Liz Lord Ecology

Oaks Farm Barn, Dilham, Norfolk

Preliminary Ecological Appraisal

Client: Bindwell Ltd

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1.0 SUMMARY

1.1 The site (located at NGR: TG 34431 26065) was found to comprise a single large modern agricultural barn surrounded by hard standing, semi-vegetated margins and compacted hardcore. Planning permission is being sought to convert the building into five holiday lets.

1.2 Following the results of the building inspection, the building was assessed as being of negligible suitability for roosting bats in accordance with Bat Conservation Trust guidelines (Collins, J. 2016).

1.3 The building provides some limited opportunity for nesting birds such as pigeon, however access into the building is limited. No evidence of the presence of barn owl was recorded. Where possible, building works should commence during October to February inclusive to avoid the bird nesting season; but if this is not possible, immediately prior to commencement of works a check for nesting birds should be undertaken by a suitably experienced ecologist. Any active nests will need to be left in situ until the young have left the nest.

1.4 The site is not deemed suitable for any other protected species.

1.5 The enhancement measures detailed in section 6.0 can be secured via a planning condition, and should result in a minor overall enhancement of offsite habitats for a range of local wildlife.

2.0 INTRODUCTION

Instruction

2.1 This report has been prepared by Liz Lord following instruction by Mr. L Paterson to carry out an ecological appraisal of a building and immediately surrounding land at Oaks Farm, Oak Road, Dilham, Norfolk NR28 9PN.

Site Proposals

2.2 Planning permission is being sought to convert the building into five adjoining holiday lets, each with covered parking bays.

Site Description

2.3 The site lies to the north east of Dilham village, and just outside the boundaries of The Broads National Park. The surrounding landscape is a mix of arable fields, grazing pasture, woodland and fen. To the north, south and west of the site are expanses of arable land, with regularly managed hedgerows and grass buffers. A small collection of residential dwellings and gardens lie to the east, with the North Walsham and Dilham Canal immediately beyond. Beyond here, and to the south, is a mosaic of floodplain grazing marsh, deciduous woodland, lowland fens and reed beds.

2.4 A site location plan is provided below.

Fig 1: Site location, with site location outlined in red. Aerial photograph taken from Google Earth Pro, image dated 25/07/2019

Objectives

2.5 This report has been written broadly in accordance with the report writing guidelines produced by the Chartered Institute of Ecology and Environmental Management (CIEEM) (CIEEM 2018, 2017a, 2017b). In accordance with the client brief, this survey and report aims to:

2.5.1 Identify and describe all potentially significant ecological effects on protected and notable species / sites associated with the proposals;

2.5.2 Set out the mitigation measures required to ensure compliance with nature conservation legislation and address any potentially significant ecological effects;

2.5.3 Identify how mitigation measures will / could be secured;

2.5.4 Provide an assessment of the significance of any residual effects;

2.5.5 Identify appropriate enhancement measures; and

2.5.6 Where deemed necessary, set out the requirements for post construction monitoring.

2.6 This survey and report is intended to inform, as necessary, the layout and design of the proposals, future landscape design and management on site, and where required the methodology and timing of development works.

Timescales

2.7 The total works period is expected to be around 12-24 months following the granting of relevant permissions.

2.8 This report is valid for a period of 24 months from the date of survey. Beyond this time, changes to the building and / or use of the building and surrounding habitats may have occurred which could require re-assessment and potentially further survey to re-determine the presence / likely absence of protected species.

Relevant Documents

2.9 The site assessment was based upon drawing numbers PL0004 and PL0003 both dated October 2020 by Studio Drake, as provided in Appendix 1. Note that any minor amendments to the overall scheme are unlikely to alter the conclusions and recommendations of this report.

2.10 Recommendations included within this report are the professional opinion of an experienced ecologist based on the client's proposals for the site, the site survey, and features present in the surrounding environment.

3.0 METHODOLOGY

Desk Study

3.1 The Multi Agency Geographic Information for the Countryside (MAGIC) website was consulted on 21st January 2021 to determine the presence of any nationally and internationally designated sites such as Sites of Special Scientific Interest (SSSI), Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites within influencing distance of the proposals.

3.2 The MAGIC website was also used to search for any records of European Protected Species Mitigation (EPSM) licences that have been approved by Natural England within a 5km radius of the application site since late 2008. The website was checked for any data from Natural England's great crested newt eDNA Habitat Suitability Index pond surveys for District Level Licensing 2017-2019 (last updated October 2020); and data from Natural England great crested newt Class Survey Licence returns within a 5km radius of the site (last updated May 2020).

3.3 The site is of very low ecological value due to it being dominated by an existing, modern agricultural building and hard standing / compacted hardcore. A records search was therefore not considered to be of relevance to this particular site and was not undertaken. The results of a detailed records search are very unlikely to affect the conclusions and recommendations of this report due to the negligible potential for the building and its surroundings to support any protected or notable species. The lack of a records search is therefore not considered to be a constraint to the conclusions and recommendations of this report.

3.4 The County Wildlife Site (CWS) pages of the Norfolk Wildlife Trust website were consulted on 28th January 2021 for information relating to CWS within potential influencing distance of the site.

Site Survey

3.5 A daytime building inspection was carried out on 20th January 2021. The survey was based upon the standard methodology for Extended Phase 1 Habitat Surveys (JNCC 2010), with habitats classified according to the abundance of plant species present.

3.6 The survey area was limited to the building on site and the immediate surroundings as highlighted in Figure 1 and Appendix 1, plus land within the potential Zone of Influence.

