

c/o James Stannard (Planning Consultant)

Date: 26 January 2024

Dear James,

Ecological assessment of an existing dwelling and land at White House Farm, Dublin Road, Occold, Suffolk IP23 7PY

I am writing to provide a summary of the findings following a survey of the site on 15 January 2024 (NGR TM1612569976; Figure 1), where it is proposed to erect a single storey side extension (an orangery), on the southeast aspect of the main house.

The purpose of the visit was to inspect the site and identify potential ecological features of relevance to the scheme, to enable an assessment of potential impacts where appropriate. The desk and field assessment completed were made with reference to the CIEEM Guidelines for Preliminary Ecological Appraisal¹.

Methodology

a) Desk Study

A desk study was undertaken, which included the use of SBIS and open-source historical biological records, MAGiC Map, OS Maps, aerial photography, and Natural England European Protected Species (EPS) mitigation species licences within 2km of the application site.

b) Field survey

During the field survey notes were made and the site was assessed for its potential to support protected species, e.g., amphibians including GCNs² (*Triturus cristatus*), nesting birds³, and mammals such as bats⁴ and hedgehogs (*Erinaceus europaeus*)⁵, by Christian Whiting BSc (Hons) MSc MCIEEM who has over 24 years' experience working as an ecologist. He holds Natural England (NE) survey licences for bats (2015-14745-CLS-CLS – Bat Survey Level 2), barn owl (CL29/00213) and great crested newts (Class A licence 2015-17633-CLS-CLS).

Results

Designated sites

i) Locally designated sites

No Local Nature Reserves (LNR) are located within 2km of the application site boundary.

ii) Nationally designated sites

A single Site of Special Scientific Interest (SSSI) is located within 5km of the development site, namely Major Farm, Braiseworth. The farm is designated for containing one of the few remaining species-rich, unimproved hay meadows in Suffolk. The meadow is shallow-sloping, on boulder clay of low soil fertility, and characterised by an abundance of mole hills.

The application site falls within a SSSI Impact Risk Zone but does not meet the listed criteria to warrant further consultation (e.g. airports, helipads and other aviation proposals). between the LPA and Natural England.

iii) Internationally designated sites

There are internationally designated sites within 13km of the application site boundary.

Protected and notable species

No protected or notable species records exist within the application site boundary. Table 1 identifies species records for within 2km (where geographical precision is < 1km) of the site.

Table 1 Protected/notable species

Scientific name	Common name	Legal /conservation status
Amphibians and reptiles		
<i>Bufo bufo</i>	Common toad	Sch. 5; S. 41

¹ CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester

² GCNs receive full protection under the WCA 1981 and Habitats Regulations 2017.

³ All wild birds, their nests and eggs are protected under the WCA 1981 (as amended), level of protection varies per species.

⁴ Collins, J. (ed) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition), Bat Conservation Trust, London

⁵ Hedgehogs are listed under Section 41 of the NERC Act 2006 lists as a 'species which are of principal importance for the conservation of biodiversity in England'

<i>Lissotriton vulgaris</i>	Smooth newt	Sch. 5
<i>Natrix Helvetica</i>	Grass snake	Sch. 5; S. 41
<i>Rana temporaria</i>	Common frog	Sch. 5
Bats		
<i>Myotis nattereri</i>	Natterer's bat	EPS; Sch. 5
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	EPS; Sch. 5
<i>P. pygmaeus</i>	Soprano pipistrelle	EPS; Sch. 5; S. 41
<i>Plecotus auritus</i>	Brown long-eared	EPS; Sch. 5; S. 41
Birds		
<i>Apus apus</i>	Swift	Red Status
<i>Chloris chloris</i>	Greenfinch	Red Status
<i>Columba oenas</i>	Stock dove	Amber Status
<i>Delichon urbicum</i>	House martin	Red Status
<i>Emberiza citronella</i>	Yellowhammer	Red Status; S. 41
<i>Falco tinnunculus</i>	Kestrel	Amber Status
<i>Linaria cannabina</i>	Linnet	Red Status; S. 41
<i>Passer domesticus</i>	House sparrow	Red Status; S. 41
<i>Prunella modularis</i>	Dunnock	Amber status; S. 41
<i>Streptopelia turtur</i>	Turtle dove	Red Status; S. 41
<i>Sturnus vulgaris</i>	Starling	Red Status; S. 41
<i>Troglodytes troglodytes</i>	Wren	Amber Status
<i>Turdus philomelos</i>	Song thrush	Red status; S. 41
<i>Tyto alba</i>	Barn owl	WCA1
Other mammals		
<i>Erinaceus europaeus</i>	Hedgehog	S. 41
<i>Lepus europaeus</i>	Brown hare	S. 41
<i>Meles meles</i>	Badger	PBA 1992

