Richard Kilshaw ecological services
Bsc. (Hons) Conservation management. Cert. Biological Survey. MIEEM
Wildlife survey and site assessment

Masters Lodge, Heath Road, Polstead, Colchester, Essex CO6 5AN.
Tel. 01206262008 / 07952032158. email rkilshaweco@aol.com

Phase 1 Habitat Survey:

Site at Newhouse Farm, Hall Road, Great Bromley. CO7 7TP

20 March 2020

Prepared for: Mr J. O'Connor
Inova (UK) Ltd
Broomhouse
Langham
Essex. CO4 5PT

CONTENTS

1. INTRODUCTION.

1.1 This ecological assessment has been completed on behalf of Inova (UK) Ltd in relation to the proposed re-development of existing buildings and land at Newhouse Farm. Details of the proposals were unspecified at time of site assessment.
Site location and site boundaries as determined in supplied drawing:-

- SITE PLAN - BUILDINGS AT NEWHOUSE FARM, HALL ROAD GREAT BROMLEY, COLCHESTER CO7 7TP
- Ordnance Survey grid reference: TM 0721 2705 (centre of site)

1.2 The assessment consists of an Extended Phase 1 habitat survey (JNCC 2007) and targeted site surveys for the presence and potential for protected species. It includes analysis of a data search compiled by Essex Wildlife Trust Biological Records Centre (EWTBRC Ref 087).

1.3 A site visit was undertaken on 4th March 2020, during overcast but dry conditions, with sunny spells and temperatures of 7-9C. All areas of the site and the immediately adjoining areas were assessed where possible; roof voids to some of the buildings were not accessible.

1.4 This report details survey findings, evaluates the data search, and makes recommendations for further survey and outline mitigation measures where appropriate.

1.4.1 A site habitat map is included at Appendix 1. This is adapted from Phase 1 habitat survey methodology (JNCC 2007) and depicts habitats present and the locations of target notes referred to in the report text.

1.4.2 Plant species noted in the text include scientific names in the first instance, with common names only used thereafter. Botanical nomenclature follows *New Flora of the British Isles by Clive Stace (2nd edition 1997).*

1.5 When used to inform a planning application this report should be accompanied by the relevant data from the EWTBRC search report. This may include information about sensitive species and should not be passed on to third parties, or published in any form.

1.6 Site assessment, data analysis and report were completed by Richard Kilshaw - a suitably qualified ecologist of 20 years professional experience and full member of the Chartered Institute of Ecology and Environmental Management since 2007.

2. SITE DESCRIPTION

2.1 This site consists of the farmyard area of Newhouse Farm, which contains a pair of semi-detached farmworker cottages, traditional timber framed barns and open fronted cart lodges, and contemporary agricultural storage and livestock buildings (some in a derelict condition). It includes hard standing areas and access tracks associated with the buildings, as well as areas of rough grassland, disturbed ground and spoil, species-poor hedgerows and existing vehicular access points (x 2) from Hall Road (B1029). It includes a seasonally wet ditch and links to water bodies in adjacent properties.

2.2 The site is bound by the relatively busy B1029 and extensive agricultural land to the south-west; by Great Bromley House and Newhouse Farm Cottages and their associated gardens to the west and south-east respectively; and by species-poor, horse-grazed grassland beyond a species-poor hedge and ditch to the north-west boundary.
The north-east boundary is marked by tall palisade fencing of recent origin, which screens the site beyond which contains contemporary agricultural buildings, static caravans, rough grassland, trees and scrub.

2.3 The site is located in a low density residential area, set within an arable dominated landscape with sparse hedgerows, scattered woodlands, young tree plantations and occasional ponds.

3. DATA SEARCH

Records were compiled by Essex Wildlife Trust Biological Records Centre (EWTBRC) for a 1km radius from site centre (TM 0721 2705). In addition, Multi-Agency Geographic Information for the Countryside (MAGIC)and available aerial imaging were accessed.
See Figure 1 below for search area and locations of designated sites.

3.1 Statutory[1] and Non-Statutory sites[2].

There are no statutory sites, and one non-statutory site within the search area:

- Manning Grove (Local Wildlife Site Te 33) : an ancient woodland dominated by hazel (Corylus avellana) coppice, with large oak (Quercus robur) and sweet chestnut (Castanea sativa) standards. Ground flora is mainly bracken (Pteridium aquilinum), bluebell (Hyacinthoides non-scripta) and bramble (Rubus fruticosus).
- This site is also UK Priority habitat: Lowland mixed deciduous woodland, and Essex Priority habitat: Ancient woodland.