3.7 The survey also included an assessment of the site's potential to support any legally protected species; or Species and Habitats of Principal Importance, as identified by Section 41 of the Natural Environment and Rural Communities Act 2006. Where best practice guidelines exist, these have been used to assess the likelihood that individual species will be present, for example Bat Surveys: Good Practice Guidelines (Collins, J. 2016) and Habitat Suitability Index for Great Crested Newt (Oldham *et al*, 2000).

3.8 Using criteria provided in best practice guidelines, habitats have been assessed for their potential to support protected species; notably bats, barn owls *Tyto alba,* badgers *Meles meles*, great crested newts *Triturus cristatus*, reptiles, water voles *Arvicola amphibius*, dormice *Muscardinus avellanarius* and otters *Lutra lutra*.

3.9 Where methodologies, classification or recommendations deviate from best practice guidelines, this report provides ecological justification for such changes.

Building Inspection

3.10 The building was surveyed and assessed in accordance with criteria outlined in Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, J. 2016).

3.11 Floors, walls and storage surfaces beneath all possible access points or crevices which may be used for roosting were checked for droppings, scratching and urine or fur staining, and particular attention was paid to the areas beneath tie beams from which bats may hang or rest. Where relevant, the ridge boards, tie beams, barge boards and door frames of the building were specifically checked for scratching and staining, as well as roosting bats.

3.12 Floor surfaces comprised a mix of relatively clean concrete, stored building materials, straw bales and disused farm equipment. At the time of the building inspection the floor did not appear to have been recently swept.

Surveyors

3.13 The site assessment was completed by Liz Lord. Liz has been a professional ecologist since 2005, and holds current Natural England licences to survey bats - Class Licence Reg. No. 2015-13305-CLS-CLS; great crested newts - Class Licence Reg. No. 2020-44816-CLS-CLS; and barn owls - Class Licence Reg. No. CL29/00160. Liz is a full member of CIEEM.

3.14 The weather at the time of the site survey was overcast with a moderate wind (BF4-5) and a temperature of 6˚C.

Zone of Influence

3.15 The potential impacts of a development are not always limited to the boundaries of the site concerned, such as where there are ecological or hydrological links beyond the site boundaries. In order for the proposed works to have an impact on habitats and species outside of the site boundaries, there needs to be a source of impact, a pathway and a receptor for that impact.

3.16 The Zone of Influence will vary for different habitats and species depending on their sensitivity to predicted impacts, the distribution and status of the relevant species, whether a species is mobile, migratory, and whether its presence and activity varies according to the seasons.

3.17 An assessment of the Zone of Influence has been made based on the site layout shown in Appendix 1, and where necessary recommendations to avoid any significant adverse impacts beyond the site boundaries have been provided in section 5.0.

Limitations

3.18 The conclusions in this report are based on the best information available during the reported period of survey.

3.19 Ecological surveys provide only a 'snapshot' of the site in time, and many species, such as bats and badgers, are capable of colonising a site in a very short space of time. Lack of evidence of a species at the time of survey can only allow conclusion of the *likely* absence of this species, since no level of survey effort is capable of proving absence beyond doubt.

3.20 The survey was undertaken at a time of year when some plant species are not present above ground, or are simply not easily recorded; however an overall assessment of the very limited flora communities present at the time of survey has been used to assess the likelihood of the unrecorded presence of any plant species of conservation importance.

3.21 Whilst best efforts have been made to identify all water bodies within 250m of the site, it is not always possible to record all garden ponds using Ordnance Survey maps and aerial photography. Additional search effort with respect to garden ponds is likely to be disproportionate, as many garden ponds have limited suitability for great crested newts, and it is a common constraint associated with all Ecological Assessments. Due to the very low ecological value of the habitats present on site, amphibians are in any case very unlikely to be impacted by the proposals.

Geographic Context

3.22 Where applicable, the importance of each ecological feature has been considered in a geographic context as follows:

- International and European
- National
- Regional
- Metropolitan, County, vice-county or other local authority-wide area
- River Basin District
- Estuarine system/Coastal cell
- Local (further categorized into District, Borough or Parish)
- Site

Assessment of Impacts and Effects

3.23 The following definitions are used for the terms 'impact' and 'effect' in accordance with CIEEM (2018) guidelines:

- Impact – actions resulting in changes to an ecological feature
- Effect – outcome to an ecological feature from an impact

3.24 The importance of any ecological feature has been determined via the site surveys detailed in this report. Note that species and habitats afforded legal protection are, by default, always considered within the EcIA assessment process to be 'important'.

3.25 Potential impacts of the proposals on any such features have been assessed based on the client proposals for the site, and following a review of all phases of the project. Impacts are assessed through consideration of the extent, magnitude, duration, reversibility, timing and frequency of works which may result in likely 'significant' impacts to any ecological features present. The route through which impacts may occur (direct, indirect, secondary or cumulative) has also been considered. Positive impacts are assessed as well as negative.

3.26 The results of the surveys have been used to identify any potentially significant impacts in the absence of any avoidance, mitigation or compensation measures. Any such appropriate measures have then been proposed where necessary.

Characterisation of Ecological Impacts

3.27 When considering ecological impacts and effects, the following characteristics have been considered:

- positive or negative
- extent
- magnitude
- duration
- frequency and timing

- reversibility

3.28 Where various characteristics have not been specifically referred to in this report, they have been considered insignificant or irrelevant to that specific feature.

