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Preliminary Ecological Appraisal Ferrand Lane Gomersal West Yorkshire

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Version History

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I.0 INTRODUCTION

Smeeden Foreman Limited has been commissioned by KCS Developments Limited to undertake a preliminary ecological appraisal of their site at Ferrand Lane, Gomersal, West Yorkshire (central grid reference SE 20316 26343), hereafter referred to as the 'site'.

This report will include the following information gathered by a desk study and phase 1 habitat survey:

- Proximity to statutory and non-statutory designated sites;
- Proximity to existing records of protected species; and,
- Site habitat appraisal and potential to support protected species.

A review of the above information will be made to identify any features or sites of ecological interest which may be affected by the development proposals. Where potential impacts or protected species are identified the need for mitigation measures and requirements for further surveys will be discussed.

The report has been commissioned to inform a planning application for development of the site to housing (100 units).

2.0 SITE DESCRIPTION

The site is located on the outskirts of the village of Gomersal approximately 6.7km south of Bradford centre. It occupies an area of approximately 3.7 hectares and comprises improved pasture, hedgerows, trees, shrubs, nine buildings/structures and a pond, refer to *Figure 01* below.



Figure 01: Aerial view / site location (red line denotes construction zone, blue line defines survey area).

The site is bound to the north by a fence and Ferrand Lane, beyond which lie fields of agricultural farmland; to the east by a fence and a hedgerow, beyond which lie a built up residential area; to the south by a fence and a hedgerow, beyond which lie a built up residential area; and, to the west by a fence and a hedgerow, beyond which lie residential homes and gardens and fields of agricultural farmland.



3.0 **BASELINE INFORMATION**

3.1. Methodology

The ecological interest of the site and its surroundings has been investigated by a combination of the following.

- Desk study of existing sources of information including: .
 - The UK Biodiversity Action Plan (UKBAP);
 - The Kirklees Biodiversity Action Plan (KLBAP);
 - Magic map, a government website for nature conservation information; and,
 - Aerial photographs.
- Existing protected species records and statutory / non-statutory designated sites information . within local area (within 2km) of the development site has been requested and received from the West Yorkshire Joint Services (WYJS).
- Field survey of the site and immediate surroundings which was undertaken on 10/03/2016.

3.2. **Nature Conservation Designated Sites**

3.2.1. Statutory Designations

There are no statutorily designated sites within the site but one is present within the local area (\sim 2km).

Oakwell Park Local Nature Reserve (LNR) is located approximately 700m north-east, on the opposite side of a built up residential area and two 'A' roads, and comprises ancient woodland, species rich grassland and open water habitat..

The site is not within an Impact Risk Zone (IRZ) of any Site Special Scientific Interest (SSSI).

3.2.2. Non-Statutory Designations

Consultation with WYJS provided information on no non-statutory sites within the site but 3 are present within the local area, as follows:-

Hunsworth Little Wood Local Wildlife Site (LWS) is located approximately 1.6km north-west, on the opposite side of a busy main road (A58) and a built up residential and commercial area, and comprises ancient woodland habitat; Hanging Wood Kirklees Site of Wildlife Significance (KSWS) is located approximately 2km noth-west of the site on the opposite side of the M62, and is designated for its woodland habitat; and, Oakwell Park (see above) is also a LWS. A map showing the locations of these sites was provided by WYJS, refer to Figure 02 appended.

3.3. **Existing Records**

3.3.1. Protected species

Table 01 below provides a summary of records held by WYJS and WYBG for protected species within the local area.

Common Name	Scientific Name	Distance (m)*	No. of Records	Wildlife Barrier**
badger	Meles meles	1675	8	moderate (local roads, existing housing)
bats***	Chiroptera	25	69	none
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Table 01: Protected species records within the local area

fieldfare	Turdus pilaris	1490	2	none
kingfisher	Alcedo atthis	1050		none
otter	Lutra lutra	1200		none
redwing	Turdus iliacus	1490	2	none
*** species present i	etween the application site and nclude common pipistrelle (Pip Pipistrellus pygmaeus), Leisler's	oistrellus pipistrellus),		

3.3.2. Notable species

daubentoni)

WYJS holds records for the following notable (UKBAP and KLBAP) species within the local area:

- common toad (Bufo bufo);
- hedgehog (Erinaceus europaeus);
- brown hare (*Lepus europaeus*);
- reed bunting (Emberiza schoeniclus);
- dunnock (Prunella modularis);
- bullfinch Pyrrhula pyrrhula;
- yellowhammer (*Emberiza citrinella*);
- skylark (Alauda arvensis);
- spotted flycatcher (Muscicapa striata);
- willow tit (Parus montanus);

- house sparrow (Passer domesticus);
- tree sparrow (Passer montanus);
- grey partridge (Perdix perdix);
- starling (Sturnus vulgaris);
- song thrush (Turdus philomelos).
- weasel Mustela nivalis (KLBAP);
- spindle Euonymus europaeus (KLBAP);
- bluebell Hyacinthoides non-scripta (KLBAP);
- goldfinch Carduelis carduelis (KLBAP).