3.1.1 Impact on Statutory and Non-Statutory sites:

There will be no direct impact on Statutory or Non-statutory wildlife sites and indirect impacts are highly unlikely.
The MAGIC website shows the site is located outside of SSSI Impact Risk Zones for the type of development proposed (less than 100 residential units), and does not therefore require LPA consultation with Natural England.

3.2 Landscape designations and habitats.

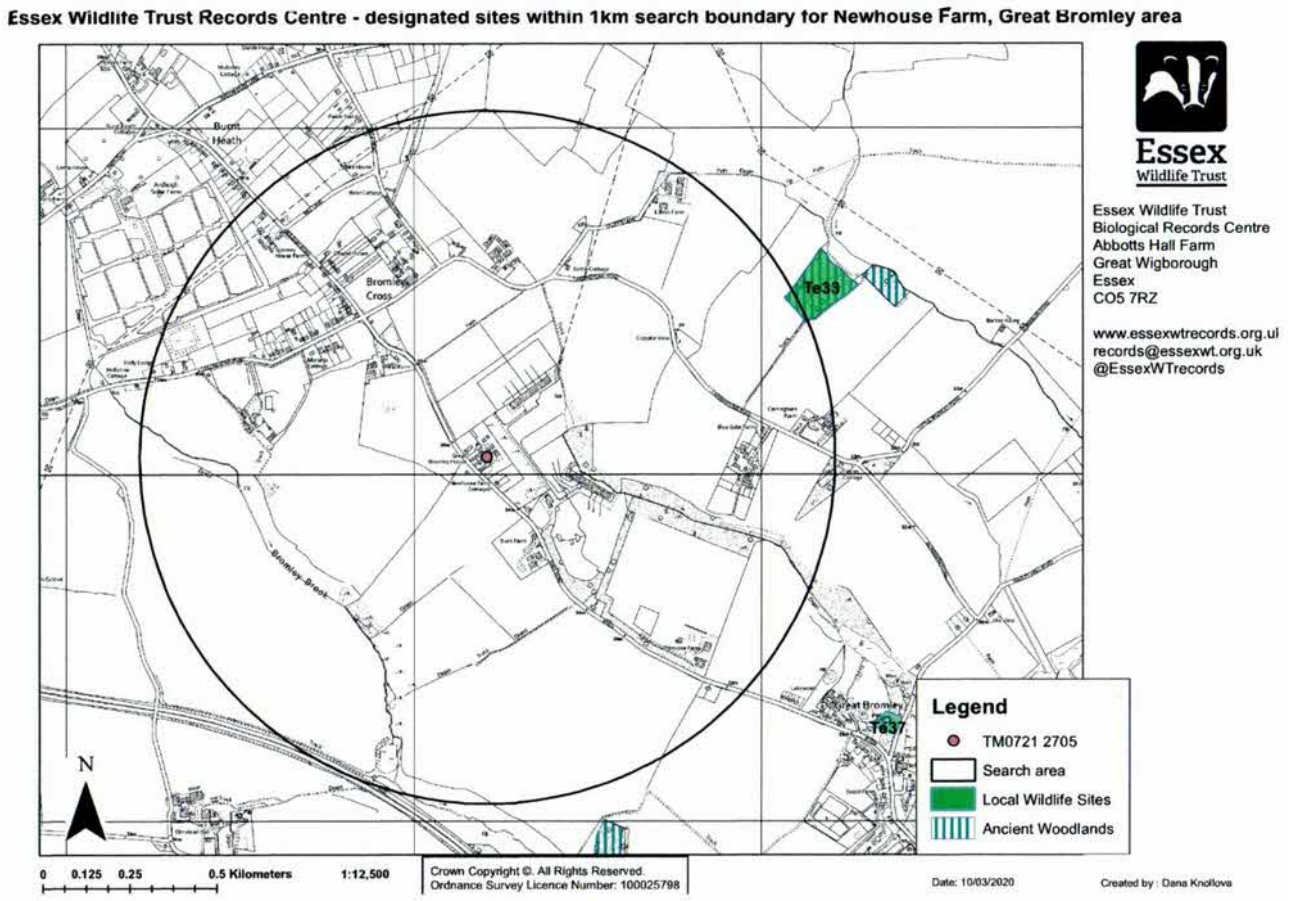
3.2.1 The site is situated within an *Arable bird assemblage* area with the following farmland birds recorded in the landscape: lapwing, corn bunting, grey partridge and turtle dove, but does not contain suitable habitats to support these species.

3.2.2 Aerial imaging shows 2 ponds within 500m of the site (250m to the north-east, and 450m north-west), in addition to seasonal water bodies and ditch networks.

