



**Ecological Appraisal
Land off Wellthorne Lane,
Ingbirchworth**

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Report Title:	Ecological Appraisal Land off Wellthorne Lane, Ingbirchworth
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Summary Statement

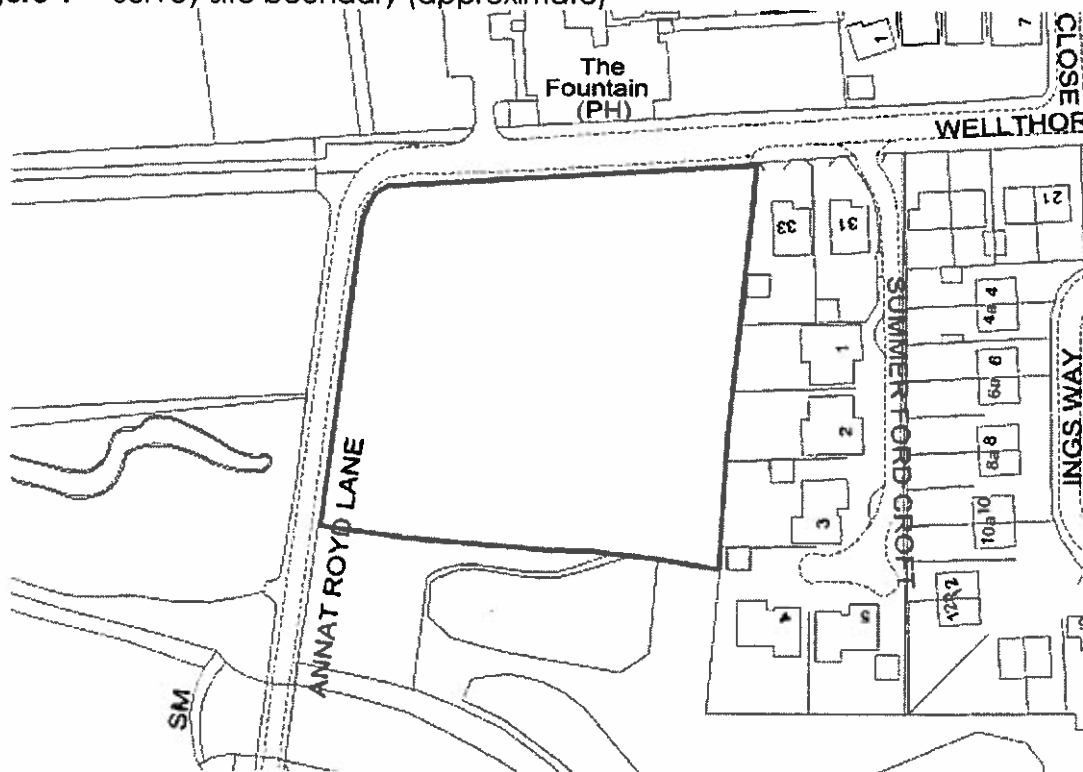
The site has very low wildlife value and the proposals present little risk of affecting notable, or protected, wildlife or sites. Further survey effort is not required in support of this conclusion.

General precautions and recommendations for the site's ecological enhancement are made in this report.

Introduction

1. Brooks Ecological Ltd was commissioned by Keyland Developments Ltd to carry out an ecological appraisal of land off Wellthorne Lane, Ingbirchworth, South Yorkshire (SE 217 061).
2. The application site comprises a small pasture/silage field found within the small rural village of Ingbirchworth, set within an agricultural landscape principally of arable use. Significant features of likely wildlife value in the wider area include Ingbirchworth reservoir less than 50m from the site's south west corner.

Figure 1 Survey site boundary (approximate)



Site Proposals and Impacts assessment

3. Our assessment of impacts is based on the proposals to develop the site with 14 residential units. Impacts considered include:
 - Site preparation including vegetation and habitat removal
 - Direct effects on significant faunal groups or protected species
 - Effects on adjacent habitats or species such as disturbance and pollution
 - Operation effects on wildlife such as noise and light disturbance

Phase 1 Habitat Survey

Survey Method

4. The survey was carried out on the 24th of June 2013 and followed Phase 1 habitat survey methodology (JNCC, 1993). This involves walking the site, mapping and describing different habitats (for example: woodland, grassland, scrub). Evidence of fauna and faunal habitat was also recorded (for example droppings, tracks or specialist habitat such as ponds for breeding amphibians). This modified approach to the Phase 1 survey is in accordance with the approach recommended by the Guidelines for Baseline Ecological Assessment (IEA, 1995).