3.4. Site Survey

A phase I habitat survey was undertaken on the 10/03/2016. Habitat types and key species were noted and are presented in the Phase I Habitat format based on the Joint Nature Conservation Committee methodology, 2010 (see *Figure 03*: Phase I Habitat Survey appended).

The survey at the site found it to be composed of improved pasture, hedgerows, trees, shrubs, nine buildings/structures and a pond, refer to Figure 03 appended and Section 3.4.8 for photographs.

3.4.1. Improved Pasture

Fields of improved grassland being managed as pasture occupy the majority (~96%) of the site and are characterised by common grassland species, typical of agriculturally improved grassland, refer to Table 02 below.

Common name	Scientific Name	Abundance
Yorkshire-fog	Holcus lanatus	A *
perennial rye-grass	Lolium perenne	A*
cock's-foot	Dactylis glomerata	F*
creeping buttercup	Ranunculus repens	F*
white clover	Trifolium repens	F*
bramble	Rubus fruticosus	LA
common nettle	Urtica dioica	LF
creeping thistle	Cirsium arvense	LF
spear thistle	Cirsium vulgare	LF
crested dog's-tail	Cynosurus cristatus	LF



broadleaved dock	Rumex obstrusifolius	LF
rosebay willowherb	Chamerion angustifolium	LF
broadleaved plantain	Plantago major	LF
dandilion	Taraxacum agg.	0
moss		VLF

¹ The DAFOR scale: surveyor assigns one of the following categories to the abundance of the species; D=Dominant, A=Abundant, F=Frequent, O=Occasional and R=Rare. The prefix 'L' is used where species are local (ie. distributed in a patchy manner) - for example, LF (locally frequent), and 'V' for 'very' - for example when species are frequent but only in very small patches, i.e. VLF (very locally frequent). The suffix '*' is used to identify species that are 'constant', i.e. occur constantly accross the habitat.

This grassland is characteristic of the MG7: Perennial rye-grass leys and related grasslands community of the NVC, which is typical of species-poor managed grasslands found in agricultural areas throughout the British lowlands.

All fields at the site comprised the same improved grassland habitat, except for the following localised differences: field F3 had locally abundant patches of broadleaved dock and crested dog's-tail, and dense linear patches of tress, shrubs and scrub, comprising oak (VO), holly (LD), hawthorn (LA), elder (LF) and bramble (LD).

In general the fields appeared to receive similar levels of grazing, except for field F5 which is being used as a paddock and was heavily grazed by horse.

3.4.2. Hedgerows

There are seven hedgerows present at the site.

Hedgerows at the site comprise a mix of ornamental and native hedgerows. The native hedgerows generally have low species diversity, typically comprising blackthorn (*Prunus spinosa*), ash (*Fraxinus excelsior*) and elder (*Sambucus nigra*); except for hedgerow H3 which contains seven native woody species.

It is considered that: hedgerow H3 mayqualify as '*Important*' under the Hedgerows Regulations 1997 with regards to ecology; hedgerows H2 and H3 meet the criteria to be considered UKBAP priority habitat; hedgerow H3 is of local value in terms of wildlife connectivity; and, all are of local value to wildlife for sheltering and foraging opportunities.

3.4.3. Trees and shrubs

Trees and shrubs present at the site are mostly associated with the field boundaries, except in field F3 where they form some scattered linear patches. Species present at the site include ash, beech (*Fagus sylvatica*), blackthorn, elder, hazel (*Corylus avellana*), holly (*llex aquifolium*), horse chestnut (*Aesculus hippocastanum*), oak (*Quercus sp.*), sycamore (*Acer pseudoplatanus*) and fir.

Two lines of trees form part of the boundaries of fields FI and F3. Tree Line I (TLI) contains young to semi-mature trees, is approximately 80m long and comprises the following species, ash, elder, hawthorn, hazel, blackthorn and oak. TL2 contains young to semi-mature trees, is approximately 95m long and comprises the following species, blackthorn, hazel, oak and sycamore.