1 *Statutory sites have legal protection. These include: Ramsar sites, Special Areas of Conservation (SAC), Special Protection Areas (SPA); National Nature Reserves (NNR), Sites of Special Scientific Interest (SSSI), Marine conservation zones (MCZ); Local Nature Reserves (LNR), National Parks,*

2 *Non statutory sites, e.g.s: County Wildlife sites (CWS), Local Wildlife Sites (LoWS) and UK Priority habitats have no legal protection but are a 'material consideration' in determination of planning applications.*

Figure 1.



3.4 Protected and UK priority species[3].

There were no species records (protected, designated, invasive and veteran trees) found within the 1km search area on the EWTBRC database.

NB. Absence of records does not imply a species or habitat is absent from a given area.

3.4.1 Protected and UK priority species suited to site habitat conditions and therefore have the potential to be present (whether or not previously recorded in the EBRC data search), and the considered level of impact risk from site re-development are listed in **Table 1.**

3 *Species afforded legal protection under European and UK national Law; Priority / NERC S41 species; Global and National Red List and Scarce species.*

Table 1: Summary of protected or UK priority wildlife: potential for site presence and impact risk.

Species / group	*Status and protection*	*In data search*	*Potential for presence / Impact risk if present.*
Nesting Birds – species suited to site conditions.	UK legal protection (birds and active nests: all species) Priority; local priority species presence.	No	High / High risk March-September: active nests to scrub, buildings, spoil and tall ground vegetation. Moderate risk outside of main nesting season.
Bat species – species suited to site conditions	EU and UK legal protection (all species and roost sites)	No	High / High risk year round: roosting within buildings.
Widespread reptiles (slow worm, common lizard, grass snake)	Priority / NERC S41 species; UK legal protection (killing/injuring)	No	Moderate / High risk year round: rough grassland, spoil and hedge bases.
Hedgehog	Priority / NERC S41 species	No	Moderate / Moderate during hibernation and day-time refuge: buildings, spoil and hedge bases.
Great crested newt	EU and UK legal protection	No	Moderate / Moderate risk to water bodies, grassland, spoil and hedge bases.
Common toad.	Priority / NERC S41 species	No	Moderate / Moderate risk to water bodies, grassland, spoil and hedge bases.

4. Findings

4.1 Target notes. *Refer to Appendix 1: Site habitat map.*

Tn 1. Farm workers cottages and garden

Pair of semi-detached red brick cottages with clay tiled roof and attached single-storey out-building containing toilet and traditional wash-room. The garden area includes a second outside toilet building, a fire-site, non-native shrubs, patches of dense Ivy and Bramble scrub, disturbed ground and a red-brick wall to the road boundary.
The cottages are uninhabited and in a state of disrepair with broken and boarded up windows, missing roof tiles, damage to the roof structure and chimney.
Internal inspection was restricted due to a collapsed staircase and section of roof to the northern most cottage, and the absence of a loft access to the southernmost cottage.
Signs indicative of bat activity (droppings, feeding debris, dead bats etc) were not found but opportunities for bat roosting are present to cottage and outbuilding roof structures, chimneys and behind boarding to the cottage windows.
Old (inactive) bird nests (including wren, blackbird and jackdaw) were present to cottage kitchens, the wash-room and toilet buildings, and debris present to the cottage fireplaces indicating past use of the chimneys for nesting.
The out buildings and shrub/scrub basal areas to the garden margins are potential refuge and hibernation habitat for hedgehogs.
The garden contained early shoots of what appears to be Japanese knotweed (Fallopia japonica).

- Bat activity surveys are required to determine use prior to works.
- Active bird nests are likely to be present at certain times of the year, and survey or mitigation measures are required to prevent disturbance during site works.
- Survey or mitigation measures are recommended prior to clearance of habitats with potential to contain hedgehog.
- Suspected presence of Japanese knotweed to the cottage gardens, requiring re-survey when plants are fully emerged (April). *NB. This assessment does not include a comprehensive survey for Japanese Knotweed within the site.*

Tn 2. Traditional barn attached to cottages

Older style barn with traditional timber-frame and weather-board construction, with cement render to exterior walls and the roof tiles replaced with corrugated mineral-sheeting which includes 2 x roof lights.

The barn is divided into 2 parts: a main section consisting of an open 2 storey space with exposed rafters and jointed timbers; and a purpose built stabling area with a loft space above. Both parts are accessible to bats via gaps to roof structures and have opportunities for bat roosting.