3.29 A 'significant effect' is defined within the current CIEEM guidelines (2018) as: "*an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. Conservation objectives may be specific (e.g. for a designated site) or broad (e.g. national/local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local.*"

3.30 Where a significant effect is predicted, this requires assessment and reporting in order to provide the decision maker with sufficient information to determine the environmental consequences of a project. A significant effect can be either positive or negative, and its extent will determine the requirement of conditions, restrictions or monitoring works.

3.31 The current CIEEM guidelines (2018) also state that: "*After assessing the impacts of the proposal, all attempts should be made to avoid and mitigate ecological impacts. Once measures to avoid and mitigate ecological impacts have been finalised, assessment of the residual impacts should be undertaken to determine the significance of their effects on ecological features. Any residual impacts that will result in effects that are significant, and the proposed compensatory measures, will be the factors considered against ecological objectives (legislation and policy) in determining the outcome of the application.*"

3.32 This report has taken into account the factors detailed above for each important ecological feature in the absence of mitigation. Recommendations have then been made with respect to avoidance / mitigation / compensation / enhancement as necessary, and an assessment of the residual impacts after such measures has been made.

Mitigation Hierarchy

3.33 In order to minimise the likelihood of any significant negative residual effects on environmental features, this assessment has followed the mitigation hierarchy (listed below in order of preference):

- Avoidance – measures that avoid harm to ecological features, both spatially and temporally;
- Mitigation – avoidance or minimisation of negative effects through appropriate timing of works, or the provision of mitigation measures within the scheme design which can be guaranteed by condition or similar;
- Compensation – measures taken to offset residual effects which result in the loss of, or permanent damage to, ecological features despite mitigation;

- Enhancement – measures to provide net benefits for biodiversity, either by improved management of existing features, or the provision of new features, and over and above that which is required to mitigate / compensate for an impact. Delivery should be secured via planning condition or similar.

Legislation and Policy

3.34 Specific reference has been made to the individual legal protection of the species detailed within this report, however additional information with respect to other relevant legislation and planning policy is provided in section 8.0.

3.35 The legislation of particular relevance within the body of this report is the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended). The former confers legal protection to 'European' Protected Species against both disturbance and harm, and extends to the full protection of their habitats.

3.36 This legislation also provides legal protection for a number of internationally designated sites within the UK, and remains in place following Brexit.

3.37 The Wildlife and Countryside Act 1981 (as amended) is UK specific, and generally only provides protection against direct harm to individuals of a species.

4.0 RESULTS (*Baseline Conditions*)

Site Summary

4.1 The site comprises a large, predominantly redundant, modern agricultural shed. The building frame is built of steel girders, covered with a mix of corrugated cement fibre boards and corrugated tin sheets. It is surrounded by hard standing, compacted hard core and narrow, sparsely vegetated margins.

Desk Study: Statutory Designated Sites

4.2 Natural England's MAGIC website indicates that there are five statutory designated sites of national or international importance located within a 2km radius of the site boundary, but with many overlapping boundaries.

4.3 The site lies approximately 220m to the north of Broad Fen which carries both national (SSSI) and international (SAC, SPA, Ramsar) designations. East Ruston Common SSSI is located c.1.1km to the north of the site. The reasons for designation are summarised below.

Table 1: Statutory designated sites within applicable search radii:

Name	Designation(s)	Distance & Direction	Reason for designation / features of note (taken directly from citation)
Broad Fen, Dilham	SSSI	220m south	Fen, fen meadow, open water and carr woodland communities. Open areas of fen are maintained through regular cutting of reed, sedge and for marsh hay and as a result a species-rich vegetation has developed characteristic of undrained wetland in Broadland. Bittern *Botaurus stellaris* overwinter here but do not breed; several rare invertebrates are also present.
Broadland	SPA	220m south	This part of the site forms a small part of a much larger area of Broadland. It has been designated as an SPA for supporting significant numbers of breeding and wintering waders and wildfowl: • *Botaurus stellaris*; Great bittern (Breeding) • *Cygnus columbianus bewickii*; Bewick's swan (Non-breeding) • *Cygnus cygnus*; Whooper swan (Non-breeding) • *Anas penelope*; Eurasian wigeon (Non-breeding) • *Anas strepera*; Gadwall (Non-breeding) • *Anas clypeata*; Northern shoveler (Non-breeding) • *Circus aeruginosus*; Eurasian marsh harrier (Breeding) • *Circus cyaneus*; Hen harrier (Non-breeding) • *Philomachus pugnax*; Ruff (Non-breeding)
Broadland	Ramsar	220m south	This part of the site forms a small part of a much larger area of Broadland. A designated Ramsar site under Ramsar criteria 2, 3, 5 and 6; which are summarised below: Criterion 2: the nationally scarce Annex I habitats – calcareous fens, alkaline fens and alluvial forests; and the Annex II species