The trees at and adjacent to site were surveyed during the walkover survey in order to identify if they had potential to house roosting bats. All aspects of the trees were surveyed using close focusing binoculars and high powered torch light. The surveyor looked for features which are commonly used by bats for roosting or shelter, such as natural holes, woodpecker holes, cracks and splits, cavities, epicormic growth and bat boxes; and, for signs of bats utilising a tree for roosting purposes such as scratches on the bark at entry points, staining, droppings, audible noise, distinctive smells and the smoothing of surfaces near to cavities.

The trees potential to support roosting bats was categorised to relate to the value of identified features. These categories are based on those described in Table 4.1 from the Bat Conservation Trust (BCT) Bat Surveys for Professional Ecologists: Good Practice Guidelines 3rd edition (2016), and are summarised in the Table 03 below.

Table 03: Categories for describin	ng bat potential of buildings and trees
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Suitability	Description of roosting features
Negligible	Negligible habitat features suitable for use by roosting bats
Low	One or more sub-optimal features which could be used by a low number of roosting bats
Moderate	One or more good quality features which could be used by a low number of roosting bats
High	One or more good quality features which are suitable for a larger number of roosting bats

During the walkover survey five trees (TI to T5) were considered to have bat potential, refer to Figure 03 appended for locations, and Table 04 below for details.

Ref.	S pecies	S uitability ¹	Notes		
ΤI	sycamore	Moderate	multiple suitable features for low-mod no. of bats		
T2	sycamore	Moderate	Moderate one feature of limited suitability for low-high no. of bats		
Т3	ash	h Moderate multiple suitable features for low-mod no. of bats			
T4	ash	Moderate	single good quality feature for low-mod no. of bats		
Т5	T5 horse Low single feature with limited potential but size and age ²				
¹ The trees potential to support roosting bats was categorised to relate to the value of identified features. These categories are provided by the Bat Conservation Trust (BCT) and are summarised in the <i>Table 03</i> above.					
2 Size and age where it was considered that there may be suitable features not visible from the ground.					

Table 04: Trees with bat potential

3.4.4. Buildings

There are nine buildings/structures present within the site (BI to B9), refer to Figure 03 appended for locations. An initial assessment of the buildings for evidence of, or potential to support, roosting bats or breeding birds was carried out during the walkover survey, refer to Table 05 below for details.

Building	Bat potential*	Breeding birds**	Comments: bats/breeding birds		
BI	Negligible	No	Single skin, well sealed, wooden cabin with a flat roof		
B2	Negligible	No	Dilapidated caravan, no suitable features found		
B3	Negligible	No	Single skin, well sealed, cabin with a flat roof		
B4	Negligible	Yes	Wooden chicken coop with corrugated single skin roof		
B5-B7	Negligible	Yes	3 small wooden garden sheds		
B8	Negligible	Yes	3 sided structure, with concrete walls and corrugated roof		
В9	Moderate to High	Yes	Residential detached house, composed of stone block walls and ceramic tile apex roof. Walls and roof well sealed and in good condition. Potential access points identified along the roofline and around soffit boxes.		
* The buildings potential to support roosting bats was categorised to relate to the value of identified features. These					

 Table 05: Assessment of buildings for roosting bats and breeding birds

The buildings potential to support roosting bats was categorised to relate to the value of identified features. These categories are provided by the Bat Conservation Trust (BCT) and are summarised in the *Table 03* above.
 ** Evidence of breeding birds found or building considered to provide opportunities for breeding birds (Yes/No); breeding birds may be present during the breeding season (March to October inclusive).

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3.4.5. Pond

There is one pond present within the south-west corner of the site. The pond is approximately $50m^2$ in size and up to 0.2m deep. The pond is adjacent to the chicken/foul coop and consequently is frequented by chickens, turkeys and geese. As a result the water within the pond is turbid and its banks support no aquatic or emergent vegetation. There was some aquatic/emergent vegetation present in the centre of the pond but it wasn't possible to confirm the species at the time of the survey.

This pond was assessed as being of 'poor' suitability to support breeding great crested newt (GCN), refer to Section 3.4.6 below and Appendix 01 for more details.

3.4.6. Fauna

Carrion crow (*Corvus corone*), great tit (*Parus major*), wood pigeon (*Columba palumbus*), moorhen (*Gallinula chloropus*) and black-headed gull (*Chroicocephalus ridibundus*) were observed during the survey.