These areas were inspected for signs of bat activity, although this was restricted to ground level to the main section. Possible bat feeding debris (moth wings) and 2-3 old and friable bat droppings were found to the floor of the main barn, along with rodent (mice and rat) droppings and feeding debris; the loft area had no indications of bat use but frequent mouse droppings and feeding debris were present.

The northern end of the barn connects to a single-storey addition of a simpler construction with no significant opportunities for bat roosting, and thee were no indications of bat activity. However, this part is readily accessible to birds via a half-height wall to the adjoining yard areas; no active or old nests were found during survey. The earth floor of this section was heavily disturbed and fresh rat dropping were present.

- Detailed surveys are required to determine bat activity.
- Active bird nests may be present at certain times of the year and survey and / or mitigation measures are required to prevent disturbance during site works.

Tn 3. Traditional barn

Older style barn with timber-frame and weather-board construction atop red brick walls; with open fronted ‘cart lodge’ style additions to the southern end and enclosed single storey areas to the north; a dilapidated, open-ended storage addition is present to the northern end. The barn is roofed with corrugated mineral-sheeting and with a small area of slate; there are no loft spaces or under-felting, but the single storey areas are close-boarded internally.

The main barn area consists of an open 2 storey space with exposed rafters and jointed timbers providing numerous opportunities for bat roosting that are readily accessible via gaps to weather boarding, roof sheeting and around the doors. Further roosting potential includes gaps beneath ridge tiles and verge cover-sheeting, and to voids between roof coverings and internal close-boarding to single storey areas.

Survey was restricted to ground level, where old and fresh bat droppings, and probable feeding debris (moth wings) were found scattered within the main section of the barn. Roosting bats have previously been observed (by the land-holder) to a construction joint to one of the central timber beams; smearing and staining associated with bat access were visible during survey but concentrations of droppings indicative of roosting were not present. Mouse droppings and feeding debris were also present.
Old (inactive) bird nests (including swallow, jackdaw and pigeon / dove) were present to the main barn and open cart lodge areas.

- A bat roost, and evidence of bat activity were present within the barn, although current use was not indicated. *NB: a bat roost is afforded legal protection whether occupied or not.*
- Detailed surveys are required to determine bat activity and appropriate mitigation measures regarding the known bat roost prior to works affecting this building.
- Active nests are likely to be present at certain times of the year, and further survey and / or mitigation measures are required to prevent disturbance during site works.

Tn 4. Livestock buildings and yard area

A collection of open fronted livestock buildings of mid-20th century construction or modification, with associated concrete hard-standing areas, block walls and debris. Consisting largely of timber frame and weather-boarding atop block walls, and corrugated mineral-sheet roofing. Includes derelict and partially collapsed buildings, and low, ramshackle ‘lean-to’ buildings to the rear. Piles of rubble, walls, dense Ivy (Hedera helix), land scrub, ruderals and short ephemeral vegetation, and areas of standing water were present at time of survey.
There were no indications of bat activity, nor significant opportunities for roosting bats. Old bird nests were present to buildings and likely to the established Ivy and scrub. Accessible buildings, debris piles and marginal vegetation are potential refuge and hibernation habitat for hedgehog.

- Active bird nests are likely to be present at certain times of the year, and further survey and / or mitigation measures are required to prevent disturbance during site works.
- Potential hedgehog habitat: survey or mitigation measures are recommended prior to clearance.

Tn 5. Double Garage and storage building.

Double garage with separate storage or live-stock area to rear, with red brick and slate roof construction. A loft space above the garage area, and voids between slates and internal close-boarding, may be accessible to wildlife via gaps beneath ridge tiles, damaged slates and structural damage to the gable end.

Survey of the building interior found no indications of bat activity, and heavy cobwebbing to the open roof areas to the rear sections; the roof voids above the garage area were not accessible for inspection.

- Bat activity surveys are required to determine use prior to works.
- Active nests are likely to be present at certain times of the year, and further survey and / or mitigation measures are required to prevent disturbance during site works.

Tn 6. Livestock / storage building

Open fronted live-stock building subdivided into stalls and currently used for storage, containing farm implements, building equipment and materials, and general items. Of mid 20th century construction with concrete block and timber frame clad with corrugated mineral-sheeting to roof and walls, concrete floors and extensive hard standing area in front of the building.

Several old bird nests were present (jackdaw, pigeon/dove) but there were no indications of bat activity and no significant voids to roof or walls, or bat roosting potential.

- Active nests are likely to be present at certain times of the year, and further survey and / or mitigation measures are required to prevent disturbance during site works.

Tn 7. Storage building

Former piggery converted to storage building, of mid 20th century construction with simple timber frame, block walls and corrugated sheet cladding to walls and roof; concrete floors and extensive hard standing area in front of the building.