			these habitats support – Desmoulin's whorl snail *Vertigo moulinsiana*; otter and Fen orchid *Liparis loeselii;* Criterion 6: overwintering Bewick's swan, wigeon, gadwall and northern shoveler at internationally important levels. Future consideration of overwintering pink footed goose *Anser brachyrhynchus* and greylag goose *Anser anser.*
Broads	SAC	220m south	This part of the site forms a small part of a much larger area of the Broads SAC. Annex I habitats / qualifying features: • Alkaline fens. (Calcium-rich spring water-fed fens) • Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)*. (Alder woodland on floodplains) • Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*. (Calcium-rich fen dominated by great fen sedge (saw sedge)) • Hard oligo-mesotrophic waters with benthic vegetation of *Chara spp*. (Calcium-rich nutrient-poor lakes, lochs and pools) • *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*). (Purple moor-grass meadows) • Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition*-type vegetation. (Naturally nutrient-rich lakes or lochs which are often dominated by pondweed) • Transition mires and quaking bogs. (Very wet mires often identified by an unstable 'quaking' surface) Annex II species / qualifying features: • Desmoulin's whorl-snail • Little whirlpool ram's-horn snail *Anisus vorticulus* • Fen orchid • Otter
East Ruston Common	SSSI	1.1km north	A large area of unimproved heathland and fen. Acidic flushes emerging from sands and gravels at the base of surrounding high ground, are a notable feature and an unusual plant community has developed in these conditions, contrasting with the majority of the spring-fed fens which are calcareous. There is a clear zonation of vegetation types from acidic grassland through acidic flush and fen to carr woodland on the lowest-lying ground. The rare spiders *Acanthophyma gowerensis* and *Hygrolycosa rubrofasciata* are present.

Desk Study: Non-Statutory Designated Sites

4.4 There are no County Wildlife Sites (CWS) located within influencing distance of the site.

Habitats

Invasive species

4.5 No aerial evidence of Japanese knotweed *Fallopia japonica* was recorded within the site or the immediately adjacent areas at the time of survey.

Water bodies

4.6 Ordnance Survey plans at 1:10,000 scale identified one water body approximately 125m to the east of the site, in a residential garden. Given the site itself provides no potential amphibian habitat, with further hard standing and arable land beyond the site boundaries, this water body was not considered to be of relevance to the proposals. No HSI assessment was therefore undertaken. No other water bodies were noted within 250m of the site boundaries.

Scattered ruderal vegetation

4.7 Sparse vegetation growth is present along the narrow southern and western boundaries, best described as a patchy mix of low growing ruderal vegetation and occasional low growing bramble *Rubus fruticosus agg*. Ruderal vegetation growth is dominated by nettle *Urtica dioica*.

Hardstanding

4.8 A large expanse of concrete hardstanding extends to the north of the building.

Hardcore

4.9 A c.4m wide margin of compacted hardcore and bare ground runs along the eastern side of the building.

Buildings

4.10 One large building is present on site, constructed in the 1980's. A steel frame supports corrugated tin sheeting to c.3m, with corrugated cement fibre boarding above and across the roof. The building is unlined throughout. The six bay building supports five skylights on either side of the shallow pitched roof.

4.11 The doors are permanently shut, with very few potential access points into the building. The building is used for occasional storage of small machinery, building materials and straw.

Photo 1: North western corner of building, with hard standing extending north

Photo 2: Internal view of building, with steel girders supporting corrugated cement fibre board

Photo 3: Southern façade of building, with narrow margin of ruderal vegetation adjacent to an arable field

Photo 4: Small, modern, single skinned shed and stored farm machinery along part of western façade

Photo 5: Eastern side of building, with bare ground and hard standing

Photo 6: Western side of building, with bare ground and sparse, low vegetation cover

Animals

Bats

4.12 Six EPSM licences were identified within 5km of the site, as summarised in Table 2 overleaf.

Bats - roosting

4.13 The building provides no typical potential roosting crevices for bats, and is assessed in accordance with guidelines from the Bat Conservation Trust (Collins, J. 2016) as being of negligible suitability for roosting bats.

Bats – commuting / foraging

4.14 The proposed development site provides no potential bat foraging and commuting habitat. Offsite gardens to the east provide small areas of mature tree and shrub cover, with good connectivity beyond here to the nearby canal, and large areas of woodland and wet woodland to the south east.

Table 2: Details of bat EPSM licences granted within 5km of the site since 2008

Distance & Direction	Year started	Species affected	Type of roost
2km N	2016	Common pipistrelle *Pipistrellus pipistrellus*, brown long-eared *Plecotus auritus*, barbastelle *Barbastella barbastellus* and natterers *Myotis nattereri*	Non breeding
2.7km SW	2011	Common pipistrelle, soprano pipistrelle *P. pygmaeus* and brown long-eared bat	Breeding
4.6km E	2013	Common pipistrelle, soprano pipistrelle and natterers	Breeding
4.2km NW	2015	Common pipistrelle and brown long-eared bat	Non breeding
4.8km NW	2014	Common pipistrelle, soprano pipistrelle, brown long-eared, barbastelle and natterers	Non breeding
4.6km SW	2012	Common pipistrelle, brown long-eared and natterers	Breeding

Invertebrates

4.15 The site is considered likely to support very few common and widespread invertebrate species typical of the habitats present.

Amphibians

4.16 The MAGIC search did not highlight any great crested newt (GCN) records within 5km of the site.

4.17 The site does not provide any potential habitat for great crested newts, with negligible opportunities for forage or shelter. The building itself also presents a significant barrier to commuting amphibians.

Reptiles

4.18 The site does not provide any suitable habitat for reptiles, and there are no offsite adjacent habitats with potential to support reptiles.

Birds

4.19 The building provides poor opportunities for nesting birds, with the only nesting species likely to be limited to pigeon *Columba palumbus*.

4.20 No evidence of the presence of barn owl was found in the building.

Badger

4.21 Badgers are a common and widespread species, not of conservation concern.

4.22 No evidence of badger was recorded on or within 30m of the site. No setts, footprints, hairs, latrines, snuffle holes or scratching indicative of the presence of badgers was recorded.

