: Scrub



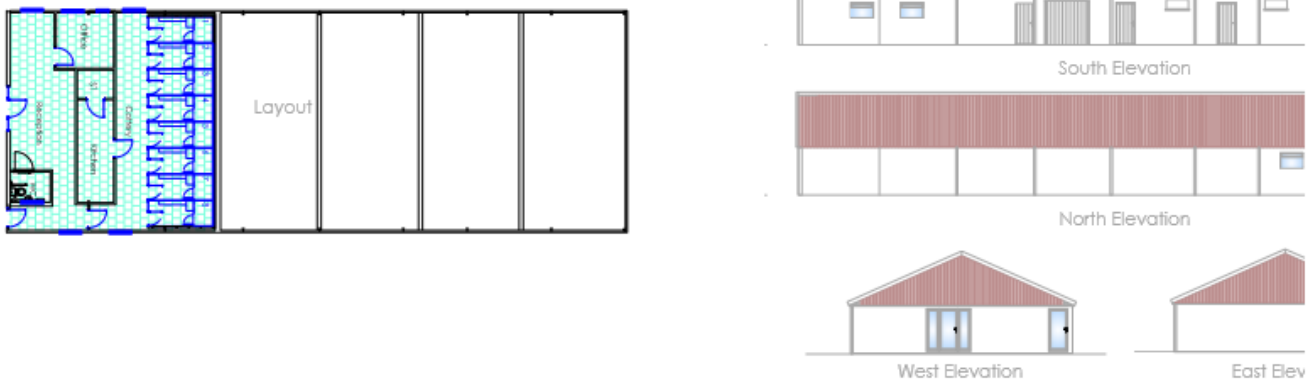
Photo 2: Pond 1



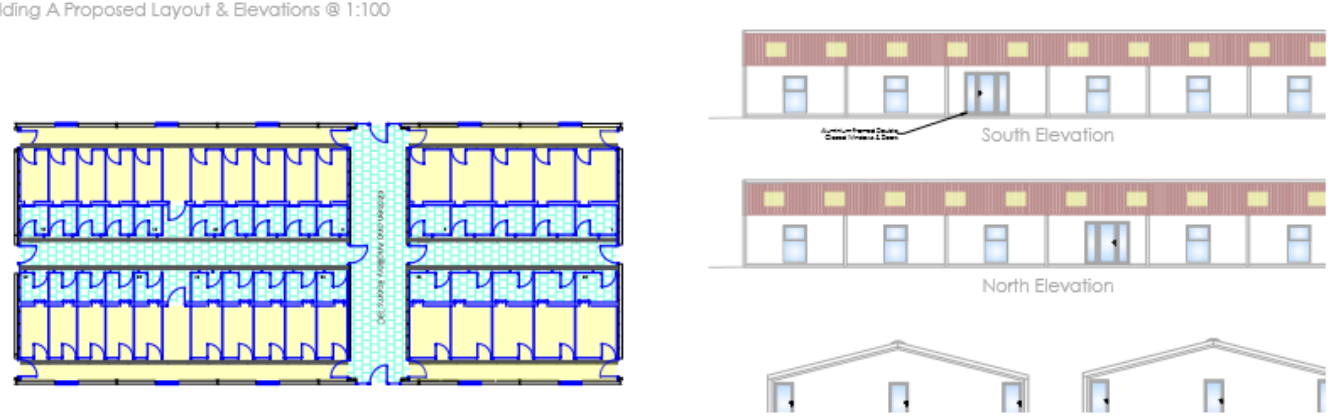
Photo 3: Pond 2

Appendix 2: Project Description and Site Plan (*the proposed development*)

Building B Proposed Layout & Elevations @ 1:100



Building A Proposed Layout & Elevations @ 1:100



Appendix 3: Assessment Methodology and Limitations

Likelihood of the presence of protected species

The habitats on site were evaluated as to their likelihood to provide sheltering, roosting, foraging, basking or nesting habitat. The likelihood of occupancy of protected species is ranked according to the criteria listed in Table 1:

Table 1: showing criteria considered when assessing the likelihood of occurrence of protected species