Currently used for storage, containing vehicles, tools and equipment etc.

The roof has a vented ridge which may enable wildlife access but no old or active bird nests were observed, and there were no indications of bat activity or significant roosting potential.

- Active nests could be present at certain times of the year, and further survey and / or mitigation measures are required to prevent disturbance during site works.

Tn 8. Livestock / storage building

Mid 20th century building with timber frame and wooden sheet construction, with corrugated mineral-sheet roofing; sub-divided into 2 sections with a protruding roof vent to each. There is no loft space but the internally lined and insulated ceilings create voids that may be suited to roosting bats, and accessible via verge and ridge sheets, and the roof vents. Survey found no indications of bat activity or nesting birds within the building.

- Low potential for bat presence: activity surveys are recommended to determine use prior to works.
- Active nests may be present at certain times of the year, and further survey and / or mitigation measures are required to prevent disturbance during site works.

Tn 9. Remnant Hedge-line with barn owl box

Remnant hedge consisting of Hawthorn (Crataegus monogyna) over Ivy, Nettle (Urtica dioica) and Cleavers (Galium aparine). Spoil piles and general debris, bare soil and rabbit burrows are also present offering suitable refuge and hibernation habitats for protected and notable reptile and amphibian species such as slow-worm, common lizard and common toad.

An owl nest box is fixed to a telegraph pole roughly in line with this hedge; the box is in a state of disrepair was not in use at time of survey.

- Active bird nests may be present at certain times of the year, and further survey and / or mitigation measures are required to prevent disturbance during site works.
- Habitats suitable for protected or notable reptile and amphibian species are present requiring further surveys to fully assess the site.

Tn 10. Prefabricated building

Derelict mid 20th century pre-fabricated building with metal frame and mineral-sheet cladding to roof and walls, and with double doors which seem to be permanently left open. A suspended ceiling within creates a large loft space accessible to wildlife from the building interior via a missing section of ceiling, and directly from outside via a damaged section of roofing.

Survey found an accumulation of barn owl pellets and debris (estimated 2-3 years old) indicative of previous nesting in the northern end of the loft, and nesting material to the

southern end of the building suggestive of starling or house sparrow use. Active nests were not present during survey.

The loft space has potential for roosting bats but was not fully accessible for inspection; there were no no indications of bat activity to accessible parts of the building.

- Active bird nests, including barn owl, may be present at certain times of the year, and further survey and / or mitigation measures are required to prevent disturbance during site works.
- Bat activity surveys are required to determine use prior to works.

Tn 11. Livestock / storage building

Mid 20th century storage barn of concrete beam and block construction, with open front and sides; in current use for hay bale storage.

The structure and contents have potential for nesting birds although no old or active nests were observed; no significant opportunities for bat roosting.

- Active nests may be present at certain times of the year, and further survey and / or mitigation measures are required to prevent disturbance during works.
- Potential refuge and hibernation habitats for hedgehog and survey or mitigation measures are recommended prior to clearance.

Tn 12. Rough grassland

Species-poor rough grassland with good structural diversity including tussocks and a vegetative litter-layer, and rabbit paths and grazed areas; extends along the eastern margin of the site behind storage buildings. This area is dominated by False oat-grass (Arrhenatherum elatius) and Cocks'-foot (Dactylis glomerata) with occasional Cow parsley (Anthriscus sylvestris), Broad-leaved dock (Rumex obtusifolius) and Nettle; light Blackthorn (Prunus spinosa) scrub is present at the margins.

Good habitat conditions for widespread reptile species, and terrestrial habitat for amphibians, which connect to further suitable habitats on-site (Tn.s 13 & 16) and immediately off-site (Tn 17 & 18) that include rough grassland, spoil and debris piles, and water bodies with potential for amphibian breeding habitat.

There is potential for ground-nesting birds within ground flora, and for general bird nesting to ground flora and marginal scrub.

- Active nests may be present at certain times of the year, and further survey and / or mitigation measures are required to prevent disturbance during works.

- Habitats suitable for protected or notable reptile and amphibian species are present requiring further surveys to fully assess the site prior to works.

Tn 13. Boundary hedgerow and ditch

Species-poor hedgerow with water-filled ditch to site boundary. Dominated by Hawthorn and Bramble over Nettle and occasional Elder (Sambucus nigra), with frequent bare soil and rabbit activity including burrows. A deficiency of woody species rules out consideration as 'Important' under Hedgerow Regulations 2006 as amended.