Otter and water vole

4.23 There are no waterbodies on, adjacent or connected to the site which have potential to support otters or water voles. The North Walsham and Dilham Canal, located c.300m to the east of the site is not within the potential Zone of Influence with respect to any direct physical impacts e.g. pollution or disturbance.

Dormice

4.24 The site does not provide, and is not connected to, any areas of potential dormouse habitat.

Other Legally Protected Species

4.25 Due to a lack of suitable habitats the site is not considered likely to support any other legally protected species.

Species of Principal Importance

4.26 The site contains very little habitat suitable to support Species of Principal Importance in England (SPIE).

5.0 CONCLUSIONS AND RECOMMENDATIONS

Designated Sites

5.1 The proposals are not considered to be detrimental to any CWS. No further survey or mitigation is recommended.

5.2 All internationally designated sites are fully protected by the Conservation of Habitats and Species Regulations 2017 (as amended). Any new development must avoid having a significant adverse effect on the ecological features for which an SPA/SAC/Ramsar site was designated. Any such effect must be considered in combination with potential effects from other developments within influencing distance of the designated sites. Due to the local topography, small scale of the development, surrounding habitats and distance from the relevant designated sites, this development proposal is very unlikely to have a direct significant adverse effect upon the nearby Broad Fen SSSI, SAC, SPA and Ramsar site. Consideration of possible cumulative impacts associated with increased recreational visitor pressure is provided below.

5.3 Although the site lies c.220m from Broad Fen, there are no public footpaths permitting access to the fen, and the vast majority of the designated land is owned by the applicant. With the exception of canoeists who pay a toll to regularly commute along the canal, general public access is not permitted to this site. Significantly increased levels of disturbance are therefore unlikely.

5.4 The North Walsham and Dilham Canal is already used by at least two boating companies, located at either end of the canal – Wayford Bridge and Honing Lock. Both hire canoes and kayaks, with one stating that *'This section of the river can get quite busy at peak holiday times making it unsuitable for novice groups'*. A potential minor increase in use of the canal by a proportion of the new occupants is therefore unlikely to have an adverse effect upon local wildlife, which is already subject to seasonal disturbance by canoeists using the canal.

5.5 Recreational pressure is not listed as a threat on the Natura 200 Data Form for Broadland SPA. The Information Sheet on Ramsar Wetlands (RIS) for Broadland lists the adverse effects of erosion caused by power and sail craft in the wider Broadland site; however this is unlikely to apply to the smaller, self-propelled canoes which use the North Walsham and Dilham Canal.

5.6 Whilst the increase in tourists to the area may result in an increased demand for boat trips locally, the number and frequency of boats using Broadland and the Broads is a widely recognised problem which could be addressed via controls which are not specific to this site, such as licensing, capping or minimum pricing scheme. Tourism is a significant part of the Norfolk economy, and it is of broad scale benefit to encourage tourism whilst managing the issue of bank erosion.

5.7 The holiday residences are likely to offer both canoes and bicycles for hire, which encourages the disuse of cars and discourages people from visiting the wider Broadland and Broads site. It also provides accommodation, which discourages use of the larger narrow boats. Information sheets or web links from the Broads Authority or Broads Tourism detailing the wildlife value of local sites, voluntary codes of conduct, etc could also be provided to each residence. These mitigation measures are likely to be proportional to the size of the proposals, and the predicted impacts.

5.8 If the measures listed above are implemented, the development proposals are very unlikely to have any significant adverse effect upon the Broadland or Broads internationally designated sites. *Note: the above assessment does not form part of a specific Screening Report or otherwise.*

5.9 Habitats of local value within walking distance of the site are not accessible via public footpaths. It is unlikely that any sites of local importance will be adversely affected by the proposals. Visitors to the site will be predominantly tourists, and are likely to be attracted to sites and features which are specifically designed to cater for tourists.

Invertebrates

5.10 Potential effects: negligible.

5.11 Mitigation measures: none.

5.12 Residual effects: negligible.

Amphibians

5.13 Great crested newts (GCNs) and their habitats are fully protected under the Conservation of Habitats and Species Regulations 2017 (as amended), and by the Wildlife and Countryside Act 1981 (as amended).

5.14 Potential effects: negligible.

5.15 Mitigation measures: none.

5.16 Residual effects: negligible.

Reptiles

5.17 All Norfolk reptile species are protected against harm under the Wildlife and Countryside Act 1981 (as amended).

5.18 Potential effects: negligible.

5.19 Mitigation measures: none.

5.20 Residual effects: negligible.

Birds

5.21 Breeding birds and their nests are protected under the Wildlife and Countryside Act 1981 (as amended). Species listed under Schedule 1 of this Act are afforded additional protection against disturbance during nesting and in the presence of dependent young.

5.22 Potential effects: the building provides poor potential nesting habitat, likely to be limited to pigeons. The disturbance and destruction of an active nest could have a negative effect on this wild bird species at the site level. No Schedule 1 listed species are likely to be present on site. There will negligible loss of foraging habitat.

5.23 Mitigation measures: ideally building works would commence during October to February inclusive to avoid the bird nesting season. If this is not possible, immediately prior to commencement of works a check for nesting birds should be undertaken by a suitably experienced ecologist. Any active nests will need to be left in situ until the young have left the nest.

5.24 Residual effects: negligible.

Bats

5.25 All species of bat are protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and by the Wildlife and Countryside Act 1981 (as amended). In summary, this makes it an offence to harm or disturb a bat; damage or destroy a roost; and obstruct access to a roost (whether or not bats are present at the time).