Other species records

Assessment of NE's GCN class licence returns data, and eDNA pond survey records show the closest positive record (licence return) to be located c. 3.9km northwest of the site (dated 2016), which is outside the normal dispersal range of the species.

Priority habitats

Assessment of the Magic Map database returned no priority habitats within the application site boundary, nor within the zone of influence.

Habitat descriptions

The application site boundary incorporates the entire house, which has rendered walls and a slate roof, and adjacent gardens containing areas of hard standing and lawn, scattered trees/shrubs and a large pond. However, the proposed works footprint will be limited to a small part of the building (southeast aspect) and an adjacent paved area (Photos 1 to 4).

Amphibians and reptiles

a) Ponds

Two ponds (P1 and P2, Figure 2) exist within the applicant's landownership with 5 other ponds shown on OS maps as being within 250m of the site.

Pond P1 (Photo 4) is located within the application site boundary, c. 10m southeast from where the new extension is proposed. It was assessed as supporting average habitat suitability (HSI=0.62) due primarily to the presence of rudd (*Scardinius erythrophthalmus*) with some macrophytes with mown lawn and herbaceous borders immediately adjacent to the pond. Pond P2 (Photo 5) is not thought to support fish (Owners pers. comm.) but due to the proximity to another pond with fish it was considered that they may be present in small numbers. The pond supports some native macrophytes and was assessed as supporting good habitat suitability (HSI=0.75).

b) Terrestrial habitat

i) *Amphibians*

The areas of made (surfaced) ground where the new extension is proposed are generally considered unsuitable terrestrial habitat for amphibians with no gaps under the sandstone slabs which could be used as refuge habitat (e.g., for overwintering) though the adjacent lawn areas in the wider gardens provide some foraging opportunities, particularly on warm, rainy/humid nights during the active/breeding season, whilst refuge opportunities exist within at the base of woody shrubs. However, the likelihood of amphibians (including GCNs) being present within the proposed works footprint is very low.

ii) *Reptiles*

The paved area within the proposed works footprint was assessed as supporting negligible habitat suitability for reptiles, with some (albeit low) potential for individual grass snakes to occasionally pass through the site on route to hunt in the nearby ponds.

Bats

a) *Roosting bats*

No evidence of roosting bats was found during external inspections of the building, both on and adjacent to where the new extension (orangery) will tie into the main house. No obvious potential bat roosting features were observed either with the section of the building surveyed assessed as supporting negligible bat roosting potential (Collins, 2023).

b) *Foraging and commuting bats*

The area within the works footprint site was assessed as supporting negligible value habitats for foraging and commuting bats although habitats within the wider gardens (e.g. ponds and mature broadleaved trees will offer foraging opportunities of moderate value (Collins, 2023).

Nesting birds

No evidence of nesting birds was found on the part of the building where the new extension is proposed, with potential nesting and/or roosting crevices/holes largely absent.

Other mammals

The paved area within the proposed works footprint was assessed as supporting negligible habitat suitability for hedgehogs. Habitats in the wider garden (e.g. lawn and shrubs) will provide refuge/cover and foraging habitat for the species, and also could support some S. 41 list invertebrates, including Lepidoptera. However, these will remain unaffected by the proposed development.

Discussion

a) *Habitats*

Impacts

The proposed scheme will result in the net loss of hard standing, which is considered a habitat of very low ecological value, such that it is not considered to be ecologically significant at any level.

