



Pump and Bloors Farm, Lower Rainham, Gillingham, Kent, ME8 7TJ: Preliminary Ecological Appraisal Briefing Note

Introduction

EPR was commissioned by A C Goatham & Son Ltd on behalf of Begur Ltd to undertake a Preliminary Ecological Appraisal (PEA) of Pump and Bloors Farm at Lower Rainham in Kent (hereafter referred to as 'the Site').

Scope

The PEA was carried out to gather information on the ecological attributes of the site and identify any constraints or opportunities these may present to future development proposals; as well as inform any further targeted surveys that may be required. This Briefing Note is therefore not designed to support a planning application at this early stage as specific development proposals, other than it is a residential scheme, is not currently known. The appraisal has been prepared with regard to relevant wildlife and conservation legislation and planning policy documents, namely the:

- Conservation of Habitats and Species Regulations 2010 (as amended);
- Wildlife and Countryside Act 1981 (as amended);
- Countryside and Rights of Way (CROW) Act 2000;
- Natural Environment and Rural Communities (NERC) Act 2006;
- National Planning Policy Framework (NPPF), 2012; particularly paras. 109, 104, 117, 118 and 125;
- Government Circular 06/05: Biodiversity and Geological Conservation;
- Strategic Access, Management and Mitigation, Medway Council Interim Policy Statement, Nov 2015;
- Medway Local Plan 2003, particularly policies BNE 5 Lighting; BNE 6 Landscape Design; BNE 35 International and National Nature Conservation Sites; BN36 Strategic and Local Nature Conservation Sites; BNE 37 Wildlife Habitats

Site Context

The Site comprises two parcels that are intersected by Pumps Lane, one lies to the SE and the other to the NW of this Lane. Together they form part of a strip of open land, c. 250 m south of the River Medway estuary, situated between Rainham in the east and Gillingham to the west. The Site is bounded to the north-west by agricultural fields; to the north and north-east partly by houses and the B2004 Lower Rainham Road, beyond which is the Riverside Country Park; to the south by allotments and Lower Bloors Lane beyond which is Bloors Lane Community Woodland and to the west by a railway line and houses. Habitats in the wider environs comprise woodland pockets, hedgerows, open green space and residential housing.

The Site lies along the northern edge of the North Kent Plains National Character Area (NCA) – an area characterised by open, low and gently undulating landscape with orchards and other horticultural crops in what is a very productive agricultural area.

Methodology

A PEA comprises two elements: a desk study and field visit. The methodology employed for both is set out below.

Desk Study

Kent and Medway Biological Records Centre (KMBRC) was contacted to provide records for protected, notable, scarce, rare and invasive species and species of conservation concern within 2 km of the site boundary; a 5km search radius was used for bats, statutory and non-statutory sites.

Information provided on protected species and statutorily protected sites, which is freely available from on-line resources – Multi-agency Information for the Countryside (MaGIC) Map and National Biodiversity Network (NBN) Atlas were also interrogated for historic and contextual detail.

Field Visit

A site visit, including visiting off-site areas within the likely Zone of Influence (as far as these were publically accessible) was undertaken on 21 June 2017 by a Senior Ecologist, (Laura Gravestock MCIEEM MSc BSc (Hons)). Habitats were mapped based on the Joint Nature Conservancy Committee's (JNCC) Phase 1 Habitat Survey methodology (JNCC, 2007) with additional notes taken on the potential presence of protected or notable species.

Constraints

Desk Study

Desk study data is not exhaustive and it is therefore possible for species to be present on Site or vicinity that are not provided in the data records.

Field Visit

A site visit can only provide a snap shot in time. Indeed a PEA is only designed to take a broad brush approach to recording information. This is not a significant constraint given further, targeted surveys are recommended where considered appropriate.

Results

The following section sets out the results of the desk and field work. Only information deemed relevant to the appraisal is included.