5.26 Potential effects on roosting bats: negligible.

5.27 Mitigation measures for roosting bats: none.

5.28 Potential effects on commuting / foraging bats: negligible.

5.29 Mitigation measures for commuting / foraging bats: none.

5.30 Residual effects: negligible.

Badger

5.31 Badgers and their setts are afforded protection under the Protection of Badgers Act 1992 (as amended). This legislation includes protection against damage to badger setts and against interference and disturbance of badgers whilst they are occupying a sett.

5.32 Potential effects: none. No evidence of badgers was found on site or immediately adjacent, and there is no indication that badgers are likely to colonise the site in the near future.

5.33 Mitigation measures: none.

5.34 Residual effects: none.

Otters & Water Voles

5.35 Otters and their habitats are fully protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and by the Wildlife and Countryside Act 1981 (as amended). Water voles and their habitats are fully protected by the Wildlife and Countryside Act 1981 (as amended).

5.36 Potential effects: negligible.

5.37 Mitigation measures: none.

5.38 Residual effects: negligible.

Dormice

5.39 Dormice and their habitats are fully protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and by the Wildlife and Countryside Act 1981 (as amended).

5.40 Potential effects: none.

5.41 Mitigation measures: none.

5.42 Residual effects: none.

Other Legally Protected or Notable Species

5.43 The proposed development is not anticipated to impact on any other legally protected species, therefore no mitigation measures are recommended.

5.44 In the medium to long term, the proposed new native copse detailed in section 6.0 will provide a new area of foraging, roosting and nesting habitat suitable for a wide range of wildlife, including many SPIE. This enhancement will provide measurable net gain for biodiversity.

5.45 The measures detailed in section 6.0 can be secured via planning condition.

6.0 ENHANCEMENT MEASURES

Enhancement Measures

6.1 The site proposals will not provide any soft landscaping features, and will comprise buildings and hard standing only, with car parking provided within the existing building footprint. Due to the large area of adjoining land within the applicant's ownership, offsite habitat enhancement will be provided via the planting of a small native copse, measuring approximately 800m². The planting will be provided within 250m of the site, and will form a connective feature between two existing tree / hedge lines. Species to be planted include silver birch *Betula pendula*, willow *Salix sp.*, hawthorn *Crataegus monogyna,* hazel *Corylus avellana* and dog rose *Rosa canina*.

7.0 REFERENCES

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8.0 LEGISATION

The Conservation of Habitats and Species Regulations 2017 (as amended)

8.1 The Conservation of Habitats and Species Regulations 2017 (as amended) remain in force following Brexit, and these regulations will continue to provide safeguards for European Protected Sites and Species as listed in the Habitats Directive. As a result, the same provisions remain in place for European protected species, licensing requirements and protected areas after Brexit.

8.2 Species protected by the former European legislation includes great crested newt, all UK bat species, dormice and otter. A number of other plant and animal species are also included such as sand lizard, smooth snake and natterjack toad, however these additional species are rare, with restricted geographical ranges and specific habitat types.

8.3 Under The Conservation of Habitats and Species Regulations 2017 (as amended) it is an offence to:

- Damage, destroy or obstruct access to an EPS breeding or resting place;
- Deliberately capture, injure or kill an EPS (including their eggs);
- Deliberately disturb an EPS, in particular any actions which may impair an animals ability to survive, breed or nurture their young; or their ability to hibernate or migrate; or which may significantly affect the local distribution or abundance of the species to which they belong.

8.4 The legislation applies to all stages of amphibian life cycles (eggs, larvae and adult), and to active bat roosts even when they are not occupied at that particular time of year.

8.5 Natural England can, under certain circumstances, grant a licence to permit actions which would otherwise be unlawful, subject to the species concerned being maintained at a Favourable Conservation Status and there being a true need for the proposed works to take place.

8.6 Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) are also afforded protection under the Conservation of Habitats and Species Regulations 2017 (as amended). Ramsar sites, which are designated under the Convention on Wetlands of International Importance (1971), are afforded the same level of protection as SPAs and SACs via national planning policy.

The Wildlife and Countryside Act 1981 (as amended)

8.7 The Wildlife and Countryside Act 1981 (as amended) provides varied levels of protection for a range of species including those already listed above. Water vole are one of the species not listed under the Conservation of Habitats and Species Regulations 2017 (as amended), but are afforded the highest level of protection under the Wildlife and Countryside Act 1981 (as amended).

8.8 It is an offence to intentionally kill, injure or take a water vole, to intentionally or recklessly damage or destroy a structure or place used for shelter and/or protection, to disturb a water vole whilst occupying a structure and/or place used for shelter and protection, or to obstruct access to any structure and/or place used for shelter or protection.

8.9 Other species, such as common lizard, slow worm, adder and grass snake, are afforded less protection. For these species it is an offence to intentionally or recklessly kill or injure animals.

8.10 All active bird nests, eggs and young are protected against intentional destruction. Schedule 1 listed birds e.g. barn owls, kingfishers, are further protected from intentional and reckless disturbance whilst breeding.

8.11 Schedule 9 of The Wildlife and Countryside Act lists plant species for which it is an offence for a person to plant, or otherwise cause to grow in the wild. This includes Japanese Knotweed which, under the Environment Protection Act 1990 (as amended) is classed as 'controlled waste'. If any parts of the plant including stems, leaves and rhizomes are taken off-site they must be disposed of safely at a landfill site licensed to deal with such contaminated waste.