Results

5. The following habitats, arranged in order of area can be described within the application site and on its boundaries:
 - Improved neutral grassland.

Improved neutral grassland

6. The site comprises of a single field of improved neutral grassland which is almost entirely dominated by perennial rye grass (*Lolium perenne*) and appears to be used for a mix of silage cropping and grazing pasture. Very occasional examples of timothy (*Phleum pratense*), red clover (*Trifolium pratense*) and buttercup (*Ranunculus* sp.) are also noted within the main sward.
7. Around the margins of the field, where management has had less of an influence, the grasses Yorkshire fog (*Holcus lanatus*) and cocks foot (*Dactylis glomerata*) as well as spear thistle (*Cirsium vulgare*), broad leaved dock (*Rumex obtusifolius*), cow parsley (*Anthriscus sylvestris*) and nettle (*Urtica dioica*) are also seen.

Figure 2



View of main sward looking south.



Figure 3

Margins of improved grassland.

Fauna

Bats

8. With no buildings or mature trees there is no potential for the site to support roosting bats. The site also represents poor bat foraging habitat.

Amphibians

9. The application site does not support habitat suitable for breeding amphibians and the value of the terrestrial habitat to this group is limited. Two water bodies are found within 500m of the application site, neither of which has records relating to GCN. The closest water body, the reservoir has concrete lined sections of bank and/or very little marginal or emergent vegetation reducing its suitability for use by great-crested newt, while the small field pond to the northwest is isolated and cut off from the application site by an expanse of arable land and the road. The lack of amphibian habitat within the site boundary and lack of records within the immediate surrounding area make it reasonable to conclude that great crested newt would not be present on site.

Birds

10. With no boundary hedgerows and a uniform sward dominated by grass, the chance for birds to nest within the site is limited. In its current condition the site could potentially support low numbers of common ground nesting species such as meadow pipit, skylark and grey partridge, but overall the site is unlikely to support any notable assemblages and will not be of conservation significance for birds.

Protected mammals

11. No evidence of badgers could be found on the site.
12. While otters and water vole have both been recorded in the reservoir and over spill waterway to the south of the site the likely hood of either using the habitat within the site is remote.
13. In the case of both species superior terrestrial habitat is located out with the application site and the section of the watercourse immediately south of the site is concrete lined meaning these species would only use this section for transit. Their presence can reasonably be ruled out from within the application site.

Reptiles

14. With an even sward and no water sources, habitat on site which is sub-optimal, with far superior habitat found surrounding the site it is unlikely that any reptiles would have any dependency on, or colonise habitat within the application site.
15. The likely absence of this group can be assumed without the need for further survey.

Invasive species

16. No species listed on Schedule 9 of the Wildlife and Countryside Act (1981) were found during the survey.

Desk Study

17. Desk studies look for records of protected or listed wildlife sites and protected or locally important species that could be impacted by development. They can also identify local conservation priorities and when assessed against the baseline established through field survey build a more complete picture of the site's existing and potential ecological value.

Designated Sites

18. A search of the MAGIC website was undertaken. The MAGIC site is a Geographical Information System that contains all statutory (e.g. Sites of Scientific Interest [SSSI's]) as well as many non-statutorily listed habitats (e.g. Ancient woodlands and grassland inventory sites). It is a valuable tool when considering the relationship of a potential development site with nearby important habitats.



19. There are no nationally or locally designated statutory sites within 2km of the application site.
20. Not all locally listed (non-statutory) sites are available on MAGIC. Those not found are normally held at local Biological Record Centres. A request for locally listed sites has been made to the record holder, which in this case is Barnsley Biological Records Centre and West Yorkshire Ecology as the site sits on the district boundary.
21. A total of seven lower tier sites are listed by local records centres. This includes six Local Wildlife Sites (LWS) listed by the Barnsley Biological records Centre and one Site of Scientific Importance Listed by West Yorkshire Ecology.
22. The LWS's include Broadstone reservoir, Ingbirchworth reservoir, Royd Moor reservoir, Scout Dike Reservoir, Gunthwaite Dam and Clough and Daking Brook. The West Yorkshire SSI is Denby Delf, listed as a fine example of acid grassland and heathland mosaic. The closest of these sites is Ingbirchworth reservoir, just over 30m from the application site boundary at its closest point.
23. Despite the proximity of Ingbirchworth Reservoir it is highly unlikely that development of the site will have any impacts on its qualifying interests. All other sites are sufficiently distant to feel no effect from development of the application site.