Mitigation

To prevent damage to retained habitats (e.g., ponds, trees, lawn and shrubs in the garden), the builder's compound (if required) should be sited on existing hard standing and away from trees, shrubs and retained boundary features.

The works footprint and associated disturbance should be minimised in extent as much as possible. Retained trees/shrubs and grassed areas should be protected with temporary fencing (e.g., Heras) to prevent above ground (e.g. accidental) damage during construction.

Pollution prevention measures should also be adopted to avoid any pollution of the nearby pond. A contractor Risk Assessment Method Statement (RAMS) or similar should be developed ahead of works commencing to ensure Good Practice measures are used to avoid and/or minimise the risk of pollution. Measures may include, but are not exclusive to:

- Locating any site compounds (including any fuel storage) away from the pond.
- Cleaning machinery in designated areas with a sump and re-using wastewater where possible or discharging via a sewer or tanker only.

- Storing chemical and fuels securely within double-bunded bowzers or chemical stores (with a 110% capacity to contain any spillage) away from the pond.
- Using water based, non-toxic and biodegradable chemicals and fuels where possible.
- Mixing and washing chemicals and associated equipment in designated areas with wastewater safely disposed of via mains sewerage or tanker as appropriate.
- Use of biodegradable hydraulic and fuel oils.
- Having adequate site security in place; regularly checking equipment for failures and/or leaks.
- Keeping spill kits and booms present on the site and ensuring staff are trained in their use.

Further information is available via the Guidance for Pollution Prevention - Works and maintenance in or near water: GPP 5 January 2017 document, produced by Natural Resources Wales (NRW), the Northern Ireland Environment Agency (NIEA) and the Scottish Environment Protection Agency (SEPA)⁶.

b) Species

General good working practices

Impacts likely to arise from the proposed development will be limited subject to good housekeeping and working practices. The following measures are suggested to minimise the risk of incidental harm to species that may be present on site.

1. Any trenches required for service runs (e.g., water and electricity etc.) should be filled on the same day as excavation where possible. Trenches left overnight should be covered with ply/OSB sheets to prevent animals becoming trapped. If this is not possible then amphibian/mammal ladders must be installed (wide planks, laid at shallow angles to allow animals safe egress) and they should be maintained until the excavations are filled.
2. Trenches should be inspected immediately prior to infill and any animals present (**except GCNs**) relocated to suitable nearby habitats (e.g., base of nearby hedgerow or within retained grassland away from the works footprint).
3. Any concrete slabs (if required) should be poured during the morning to ensure they have hardened off prior to evening to reduce the risk of wildlife coming into contact with wet concrete.
4. Any hand mixing of mortar or concrete should be on ply boarding over a tarpaulin which is folded over the boarding at the end of each day to prevent animals coming into contact.
5. Any excess cement/concrete should be covered and removed from site as promptly as possible to avoid animals coming into contact.
6. Any building materials should be stored on bare ground or hard standing, or stored off the ground on pallets; and
7. Any waste or spoil (e.g., for footprints and services to be installed in trenches) stored on site temporarily will be stored on bare/hard ground or in skips.

Species specific

a) Amphibians and reptiles

Impacts

No vegetation clearance is required such that impacts on amphibians should be avoided. However, ground breaking and other construction activities may result in the potential entrapment, injury, and mortality of amphibians due to the presence of trenches, building materials and temporary stockpiles of rubble (if present), which animals can seek refuge within and then suffer injury/death when the materials are moved.

On completion of the development, the use of gully pots or similar as part of a surface water drainage system can result in the entrapment of amphibians (Muir, 2012).

Combined, such impacts could result in permanent negative effects upon low numbers of individuals considered a minor negative effect at the Local level.