Desk Study

Habitats

Statutory Designated Sites

Of those that occur within 5 km of the Site boundary, only one is considered relevant in this appraisal: the Medway Estuary and Marshes Special Protection Area (SPA), Ramsar site and Site

of Special Scientific Interest (SSSI), which lies c. 250 m north. It has been designated for the complex and mix of coastal and intertidal habitats that support important assemblages of winter and breeding bird populations as well as its importance for migratory birds in spring and autumn. It is also designated for the outstanding assemblage of plant species that occur.

Non-statutory Designated Sites

Of those non-statutory designated sites that occur within 5 km of the Site, only three are considered relevant for this appraisal:

- Riverside Country Park (RCP), which is split across two parcels of land (separated by houses, gardens and a field). At its closest point RCP is only c. 15 m distant, on the opposite side of the B2004 Lower Rainham Road.
- Eastcourt Meadows Country Park lies c. 400 m north-west.
- Berengrave Chalk Pit Local Nature Reserve, c. 500 m south-east.
- There is also an RSPB Reserve situated within the estuary, Nor Marsh and Motney Hill this is split across several areas forming a complex; the nearest of which is c. 800 m north-east.

No further information on the reasons for their designations have been provided by KMBRC.

Species

Of those records returned from KMBRC only the following are considered relevant to inform the appraisal.

Bats

Six bat maternity roosts within 3 km of the Site:

- c. 50m NW Common Pipistrelle *Pipistrellus pipistrellus*, max count 16 bats, dated 2014;
- c. 120m NW Common or Soprano Pipistrelle *Pipistrellus pygmaeus*, identified from droppings (so size of roost unknown);
- c. 270 m NE Common or Soprano Pipistrelle, max count 128, dated 1986;
- c. 300 m E a Long-eared *Plecotus* sp. roost (identified from droppings, so size of roost unknown);
- c. 1.9 km E Common or Soprano Pipistrelle, data suggests multiple records for this roost between 1999 and 2006, max count in 2006 of 72 bats;
- c. 1.9 km E Soprano Pipistrelle 250 bats, dated 2008; and
- c. 3 km SW Serotine peak count of 9 bats, dated 2000.

Field Visit

A summary of results from the field visit are provided in Appendix 1 Target Notes (TN) and Appendix 2 Extended Phase 1 Habitat Map.

Habitats

Orchards and Grassland

The main habitats on site are orchards with narrow grass strips between rows of apple trees and wider grass verges, which vary in width between approximately 5-10 m around the margins of the Site. These grassed areas are intensively managed, regularly mown with herbicide treatment applied along the edges; plant species present are those that are more tolerant of such

management, including Annual Meadow-grass *Poa annua*, Perennial Rye-grass *Lolium perenne*, Cock's-foot *Dactylis glomerata*, Greater Plantain *Plantago major* and White Clover *Trifolium repens*. In a few places along the margins of the site were planted lavender and thyme to provide a foraging resource for bees within the on-site hives (TN 1 and 2).

A small area of orchard in the north-east of the site (TN3) is less intensively managed with unmown grass strips and brash piles at the ends of the rows presumably for invertebrates. Nearby (TN4) is an area of less intensively managed grassland where creates are stored, but still of no significant botanical interest. Species included Yorkshire-fog *Holcus lanatus*, Creeping Bent *Agrostis stolonifera* and Creeping Buttercup *Ranunculus repens*.

Hedgerow and Trees

The boundary of the Site is formed primarily from tall (c. 2-4 m high) species-poor hedgerows, locally dominated by English Elm *Ulmus procera* and Poplar *cf. Populus balsamifera* with locally frequent Ash *Fraxinus excelsior* and elder *Sambucus nigra*. Tree lines c. 6-14 m high also form part of the boundary in places as well as within the Site to act as wind breaks/shelter belts; plant species include Grey Alder *Alnus incana* and Leyland Cypress *x Cupressocyparis leylandii*.