Natural England Natural Area

24. The site falls within Natural Area 24 *Coal Measures*
25. Based on shale and sandstone deposits natural area 24 is characterized by dense population centres such as Sheffield, Leeds and Wakefield. The area's ecology reflects the changing geology which underlies it and is typified by mixed agriculture, acidic / ancient woodlands, valley wetlands and acidic / neutral grasslands.
26. There are no nationally important conservation priorities. Local Conservation priorities for the area are;
 - Acid Grassland
 - Fen, Marsh and Swamp
 - Lowland Heathland
 - Neutral Grassland
 - Rivers and Streams
 - Standing open water and canals
 - Wet woodland

Local Biodiversity Action Plan

27. Consideration is given to the Local Biodiversity Action Plan (LBAP), which for this site is the 'Barnsley Biodiversity Action Plan'.
28. Table 1 lists the local Species Action Plans and, with reference to the field study presented later in this report, assesses a) whether the species potentially have any degree of dependence on the site, and b) if so whether development would be likely to have a significant bearing on the objectives of the UK/LBAP.

Table 1 Species Action Plans

Species/group	Potentially on site	Would development impact significantly on BAP objectives
Hedgehog	No	N/A
Barn owl	No	N/A
Skylark	Yes	No
Tree sparrow	No	N/A
Twite	No	N/A
Great crested newt	No	N/A
Salmon	No	N/A
Bullhead	No	N/A
White-clawed crayfish	No	N/A
Glow worm	No	N/A
Dingy skipper	No	N/A
Bats	No	N/A
Bluebell	No	N/A
Water vole	No	N/A
Otter	No	N/A
Grey partridge	Yes	No
Bittern	No	N/A
Kestrel	No	N/A
Little ringed plover	No	N/A
Lapwing	No	N/A

29. Table 2 lists local Habitat Action Plans and assesses a) whether habitats on site could represent valuable examples of the habitat type within the spirit of the BAP and b) whether loss of the habitat would have a significant bearing on the objectives of the BAP.

Table 2 Habitat Action Plans

Habitat	Valuable examples present on site?	Would development impact significantly on BAP objectives
Upland oakwood	No	N/A
Lowland heathland	No	N/A



Habitat	Valuable examples present on site?	Would development impact significantly on BAP objectives
Upland heathland	No	N/A
Blanket bog	No	N/A
Purple moor grass and rush pasture	No	N/A
Reedbeds	No	N/A
Ponds	No	N/A
Rivers	No	N/A
Open mosaic habitats	No	N/A
Lowland mixed deciduous woodland	No	N/A
Wet woodland	No	N/A
Wood pasture and parkland	No	N/A
Hedgerows	No	N/A
Arable field margins	No	N/A
Floodplain grazing marsh	No	N/A
Lowland meadows	No	N/A
Lowland dry acidic grassland	No	N/A

Aerial Photography and Detailed Map Study

30. Aerial photographs published on commonly used websites were studied to place the site in its wider context and to look for ecological features that would not be evident on the ground during the walkover survey. This approach can be very useful in determining if a site is potentially a key part of a wider wildlife corridor or an important node of habitat in an otherwise ecologically poor landscape. It can also identify potentially important faunal habitat (in particular ponds) which could have a bearing on the ecology of the application site. Ponds may sometimes not be apparent on aerial photographs so we also refer to close detailed maps that identify all ponds issues and drains. We use Promap Street + scale maps for this purpose.
31. The site lies on the western edge of the small rural village of Ingbirchworth. The site is bordered on three sides (north, east and west) by a dry stone wall, whilst to the south, the field in which the application site is found continues with further improved grassland and a small area of woodland.
32. The surrounding landscape is dominated by agricultural land with fields defined with dry stone walls. Occasional woodlands break up the agricultural landscape, aside from the small copse south of the application site and some trees associated with the reservoirs edge the closest woodland is c.1km north east.
33. Approximately 30m to the southwest is Ingbirchworth Reservoir, a second, a small field pond, is also found within 500m of the application site, 280m northwest. Three

further ponds are found more than 580m south east. The reservoir spillway runs c.35m south of the site, this soon turns into Ingbirchworth Dike which flows east forming something of a wildlife corridor in an otherwise unconnected landscape.