The ditch contained some standing water following periods of high rainfall prior to site survey, but contained no aquatic plants; the presence of terrestrial grasses and ruderals suggest temporary water storage only and largely unsuitable as amphibian breeding habitat but should be re-checked during peak amphibian survey season (April – mid May).

- Active nests may be present at certain times of the year, and further survey and / or mitigation measures are required to prevent disturbance during works.
- Habitats may be suitable for protected and notable amphibian species, requiring further assessment during peak amphibian breeding season to fully assess the site.

Tn 14. Site boundary with Great Bromley House

Fenced boundary with dense Blackthorn, mature Holly (Ilex aquilinum) and Yew (Taxus baccata) trees, over a poor ground flora dominated by Nettles, Cleavers, bare ground and non-native plants. The fence-line continues along the site boundary to the road, with areas of dense Ivy and Bramble, and the occasional Leylandii (Cupressus sp.) also present.

- Active nests may be present at certain times of the year, and further survey and / or mitigation measures are required to prevent disturbance during works.
- Potential refuge and hibernation habitats for hedgehog present to shared boundary areas; survey or mitigation measures are recommended prior to habitat clearance or other disturbance.
- The mature Holly and Yew trees present may be subject to Tree Preservation Orders (TPO).

Tn 15. Yard area and vehicular access.

Grassed 'yard' area and vehicular access between road and garage building (Tn 5), containing a large, mature Sycamore (Acer pseudoplatanus) tree, which is mirrored by

another of similar stature to adjoining garden of Great Bromley House. Ground flora consists of common grasses, non-native plants, and ruderals including nettles and a prominent patch of Alexanders (Smyrnium olusatrum): an Essex listed non-native invasive species.

- Active nests may be present at certain times of the year, and further survey and / or mitigation measures are required to prevent disturbance during works.
- Habitats suitable for protected or notable reptile and amphibian species are present requiring further surveys to fully assess the site.
- Alexanders (Smyrnium olusatrum) is present and measures should be taken to prevent further dispersal during site clearance.
- The mature Sycamore tree may be subject to a TPO.

Tn 16. Open grassland and ruderal vegetation

Extensive area of mixed grassland, ruderals and short ephemeral vegetation, with areas of compacted and disturbed soils, spoil heaps, rubble and general debris. A thicket of Blackthorn scrub and a wet ditch are present to the site's south-east margin, and a closely managed Hawthorn hedge, with Bramble and Ivy dominated ground flora is present to the road-side boundary.

Habitats here connect with those described at Tn 12, Tn 17 and Tn 18, to create an extensive area of potential foraging, refuge, basking and hibernation for widespread reptiles and amphibians, and an adjoining water body that appears suitable amphibian breeding habitat.

There is potential for ground nesting birds to taller ground flora and for general bird nesting to marginal scrub, hedges, spoil heaps and debris.

- Active nests may be present at certain times of the year, and further survey and / or mitigation measures are required to prevent disturbance during works.
- Habitats suitable for protected or notable reptile and amphibian species are present requiring further surveys to fully assess the site.
- Potential refuge and hibernation habitats for hedgehog are present; survey or mitigation measures are recommended prior to habitat clearance or disturbance.

Tn 17. Adjoining 'Newhouse Farm cottages' and gardens

Adjacent properties with established gardens, planted tree-belts, hedging and a large area of amenity grass suitable for foraging reptile and amphibian species; a water filled ditch adjacent to the site boundary contains what appears to be permanent standing water suited to amphibian breeding. The potential for reptile and amphibian habitats here increases the likelihood of populations within the Newhouse Farm site.

Potential bird nesting habitat including scrub and non-native hedging are present to the site boundary.

- Active nests may be present at certain times of the year to shared boundary habitats requiring further survey and / or mitigation measures to prevent disturbance during site works.
- Habitats suitable for reptiles and amphibians, including a water body with potential for amphibian breeding are present requiring further surveys to fully assess the site.

Tn 18. Site adjoining to the north-east.

This site includes static caravans, vehicles and equipment, disturbed ground, vehicular access and commercial poultry buildings. A new wooden screen fence, approximately 2m high marks the Newhouse Farm site boundary, and a margin of light Blackthorn scrub and seasonally wet ditch run the length of the site here. Further habitats present include extensive rough grassland, scrub, mature and sapling trees, and vegetated spoil.

Terrestrial habitats present are suitable for widespread reptiles and amphibians thereby increasing the likelihood of established populations within the Newhouse Farm site. The ditch contains some standing water but is largely dominated by terrestrial grasses and ruderals and therefore unsuited for amphibian breeding but should be re-checked during peak amphibian breeding / survey season (April – mid May).