Mitigation

Due to the nature and scale of the proposal, a Precautionary Working Method Statement would ensure that ensure impacts upon amphibians (including GCNs) are avoided. This should include:

⁶ <http://www.netregs.org.uk/media/1418/gpp-5-works-and-maintenance-in-or-near-water.pdf>

1. The GCN poster in **Appendix A1** should be erected in the welfare facilities provided for construction staff on site.
2. Should any GCNs be encountered at any stage, work should stop immediately, and advice be sought from a suitably experienced ecologist. Any other animals should be allowed to move out of the works area or safely relocated.
3. Where possible ground excavation works should be undertaken during April to October when animals are active.
4. **See *General Good Working Practices Items 1 and 2* for avoidance measures relating to open excavations and what to do in the event of any amphibians, small mammals being present.**
5. **If GCNs are encountered, works should stop immediately, and advice should be sought from an experienced ecologist.**
6. Concrete pours (if required) will be undertaken in the morning to allow them to harden prior to the evening when amphibians become active or must be covered overnight.
7. Excess cement/concrete must be disposed of in such a way as to prevent contact with animals e.g., poured into a concrete skip and covered.
8. Any caustic materials (e.g., concrete) to be hand mixed must be on ply boarding over a tarpaulin which is folded over the boarding at the end of each day's use to prevent animals coming into contact.
9. All building materials will be stored on hard standing or raised off the ground on pallets and away from sensitive boundary habitats (e.g., hedgerows).
10. All building waste must be removed from site as promptly as possible to prevent animals seeking refuge.
11. **Downpipes taking water off the roof should be sealed at ground level by using a leaf and debris screen⁷ or similar to prevent amphibians entering drains.**
12. **If gully pots are required, they should use small diameter (6mm) grates or discharge via pipes without silt traps straight into a ditch or pond (not a soakaway). Gully pots should be situated $\geq 100\text{mm}$ from the roadside, OR a wildlife-kerb⁸ must be installed adjacent to each gully pot AND a gully pot ladder⁹ placed into each gully pot.**

b) *Bats*

Impacts

i) Roosts

Any works on the existing building to facilitate the development is unlikely to result in any impacts on roosting bats. However, good working practices described in the mitigation section below will ensure the risk of harm is minimised.

ii) Foraging and commuting habitats

None anticipated.

iii) Light disturbance

Lighting (construction and operational phases) can impact bat commuting and foraging behaviour and increase the risk of predation, which could affect foraging success and population recruitment and is considered a potential significant effect at the Local level. Lighting impacts relate to security lighting external to the buildings during construction (if required), and potentially from spillage of internal lighting once the buildings in use. In this instance, impacts on retained trees/shrubs and pond in the garden (e.g. to the east and south).

iv) Roofing membranes

Research has shown bats can become entangled in modern breathable roofing membranes if used under certain tiles, such as clay pantiles or peg/plain tiles (Waring *et al.*, 2013) or behind weatherboarding. Without mitigation, the impacts above could result in significant effects at a Local level. Without mitigation, the impacts above could result in significant effects at a Local level.

Mitigation

i) Roosting bats

A small number of existing slates will require stripping where the north-east corner of the orangery will tie into the existing roof line. The slates should be soft stripped by hand and works should stop immediately if a live bat or any evidence of roosting bats is observed (e.g. accumulations of droppings). A suitably qualified ecologist should then be contacted, and advice sort, before works are to proceed.

⁷ <https://www.drainagepipe.co.uk/leaf-and-debris-gully-110mm-p-D94G/>

⁸ e.g. <https://www.aco.co.uk/products/wildlife-kerb>

⁹ <https://www.thebhs.org/the-bhs-amphibian-gully-pot-ladder>

ii) Light disturbance

Exterior lighting (if required during construction and operational phases) must minimise lighting impacts upon retained natural habitats including all boundary hedgerows and trees, and should follow current guidance as necessary^{10,11}:

- *Type of lamp (light source)*: Light levels should be as low as possible as required to fulfil the lighting need. Lighting should have a maximum of 7.5 to 10 lux and LED lights should be used using the warm white (or amber) spectrum, with peak wavelengths >550nm (2700°K) and no UV component; and
- *Lighting design*: Lighting should be directed to where it is needed, with minimal horizontal spillage towards retained habitats, including and shrubs and trees and pond P1, This can be achieved by restricting the height of the lighting columns/fixtures and the design of the luminaire, including the following measure:
 - ❖ Light columns/fixtures in general should be as short as possible as light at a low level reduces the ecological impact.
 - ❖ Luminaires with an upward light ratio of 0% should be mounted on the horizontal i.e., with no upward tilt.
 - ❖ If taller lights are required, and as a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill; and
 - ❖ PIR movement sensors and timers should be used to minimise the 'lit time'.