Records

34. West Yorkshire Joint Services and Barnsley biological records centre have been asked to provide information on protected or notable species and locally designated sites within 2 km of the application site. The records include the following which are of relevance to this assessment:
- Great crested newt has been recorded in the wider area on three occasions c.1.48km away to the south in and around Royd Moor Reservoir.
 - White clawed Crayfish were recorded 1.29km east of site near Gunthwaite.
 - Water vole has been recorded within 2km of site several times. One record refers to the feeder stream for Ingbirchworth reservoir c.746m west from site. The other records refer to two sightings 800m west and one further away at 1.45km south from the site.
 - There are a number of otter records for the area, several of these close to site. The closest record refers to a dead individual on the nearby road. Other records show otters present at 500m east of site, 641m east of site and 700m south east of site respectively.
 - Badgers have been recorded several times within 2km from the survey site although not on the site itself. The closest record is 1.3km to the north east.
 - Various bird species listed under Schedule 1 of the Wildlife and Countryside Act (1981) were recorded within a 2km radius; snow bunting, kingfisher, whooper swan, fieldfare, brambling, redstart and twite. The majority of these were recorded close to Ingbirchworth reservoir but with a non specific grid reference. None were recorded on site.
 - Several bat records are available for the area, with Natterers, Daubenton's and pipistrelle bats all recorded. Natterer's bats were recorded roosting at Gunthwaite farm, 2km east of site. Pipistrelle bats were recorded twice, also near Gunthwaite farm. A single record exists for a Daubenton's bat, with a non specific grid reference near to Ingbirchworth treatment works and reservoir.



Evaluation and Recommendations

35. The site represents land of very low ecological value, as a result of its poverty of habitat types due to its agricultural improvement. There appears to be little risk that development would impact upon any specially protected species or habitats and no further surveys are thought necessary to demonstrate this.

General precautions

Nesting birds

- While the site does not present optimal habitat for nesting birds, as a precaution, to prevent an offence being committed, site clearance should be undertaken outside of the breeding bird season which is 1st March – 31st August inclusive. Any clearance that is required during the breeding bird season should be preceded by a nesting bird survey to ensure that the Wildlife and Countryside Act (1981) is not contravened through the destruction of nests and that any active nests are identified and adequately protected during the construction phase of the development.

Enhancement

36. In line with planning guidance now outlined in the National Planning Policy Framework (NPPF) development should take account of the value of ecosystem services and enhance ecological networks.
- With a complete lack of hedgerows around the site, connectivity is currently limited. Where possible boundary and interconnecting hedgerows should be planted utilising locally relevant native species such as blackthorn (*Prunus spinosa*), holly (*Ilex aquifolium*), hazel (*Corylus avellana*), hawthorn (*Crataegus monogyna*) and oak (*Quercus* sp). The value of any planted hedgerow could be markedly increased through the planting of a nectar rich ground flora and hedgerow standard trees.
 - Hedgehogs are a native mammal species which is in decline and listed on the local biodiversity action plan. The provision of a number of hedgehog boxes provides valuable refuges within modern developments. Should fences be erected through the site a small gap (c.15cm diameter) should be left at the base of each fence line to allow hedgehogs free movement providing a wider foraging area.
 - With great crested newt recorded in the wider area creation of a network of ponds through any open green space to be left in the site could potentially provide further breeding habitat for this species. Ponds would ideally be at least 100m in area and shallow enough to occasionally dry limiting the suitability of the

ponds for fish. The presence of a number of small ponds can greatly enhance the sites wildlife value even if they are not taken up by great crested newt.

References

IEA. (1995). *Guidelines for Baseline Ecological Assessment*. Chapman and Hall

Nature Conservation Committee (1990). *Handbook for Phase 1 Habitat Survey: A technique for environmental audit*. NCC