Hedgerows and trees also line both sides of a public footpath that runs across the eastern half of the site in a more-or-less NW-SE orientation from Pump Lane to Lower Bloors Lane (TN5). This footpath becomes more sunken to the east with c. 1m high banks. This is likely to reflect the age of this feature, which is shown as a lane on the early Ordnance Survey map of 1892.

Buildings

There are several buildings/structures on Site; two agricultural buildings in the NW parcel (TN6); two large metal structures (containing chemicals) in the SE parcel (TN7) that relate to the maintenance and management of the orchard and a further two buildings in this parcel that are currently subject to extensive restoration/refurbishment works – Bloors Oast Houses and barn (TN8).

One of the agricultural buildings is a single-storey timber building with single-skin walls and pitched roof – the bitumen felt laid directly on the timber roof boards. The other is a modern one and half storey metal barn with corrugated metal sheeting to walls and pitched roof. Surrounding the agricultural buildings are a number of mobile homes used by the farm workers. No access was possible to the buildings being renovated due to it being an active building site.

Species

Bats

The tree lines and hedgerows provide suitable foraging and commuting habitat for bats and act as links to suitable bat habitat off-site.

Birds

Habitats on Site are not suitable to support wetland and wildfowl birds associated with Medway Estuaries and Marshes. However, the trees, hedgerows and buildings provide suitable nesting habitat for other bird species more typical of garden environs. Species observed either on-Site or flying over included House Sparrow *Passer domesticus*, Robin *Erithacus rubecula*, Great Tit *Parus*

major, Blue Tit *Cyanistes caeruleus*, Blackbird *Turdus merula*, Magpie *Pica pica*, Jackdaw *Corvus monedula*, and Collared Dove *Streptopelia decaocto*.

Common Reptiles

The areas of the Site that are less intensively managed, such as the grassland, orchard and work site around Bloors Oast Houses (TN3, 4 and 8) provide limited suitability to support common reptile species such as Slow-worm *Anguis fragilis* and Grass Snake *Natrix natrix*.

Great Crested Newt

There are no on-Site ponds, but there are two ponds c. 300 m north in Riverside Country Park; these have been newly created with a sign stating 'newt conservation ponds'. Both have been assessed to provide 'excellent' suitability to support Great Crested Newt (GCN) *Triturus cristatus* using standard criteria (Habitat Suitability Index [HSI], Oldham *et. al.* 2010). There is only limited suitable terrestrial habitat on-Site for GCN and this occurs in the north-east section (as described above for common reptiles).

Badger

Several holes of a size consistent for use by Badger were found along some of the hedgerow banks around the site with push-throughs along fencing in places (TN9 -12). No direct evidence of Badger was found.

Other Species

A fox is likely to be using one of the holes, TN11 (fox hairs were found around the entrance).

Recommendations

Further Surveys

Whilst development proposals have yet to be determined there are some areas of ecological interest on site which will need to be considered in more detail both to inform the scheme design and avoid any potential breaches in wildlife and nature conservation legislation and accord with National and Local Planning Policies (as listed above on p.1). The following further surveys are therefore recommended.

Bats

The site lies within the Core Sustainance Zones (CSZ) of a number of off-site maternity roosts (records returned from KMBRC). A CSZ is the area surrounding a maternity roost within which habitat availability and quality will have a significant impact on the resilience and conservation status of the colony using that roost.

Based on the habitats on Site (hedgerows and tree lines that also provide a link to other suitable bat habitat within the wider landscape), the Site is assessed to be of moderate suitability for foraging and commuting bats. In order to determine whether the habitats on Site are used as key bat commuting routes or foraging areas, further surveys would be required and whilst it is unlikely that the buildings on Site support a significant bat roost, e.g. maternity roost, again further surveys would be required to determine this.