PRESENT	Species are confirmed as present during the site survey or through searches of historical biological records.
HIGH	Habitat and features of high quality for species/species assemblage. Species known to be present in wider landscape (searches of historical biological records). Good quality surrounding habitat and good connectivity.
MEDIUM	Habitat and features of moderate quality. The site in conjunction with wider landscape may provide all habitat/ecological conditions required by the species/species assemblage. Within known national distribution of species and historical records present within desk study area. Limiting factors to suitability, including small area of suitable habitat, some severance/poor connectivity with wider landscape, poor to moderate habitat suitability in local area.
LOW	All habitats within the survey area poor quality. Few or no historical records. Despite above, presence cannot be discounted as within national range, and all required features/conditions are present on site and in wider landscape. Limiting factors could include isolation, poor quality landscape, or disturbance.
NEGLIGIBLE	Very limited, poor quality or no habitats. No historical records; site on edge of or outside national range. Surrounding habitats considered unlikely to support species/species assemblage.

Assessment of ecological value

The ecological value of the survey area has been assessed using the Guidelines for Ecological Impact Assessment (IEEM, 2006), and Handbook of Biodiversity Methods: Survey, evaluation and monitoring (David Hill, 2005), using geographic frames of reference. The biodiversity value of the identified designated sites, habitat types, and associated species/assemblages has been considered. The criteria listed below have been used to reach an evaluation; examples under each category of biodiversity value are provided in Table 2:

- Presence of designated sites or features;
- Presence of UK priority habitats and species (S41 of the NERC Act), and species listed as Birds of Conservation Concern (Eaton et al, 2009);

- Size of habitat, diversity of species, or population;
- Habitats or species which are rare, species which are on the edge of their range;
- Large populations of uncommon species, or plant communities that are typical of valued natural/semi-natural vegetation types;
- Habitats or features that have supporting value for high value habitats, designated sites or protected species, e.g. buffer habitat to ancient woodland; and
- Presence of legally protected species.

Table 2: examples of criteria defining conservation evaluation

EVALUATION ON GEOGRAPHICAL SCALE	EXAMPLES OF CRITERIA DEFINING EVALUATION
INTERNATIONAL	Biodiversity feature that is designated or warrants designation as a European Protected Site
NATIONAL	biodiversity feature that is designated or warrants designation as a National designated site (Site of Special Scientific Interest (SSSI) or National Nature Reserve (NNR))
METROPOLITAN OR COUNTY	Biodiversity feature that is designated or warrants designation as a county wildlife site, local nature reserve, or a Site of Metropolitan Importance for Nature Conservation (SMI). Species and habitats of principle importance.
BOROUGH	Biodiversity feature that is designated or warrants designation as a Site of Importance for Nature Conservation (SNCI), or other feature which is one of the best examples of its type within the Borough. Diverse and/or ecologically valuable hedgerow network, or ancient woodland greater than 0.25ha
LOCAL	Biodiversity feature which is one of the best examples of its type within a local context (i.e. within ~1km of the scheme extent)/local Parish. Habitat complex considered to enrich the habitat/biodiversity resource within the context of the local neighbourhood.
WITHIN THE VICINITY OF THE SITE	Biodiversity features of value within the zone of influence (site plus approximately 50m buffer).
NEGLIGIBLE	Biodiversity features of negligible value.

Following CIEEM guidance, it should be noted that legal protection or UK Biodiversity Action Plan (BAP) status does not necessarily imply biodiversity status at the equivalent scale. For example, a badger *Meles meles* sett would receive legal protection at a national scale and a native hedgerow would be a UK BAP priority habitat, but neither feature is likely to be of biodiversity value at a national scale.

Where this report supports a planning application, the ecological interest of the study area (including the survey area) and the proposed development has also been evaluated in terms of the planning policies relating to biodiversity. It will be clearly stated where a preliminary value can be given and where further information is required.

Limitations to the desk study and the site survey

It should be noted that whilst every effort has been made to describe the baseline conditions within the survey area, and evaluate these features, this report does not provide a complete characterisation of the site.

Where only four figure grid references are provided for historical biological records, and other data, it is not possible to determine their precise location as they could be present anywhere within the given 1km x 1km National Grid square; an area equivalent to 100ha.

This assessment provides a *preliminary* view of the likelihood of protected species being present. This is based on suitability of the habitats on the site and in the wider landscape, the ecology and biology of species as currently understood, and the known distribution of species as recovered during the searches of historical biological records.

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