8.12 Sites of Species Scientific Interest (SSSI) are afforded protection by the Wildlife and Countryside Act 1981 (as amended).

The Protection of Badgers Act 1992 (as amended)

8.13 The Protection of Badgers Act (1992) makes it an offence to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so, and to intentionally or recklessly interfere with a sett.

The Protection of Mammals Act 1996 (as amended)

8.14 The Act protects all wild mammals against actions which have the intention of causing unnecessary suffering, including crushing and asphyxiation.

The Natural Environment and Rural Communities Act 2006 (as amended)

8.15 Under sections 40 and 41 of the Natural Environment and Rural Communities Act (NERC) 2006 local authorities have an obligation to have regard to the purpose of conserving biodiversity in carrying out their duties. The majority of UK legally protected species are listed under Section 41 the NERC Act.

8.16 Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act (2006) also requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity' in England (Species of Principal Importance in England – SPIE). The S41 list is used to guide decision-makers, including local and regional authorities, in implementing their duty under Section 40 of the act to have regard to the conservation of biodiversity in England when carrying out their normal functions.

Statutory Designated Sites

8.17 Under the National Parks and Access to the Countryside Act 1949 (as amended), statutory conservation agencies were able to establish National Nature Reserves (NNRs), with provisions for these areas strengthened by the Wildlife and Countryside Act 1981 (as amended). They are managed to conserve their habitats or to provide special opportunities for scientific study of the habitats communities and species represented within them.

8.18 Local Nature Reserves (LNRs) can be declared by local authorities after consultation with the relevant statutory nature conservation agency under the National Parks and Access to the Countryside Act 1949 (as amended). LNRs are not subject to legal protection, but are afforded protection against damaging operations via byelaws, and against development via local planning policies.

Non-Statutory Designated Sites

8.19 Local Wildlife Sites (LWS), Sites of Importance for Nature Conservation (SINCs), Sites of Nature Conservation Importance (SNCIs) and County Wildlife Sites (CWS) are often designated by the local Wildlife Trust. They are not usually afforded ay legal protection, but are recognised in the planning system and given some protection through planning policy.

National Planning Policy Framework (NPPF)

8.20 The National Planning Policy Framework (2019) sets out the Government's planning policies for England and how these should be applied. The NPPF must be taken into account when preparing a Local Authority's development plan, and is also a material consideration in planning decisions.

8.21 As well as highlighting the importance of protecting ecologically valuable sites and habitats, the NPPF highlights the duty of local planning authorities (LPA's) to deliver net gains for biodiversity within the planning system. Planning policies and decisions should, as per Paragraph 170d, contribute to and enhance the natural and local environment by:

d) 'minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures'

8.22 To protect and enhance biodiversity, polices and plans should, as per Paragraph 174b:

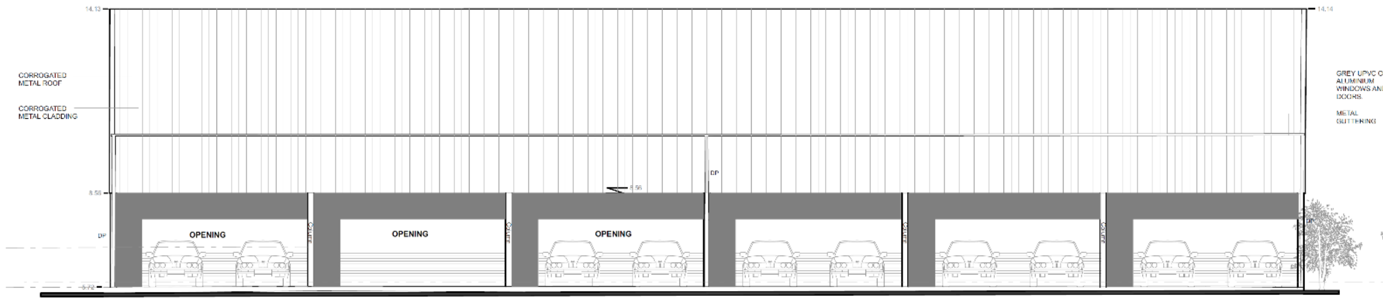
b) 'promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measureable net gains for biodiversity.'

8.23 When determining planning applications, LPA's should apply principles which avoid an adverse effect on natural environments and notable species:

d) 'if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;'

Appendix 1:

Proposed Plans and Elevations



WEST ELEVATION. SCALE 1:100

Elevation I
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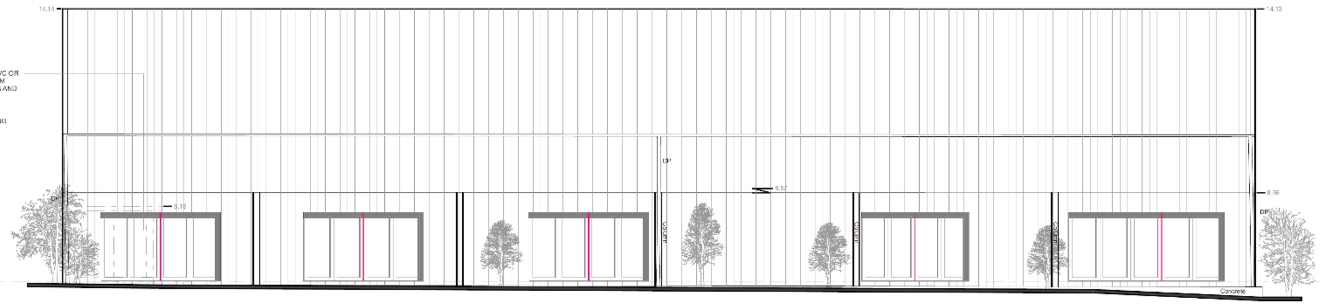