Surveys would follow good practice guidelines (Collins 2016) and comprise one visit per month of 2x walked transects across the site (one transect in each parcel) in appropriate weather conditions between April and September. Walked transects would be augmented by static detectors left in place for 5 consecutive nights to record bat activity in various habitats. Results from these surveys would help to inform the scheme design.

An external and internal bat building inspection should also be carried out for the on-site buildings to establish whether they have any bat roosting potential. The building inspections can be undertaken at any time of the year by an appropriately licensed ecologist.

Birds

No further surveys are recommended at this stage.

Common Reptiles

Further surveys, following good practice (Foster 1999), should be undertaken to establish whether common reptile species are present on Site. The surveys would be targeted to specific areas which had suitable habitat to support them (based on the site visit this is limited to the NE corner, near to Lower Bloors Lane). A reptile survey involves placing artificial reptile refugia (a mix of c. 0.5 x 0.5 m bitumen felt, onduline and corrugated metal sheets) in suitable habitat. The refugia would need to be left for 1-2 weeks to 'bed-in' and would then be checked in suitable weather conditions on seven separate occasions spread throughout the year (as far as possible) between April – June and Sept – Oct. The area that would be targeted for the survey, is also an area where anecdotal evidence suggests un-authorised people gather, particularly in the evening and there are many dog walkers who also use the site. The reptile refugia may therefore be tampered with but the survey should be attempted and the situation reviewed as necessary.

Great Crested Newt

At this stage we suggest that further freely available resources are reviewed as the next step to try to find out any further information on these two ponds and their reason for creation (e.g. is this a receptor site for a GCN translocation project), in order to gain contextual information and an understanding of any potential impacts. As there are no ponds on Site further Great Crested Newts surveys are unlikely to be required.

Badger Survey

Further surveys should be undertaken to identify whether Badgers are using the Site; this will involve a walkover of the Site to undertake a more detailed survey of the holes and surrounding area to search for evidence of this species, e.g. Badger hairs, footprints, latrines, snuffle holes. These surveys can be undertaken at any time of year, but are best carried out December to March when vegetation has died down. Follow-up monitoring with camera traps may be required where deemed appropriate.

Medway Estuary and Marshes SPA

Medway Council has adopted a strategic approach to manage and mitigate potential impacts to the Medway Estuary and Marshes SPA and Ramsar site in order to satisfy the requirements of the Conservation and Habitats Regulations 2010 (as amended), and the specific duties that these Regulations place on local authorities. Local Planning Authorities must not grant planning

permission for a development that is likely, either alone or in-combination with other developments, to have a likely significant effect on the SPA, unless any likely significant effects can be mitigated.

The number of birds using the SPA has seen a marked decline, and disturbance by people is a potential cause, such as dogs off the lead, cycling and running. It has been estimated that there will be a 15% increase in coastal recreation resulting from new residential developments planned in the surrounding area (within 6 km of the SPA). A strategic package of mitigation and management measures, including wardening, development of a code of conduct, management of access and on-going monitoring, have therefore been developed in partnership between the North Kent local authorities. The strategic package was costed and from this a tariff was calculated that should be applied to all new development within 6 km of the SPA. The tariff is £223.58/dwelling based on an assumed increase of 35,000 dwellings in the area – funding is collected through to a pooled budget to implement the strategic approach. Natural England has advised the Council that likely significant effects of recreational impacts on the over-wintering bird interest from new residential development can be screened out if an appropriate contribution is made to the provision of strategic access management measures across the North Kent marshes. Other types of development would be looked at by the LPA on a case-by-case basis.

It is therefore likely to be necessary to consult with the LPA as further information on the scheme becomes available.

General Principles for Layout Considerations

Whilst the following sets out general principles that should be considered for development of the scheme layout, results from further survey work should also feed into this.

Landscaping

A landscape design should use a high proportion of native species of local provenance and incorporate species that will provide a food resource (nectar, berries, fruit) for a wide variety of animals, such as birds and invertebrates throughout the year.