iii) Roof membrane

The orangery will have a large glass rooflight and flat roof, which will not require a bat friendly membrane to be used.

c) *Nesting birds*

Impacts

If undertaken during the bird nesting season (1st March to 31st August) building works could result in the disturbance (e.g. direct or via increased noise levels) and destruction of active nests, and potentially injure or kill young birds, considered a significant negative effect (an offence under wildlife legislation) at the Local level.

Mitigation

Commencement of the building works should take place outside of the nesting bird season. If this is not feasible, a check for nesting birds should be undertaken prior to any demolition. If any active nests are present, works within 5m must wait until the young have fledged.

Compensation

To compensate for the loss of bird nesting habitat a sparrow terrace¹² (x1), an open-fronted nest box¹³ (x1) and an apex starling nest box¹⁴ (x1) could be mounted on suitable trees in the garden and/or on the new dwelling, with exact locations agreed with a suitably experienced ecologist.

d) *Hedgehogs*

Impacts

During construction, hedgehogs could potentially fall into open trenches resulting in entrapment and possible injury and mortality of individuals due to falling in or becoming in contact with caustic substances such as fresh concrete. In combination such impacts would be considered to result in a negative ecological effect at the Local level.

Mitigation

See *General Good Working Practices* to minimise the risk of animals falling into trenches created for utilities/service runs and concrete pours.

Cumulative effects

The Mid Suffolk District Council planning website was searched (18/01/2024) for any relevant planning applications, submitted in the last two years, for locations within 1km of the application site. Refused and withdrawn applications were not considered. The

¹⁰ <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting>

¹¹ www.eurobats.org/sites/default/files/documents/publications/publication_series/WEB_DIN_A4_EUROBATS_08_ENGL_NVK_28022019.pdf

¹² <https://www.nhbs.com/1sp-schwegler-sparrow-terrace>

¹³ <https://www.nhbs.com/vivara-pro-barcelona-woodstone-open-nest-box>

¹⁴ <https://shopping.rspb.org.uk/bird-feeders-boxes-tables/bird-houses-nest-boxes/garden-bird-nest-boxes/apex-starling-nestbox.html>

search returned a low number of householder applications for extensions and/or alterations to existing dwellings and garages and/or garages, with applications relating to non-material amendments or discharge of conditions for previously decided schemes and works to trees, and two applications seeking prior approval for agricultural developments. No applications for major development projects were submitted.

Due to the limited nature of the scheme and planning search results returned, no significant cumulative effects are anticipated.

Biodiversity enhancements

Mitigation and compensation measures proposed will ensure negative ecological effects are minimised. However, to be consistent with planning policy, biodiversity gains could be delivered through suggested enhancement measures. To maximise biodiversity enhancements, the following enhancement measures will be implemented (Figure 3).

Amphibians

1. *Native macrophytes*: Some native marginal aquatic plants, comprising 3x water forget-me-not (*Myosotis scorpioides*) and 3x water mint (*Mentha aquatica*) plug plants, will be planted along the margins of pond P2. This will provide additional egg laying material for GCNs whilst benefit a range of other taxa in including macro-invertebrates and birds etc.
2. *Log/brash pile*: A log and brash pile (Appendix A2) will be created using material from broadleaved brash/logs only (**not conifers**) and placed near pond P2. Log piles provide important refuge habitat for amphibians are also likely to support a range of fungi, dead wood invertebrates and solitary bees, which in turn will attract foraging small mammals and birds etc.

Bats

3. *Bat boxes*: Two Kent Bat Boxes bat boxes (Appendix A3), will be mounted suitable mature trees in the locations shown on Figure 3, to provide artificial roosting habitat for bats. Good practice advice¹⁵ should be followed in relation to the positioning of boxes.