Bird nesting habitat including scrub and tall ground flora border the site.

- Active nests may be present to shared boundary habitats, requiring further survey and / or mitigation measures to prevent disturbance during site works.
- Habitats suitable for protected or notable reptile and amphibian species are present requiring further surveys to fully assess the site.

Tn 19. Great Bromley House and gardens

Adjacent property with established rear gardens adjoining the site; habitats with potential to support reptiles, amphibians, hedgehog and nesting birds are present along the shared boundary.

- Active nests may be present to boundary habitats requiring further survey and / or mitigation measures to prevent disturbance during site works.
- Shared boundary areas have potential to contain reptiles, amphibians and hedgehog; survey or mitigation measures are recommended prior to clearance during site works.

5. Conclusions and Recommendations.

5.1 Overview.

This site has no inherent ecological interest but suitable habitats are present within the site and to the immediately adjoining areas with potential to contain legally protected and UK Priority wildlife including: bats, nesting birds, reptile and amphibian species and hedgehog.

5.2 Nesting Birds

Active nests were not found at the time of survey but suitable nesting habitats are present within the majority of site buildings, to trees, hedgerows and scrub, areas of rough grassland and tall ground flora, and to spoil and debris piles. An owl box is also present and evidence of past barn owl nesting was found to the loft space of building Tn 10.

Active nests are highly likely to be present within the site during the main bird nesting season, generally considered as March - September inclusive, but may also be present outside of this time depending on environmental conditions.

- It is recommended that the clearance of potential nesting habitats is completed outside of the main nesting season, and preferably during November – January inclusive.
- Alternatively, habitats should be surveyed by an appropriately experienced ecologist 24hrs prior to such works, to determine active nests are absent or provide further advice if present.
- Evidence of past barn owl nesting present (estimated within 2-3 years) but no signs of recent activity were found during survey. Barn owls are protected under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) although there is no legislation protecting roost sites or nest sites when not in use.
- It is recommended that measures are undertaken to retain nesting potential for barn owl and other bird species within the site after redevelopment.

5.3 Bats

Scattered bat droppings and feeding debris were found within both the traditionally constructed barns (Tn2 and Tn3). A previously identified roost site to timber beams within Tn3 contained external smears and staining from past use, although concentrations of droppings indicative of active roosting were not present, nor found elsewhere with the site.

Further buildings with bat roosting potential include the farmworker cottages (Tn1), the double garage (Tn 5), prefabricated building (Tn10), and live-stock shed (Tn 8); these buildings have roof voids that could not inspected but appear accessible to bats.
Roosting opportunities may also be present to mature trees within the site, and bats may be utilising features such as boundary trees, scrub and hedges for flight-line or foraging habitats.

- Detailed bat activity surveys are required to fully assess the site, and to determine use and appropriate mitigation for the roost site to the traditional barn Tn3.
  NB: bat roosts are legally protected whether in current use or not.
- Works to strip roofing materials to buildings **not** identified above as requiring further survey, should be undertaken with caution and contractors made aware that a bat or bats could be discovered secreted within the fabric of a building. Should a bat come to light works must cease immediately and until assessment and guidance has been provided by an appropriately experienced ecologist

5.4 Reptile and Amphibian species

Rough grassland, both within and adjoining the site, augmented by potential refuge, basking and hibernation habitats in the form of spoil heaps, debris and hedge bases, provide an extensive habitat area suitable for widespread reptile species and terrestrial habitat for amphibians. In addition, water bodies with potential for amphibian breeding are present to the site margins, and additional ponds are located within 500m of the site.

- Reptile presence - absence surveys are recommended to all suitable habitats prior to clearance or other works. Industry standard survey methods require 7 visits undertaken between March – June, or during September depending on weather and temperature conditions.
- Water bodies at site margins need assessment for suitability (Habitat Suitability Index surveys), followed by presence-absence (p/a)surveys if conditions are suitable for Great crested newt. Standard survey methods require 4-6 survey visits undertaken between March - May.

5.5 Hedgehog

Rough grassland areas, scrub and hedge basal vegetation provide good habitats for hedgehog foraging, refuge and hibernation. The proposals are unlikely to have a negative impact on local populations but mitigation measures should be in place to prevent harm to individual animals that may be present.

- Potential habitats should be cleared with caution during mild weather conditions between March – October i.e. while hedgehogs are active and not in hibernation.

5.7 Invertebrates

The site consists of widespread habitat conditions and assemblages of common plant species. Redevelopment of the site is unlikely therefore to have a negative impact upon populations of specialist, protected or notable invertebrate species.

- Further survey or mitigation measures are not recommended.