Lighting

A sensitive lighting strategy should be developed for the site to avoid impacts to any key ecological areas, e.g. bat commuting routes, and would be informed by the results of further bat activity surveys.

Green Infrastructure

Provision for green links that provide connectivity across the Site and to the wider environs should be incorporated into the scheme layout, so as to not only allow movement of animals across the Site but also for use and enjoyment by residents. This could also include a green loop for use (amongst other residents) by dog walkers and as far as is practically possible should be linked to off-site footpaths.

Summary

Further surveys have been recommended for:

- Bats – 2x walked transects undertaken monthly between April and September with automated bat detectors deployed for 5 consecutive nights; and internal/external bat building inspections that can be carried out at any time of the year by a licensed bat ecologist;
- Common Reptiles – seven visits spread out across the season, as far as possible, between April-June and Sept-Oct;
- GCN – review of other on-line resources to try to glean further information on the off-site ponds at Riverside Country Park to help inform any potential on-Site impacts to terrestrial habitat for GCN; and
- Badger – Badger survey comprising one site visit to further investigate the various burrows for evidence of Badger; this can be carried out at any time of year, although between December and March is optimal when vegetation has died back.

References

Collins J. 2016. Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd Ed. Bat Conservation Trust.

Foster J. 1999. Froglife Advice Sheet 10: Reptile Survey

JNCC. 2010. Handbook for Phase 1 habitat Survey - a Technique for Environmental Audit 7th Ed.

Oldham RS; Keeble J; Swan MJS; and Jeffcote M. 2010. Evaluating the Suitability of habitat for Great Crested Newt *Triturus cristatus*. Herpetological Journal 10(4), 143-155

On-line Resources

MaGIC Map <http://www.natureonthemap.naturalengland.org.uk/MagicMap.aspx>

NBN Atlas <https://nbnatlas.org/>

JNCC Thames Estuary SPA Data Sheet <http://jncc.defra.gov.uk/default.aspx?page=2043>

JNCC Queensdown SAC Data Sheet

<http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?euocode=UK0012833>

JNCC Thames Estuary Marshes Ramsar Data Sheet <http://jncc.defra.gov.uk/pdf/RIS/UK11040.pdf>




NE Medway Estuary & Marshes SSSI Data Sheet




<https://necmsi.esdm.co.uk/PDFsForWeb/Citation/1000244.pdf>



NE Impact Zones for SSSIs User Guidance, 27 April 2017

http://www.natureonthemap.naturalengland.org.uk/Metadata_for_magic/SSSI%20IRZ%20User%20Guidance%20MAGIC.pdf

Appendix 1 Target Notes

Target Note (TN) Reference	Photo	Notes
1 & 2		Bee hives
3		Small area with less intensively managed orchard (tall grass between rows and brush piles at end of rows). Limited suitable habitat for common reptile species
4		Areas where crates are stored. Limited suitable habitat for common reptile species

5		<p>Footpath, eastern end where track is more sunken and banks c. 1 m high</p>
6		<p>Agricultural buildings. One single-storey timber building with pitched roof. Walls single-skin and the bitumen roofing felt is laid directly on to timber boarding. The other (background) is a large modern metal barn with corrugated metal sheeting to walls and pitch roof. No internal access.</p>
7		<p>Large metal storage containers – no bat roost potential</p>








8		<p>Bloors Oast Houses and Barn; habitat around these buildings (out of picture) provide limited suitable habitat for common reptile species</p>
9-12		<p>Burrow, with excavations</p>

Appendix 2: Extended Phase 1 Habitat Map



MAP 1 Extended Phase 1 Habitat Survey

KEY

-  Site boundary
-  Orchard
-  Treeline / species poor hedge
-  Footpath
-  Fence
-  Wall
-  Target note (& reference)

SCALE: 1:5,000 at A3

0 100 200 300 Metres



Ecological Planning & Research

CLIENT: Phase 2 Planning & Development

PROJECT: Pump Farm

DATE: July 2017

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