To maximise potential biodiversity benefits the measures proposed should be secured through detailed design and appropriate planning conditions, scheme specific and/or as per the British Standard (BS 42020:2013)

It is generally advised that subject to no significant change in site management regimes, and dependent on the species present, baseline survey results typically remain valid for approximately 12 – 18 months (CIEEM, 2019).

Kind regards,

Christian Whiting BSc (Hons) MSc
Ecologist, MHE Consulting Ltd

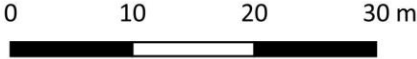
¹⁵ <https://www.nhbs.com/blog/nhbs-guide-where-to-hang-and-how-to-maintain-your-bat-box>

Figures



Legend

 Application site boundary

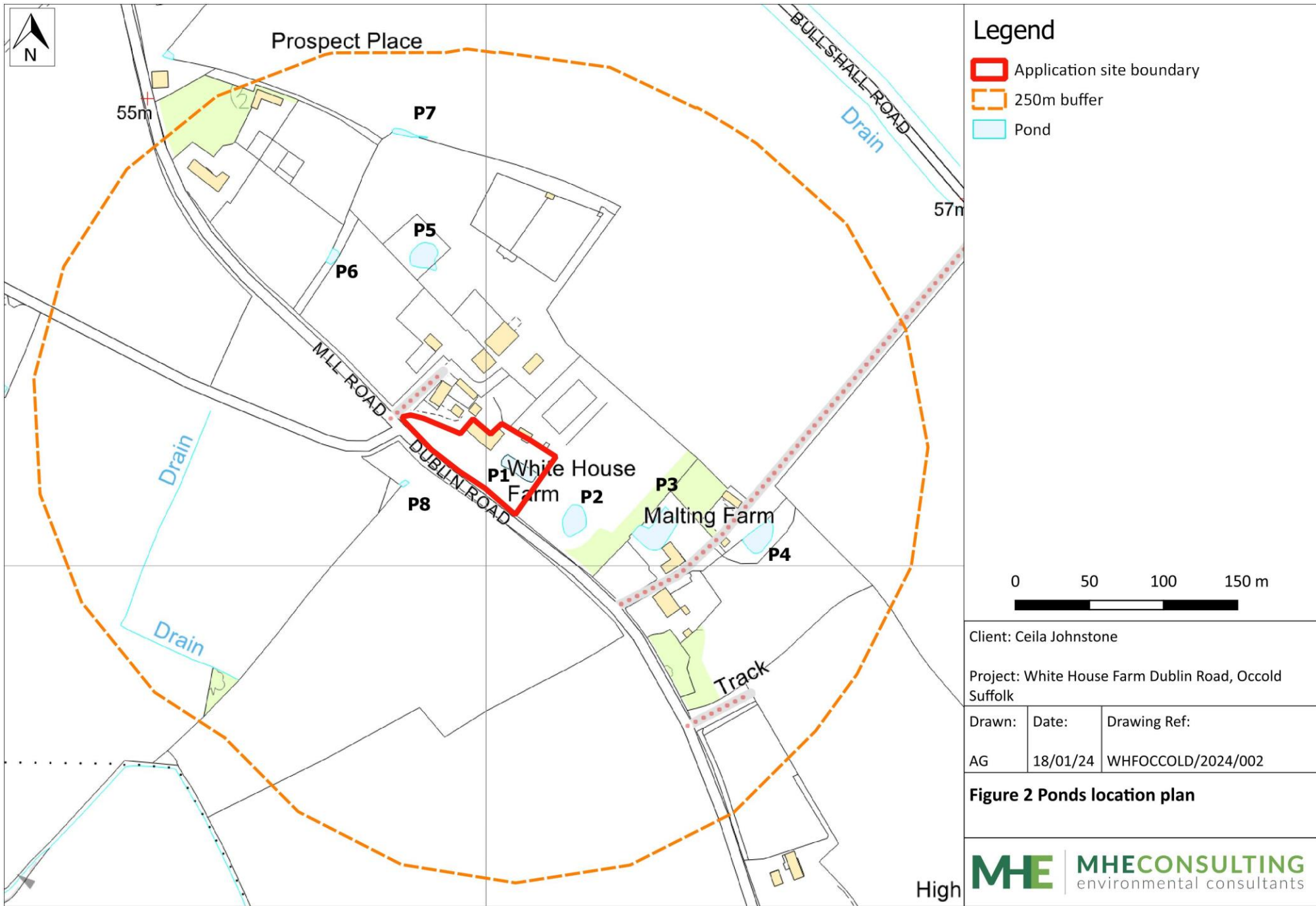


Client: Ceila Johnstone

Project: White House Farm Dublin Road, Occold Suffolk

Drawn:	Date:	Drawing Ref:
AG	18/01/24	WHFOCCOLD/2024/001

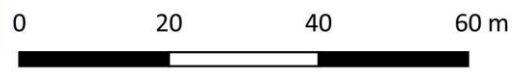
Figure 1 Site location plan





Legend

- ▲ Kent Bat Box
- ✕ Log/brush pile
- Native macrophytes planted