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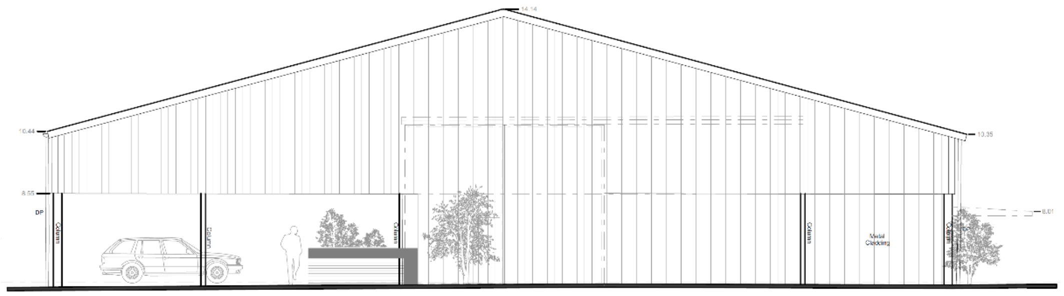

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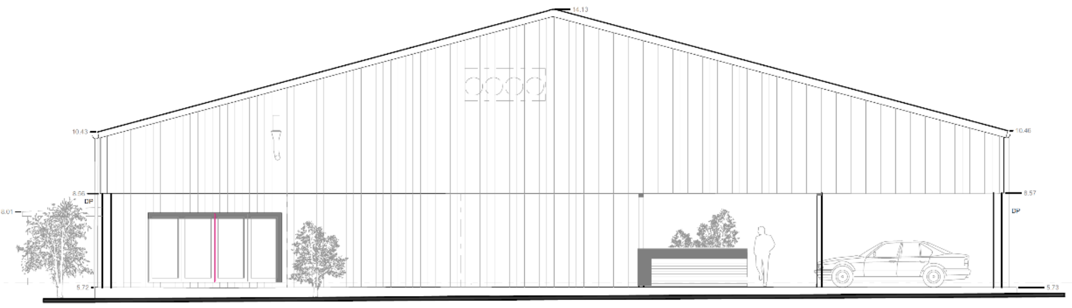
Elevation K



SOUTH ELEVATION. SCALE 1:100

Elevation L

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ALL EXISTING SERVICES, UNDERGROUND AND OVER GROUND SHOULD BE LOCATED AND SURVEYED AS REQUIRED PRIOR TO WORKS STARTING ON SITE

DRAINAGE LAYOUT / DESIGN SHOWN INDICATIVE. DESIGN TO BE CONFIRMED FURTHER TO ON SITE INVESTIGATIONS OF EXISTING DRAINS AND THE COMPLETION OF A CCTV SCAN INSTRUCTED BY THE CONTRACTOR. IF DRAINS ARE BEING CONSTRUCTED OVER OR NEAR WHICH CONNECT TO NEIGHBOURING PROPERTIES, RELEVANT DIVERSION, BUILD OVER OR NEAR APPLICATIONS SHOULD BE APPROVED BY RELEVANT WATER MANAGEMENT BODY PRIOR TO WORKS COMMENCING ON SITE.

DRAWING TO BE READ IN-CONJUNCTION WITH STRUCTURAL ENGINEERS CALCULATIONS; PROVIDED MY CLIENT.

GROUND CONDITIONS FOR FOUNDATIONS TO BE REVIEWED AND CONFIRMED ON SITE BY BUILDING CONTROL

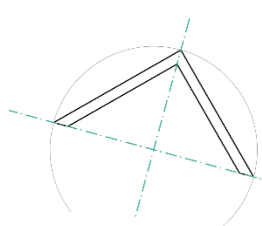
CONTRACTOR TO ALLOW FOR THE PRODUCTION OF A CONSTRUCTION PHASE PLAN, F10 PRODUCTION AND ASSISTANCE WITH THE PRODUCTION OF HEALTH AND SAFETY FILE

PARTY WALL AGREEMENTS WHERE APPLICABLE SHOULD BE PUT IN PLACE WITH ALL RELEVANT NEIGHBOURS PRIOR TO WORKS STARTING ON SITE

CONTRACTOR TO ENSURE THAT ALL RELEVANT GOVERNMENT GUIDELINES REGARDING HEALTH AND SAFETY ARE FULLY ADHERED TO DURING ANY CONSTRUCTION WORKS OR MEETINGS.

Client:	BINDWELL LTD.
Project:	PROPOSED CONVERSION OF AGRICULTURAL BARNS AT OAK FARM BARNS, OAK ROAD, DILHAM NR26 9PN
Drawing title:	PROPOSAL DRAWING. PL 0004 UNIT 3.
Project ref:	2020.10.10
Drawing ref:	PL 0004
Date:	21.10.2020

UNIT 03. GROUND FLOOR PLAN 1.50
SHOWN AS 2 BED UNITS



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Client:	BINDWELL LTD.
Project:	PROPOSED CONVERSION OF AGRICULTURAL BARNS AT OAK FARM BARNS, OAK ROAD, DILHAM NR26 9PN
Drawing title:	PROPOSAL DRAWING. SK 0002 UNIT 3.
Project ref:	2020.10.10
Drawing ref:	PL 0003
Date:	21.10.2020

Liz Lord Ecology