5.8 Flora

Rare or UK Priority plant species were not recorded within the site and habitats were readily identifiable as species poor.

UK non-native invasive species Japanese knotweed (Fallopia japonica) is thought to be present to the cottage garden (Tn1), and Essex listed invasive species Alexanders (Smyrnium olusatrum) is present to area Tn 15.

- Areas containing or suspected of containing non-native invasive species should be cordoned off immediately to prevent disturbance and further distribution within the site and the wider environment, followed by appropriate disposal.
- Further survey is required to confirm the identification and extent of Japanese Knotweed within the site when plants are fully emerged (late March-April). Specialist treatment and advice will be required if presence is confirmed.

REFERENCES

- JNCC (2007) Handbook for Phase 1 habitat survey. JNCC, Peterborough.

- EWTBRC Ref: 087 : Data request for Newhouse Farm, Gt Bromley; 1km radius from TM0721 2705

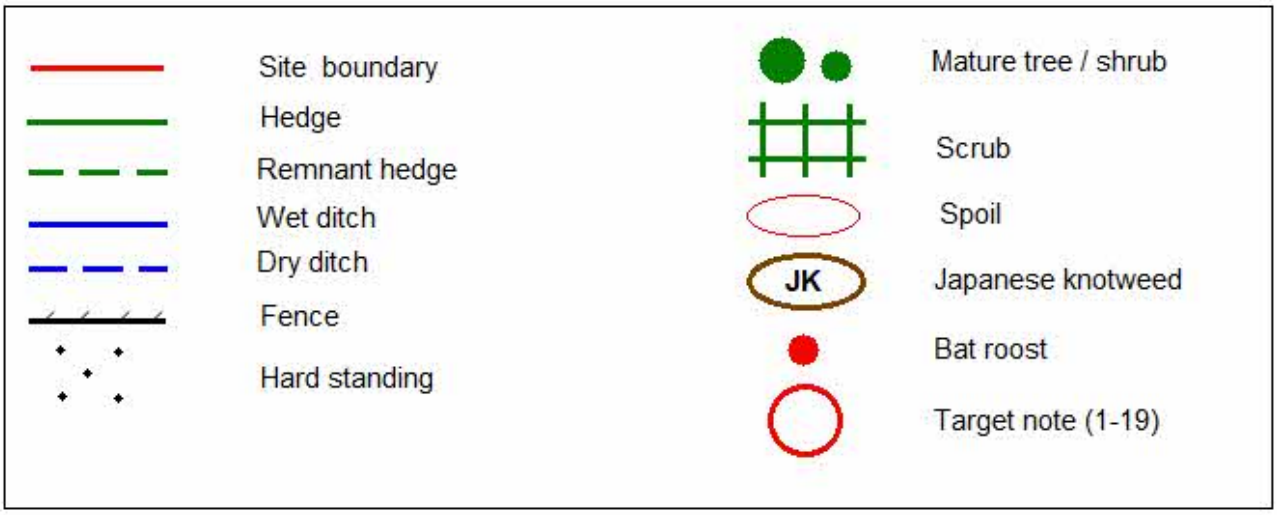
- Multi-Agency Geographic Information for the Countryside (MAGIC) www.magic.gov.uk/MagicMap.aspx

- New Flora of the British Isles (2nd edition 1997) Clive Stace. Cambridge University Press

APPENDIX 1: Site Habitat Map.

See Key overleaf.

Key. Phase 1 habitat survey.



APPENDIX 2: Site photographs.

Tn 1. Farm worker cottages

Tn 2. Traditional barn-rendered exterior; also showing rear of Tn 1 and area Tn 15.

Tn 2. Traditional barn interior: stable loft and main structure.

Tn 3. Traditional barn exterior, and interior structure; bat roost circled in red.

Tn 4. Dilapidated livestock buildings and yard area.

Area Tn 4 continued.

Area Tn 4 continued.

Tn 5. Double Garage and storage building.

Tn 6. Livestock / storage building.

Tn 7. Storage building to right.

Tn 8. Livestock / storage building.

Tn 9. Remnant hedge and spoil.

Tn 10. Prefabricated building.

Tn 11. Storage building.

Tn 12. Rough grassland.
Tn 13. Boundary hedge to rear left. Fence to Tn 18 boundary right.

Tn 14. Mature Yew and Holly trees to boundary with Great Bromley House.

Tn 16. Rough grassland and spoil piles; Tn 7 Storage building.

Tn 17. Gardens and water body to adjoining Newhouse Farm Cottages.

Tn 18. Rough grassland and scrub to adjoining site.

Area Tn 18 continued.