Client: Ceila Johnstone		
Project: White House Farm Dublin Road, Occold Suffolk		
Drawn:	Date:	Drawing Ref:
AG	26/01/24	WHFOCCOLD/2024/003

Figure 3 Biodiversity enhancement plan

Photos



Photo 1 View of where the new extension is proposed (i)



Photo 2 View of where the new extension is proposed (ii)



Photo 3 View of sealed soffits supporting no bat roosting potential



Photo 4 Garden and Pond P1 to the southeast of the house



Photo 5 View of Pond P2

Photo 6

Appendices

Appendix A1

GCN ID Poster

Great Crested Newt

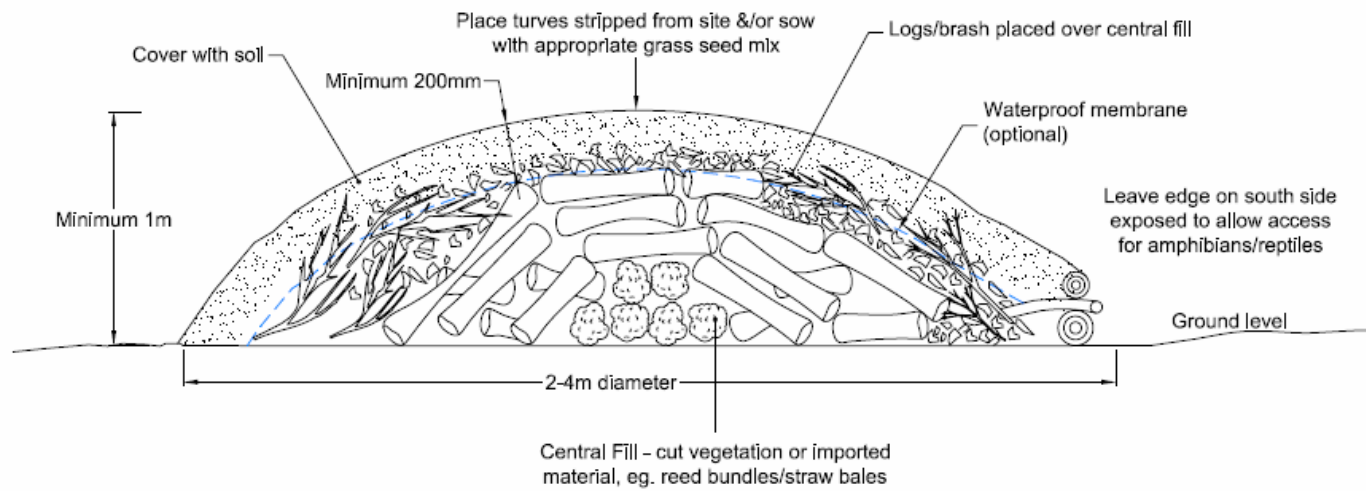
If seen by any employee, works must cease immediately and an ecologist be contacted for advice

It is an offence to intentionally or recklessly disturb, injure or kill great crested newts

Further information can be found at www.arguk.org



Appendix A2 log/brash piles



Brush/log pile recently created



Brush/log pile (c. 2 years old) with vegetation growing through and over

Appendix A3 Bat boxes



Kent bat box