A thorough search for badger was carried out within and adjacent to the site, looking for evidence of badger such as digging, scratching, pathways, latrines, setts, hairs and prints. No evidence of badger was detected.

With regards to Great Crested Newt (GCN) and other amphibians: there is one pond (P1) within the site; and, four (P2-P5) were identified within an unobstructed 500 metres from it. A Habitat Suitability Index (HSI) assessment for breeding GCN was carried out on ponds P1-P4 during the walkover survey, but not P5 due to lack of access. Due to a combination of poor water quality and small size, ponds P1 and P2 were assessed as being of 'poor' suitability to support breeding GCN. Due to high shading, poor water quality and lack of macrophytes, pond P4 was assessed as being of 'below average' suitability. Pond P3 was assessed as being of 'good' suitability, refer to Appendix 01 for more details.

There is a ditch (D1) that runs parallel to hedgerow H3. It is overgrown/choked with terrestrial vegetation, contained <5cm of water during the survey, and supports no aquatic or emergent vegetation, and terminates before reaching Throstles Nest Farm, which is located adjacent to the north-eastern corner of the site. Due to the lack of connectivity to the wider area, aquatic or emergent vegetation and water depth, it is considered that this ditch dose not provide suitable habitat for otter (*Lutra lutra*), water vole (*Arvicola amphibius*) or white-clawed crayfish (*Austropotamobius pallipes*).

Concerning potential refuges for fauna such as reptiles and amphibians, there is a pile of wooden debris within field F5 (TNI) and scattered debris associated with, and surrounding, the dilapidated caravan (B2) in field F1. Also of note, there is a compost heap adjacent to building B5 and hedgerow H3 (TN2), this would provide suitable egg laying habitat for species such as grass snake, if present (*Natrix natrix*).

3.4.7. Survey Limitations

Phase I Habitat surveys can be conducted at any time of year, although it is recognised that plant identification is more difficult during the winter months when plant species have senesced. However due to the limited habitats present at the site and the surveyors experience, it is considered that the survey undertaken was adaquate in terms of providing the ecological assessment of the site.

Due to lack of access to building B9, this building could not be internally assessed for bats or breeding birds. However, the external assessment was still able to determine if there were any suitable access points for bats or birds.

3.4.8. Photographs



Improved pasture



Hedgerow HI and pile of debris (TNI)



Hedgerow H3



Hedgerow H5



Horse paddock (heavily grazed)



Hedgerow H2



Hedgerow H4



Hedgerow H6



Hedgerow H7



Tree line TLI



Tree line TL2



Building B2



Sheds (B5, B6 and B7)



Building B1



Buildings B3 and B4



Building B8







Building B9



Ditch adjacent to hedgerow H3 (DI)

Pond within the site (PI)



Compost heap (TN2)

3.5. **Biodiversity Action Plan**

3.5.1. National Biodiversity Action Plan

The UK Biodiversity Action Plan (UK BAP) identifies priority species and habitats which are those considered to be the most threatened and therefore most in need of conservation action. The lists were updated in 2007 to include 1150 species and 65 habitats.

Hedgerows H2 and H3 meet the criteria to be considered UKBAP priority habitat. No other UKBAP priority habitats or species were detected during the survey, but the bramble scrub, hedgerows and trees at the site, and houses adjacent to it, are considered suitable for UKBAP priority species, such as tree sparrow (Passer montanus), linnet (Carduelis cannabina) and house sparrow (Passer domesticus).

Local Biodiversity Action Plan 3.5.2.

The UKBAP contains all species and habitats present within the Kirklees Biodiversity Action Plan (KLBAP) except for northern wood ant (Formica lugubris). These species are associated with tracts of conifer woodland and as such it is considered reasonable to discount presence of this species at the site.

4.0 IMPLICATIONS / RECOMMENDATIONS

4.1. Nature Conservation Designated Sites

There are no statutory or non-statutory designated sites within the site but one statutory (Oakwell Park LNR) and three non-statutory (Hunsworth Little Wood LWS, Hanging Wood KSWS and Oakwell Park LWS) are present within two kilometres of it. The site is within no Impact Risk Zone (IRZ) of any site of Special Scientific Interest (SSSI).

Due to distance, intervening land uses and lack of complimentary habitats, it is considered that there will be no significant adverse effect on any of these sites.

4.2. Habitats

The site comprises improved pasture, hedgerows, trees, shrubs, nine buildings/structures and a pond.

Generally the site is classified as having a low conservation value. None of the habitats within the site are of significant interest in terms of the plant species composition. The plant communities at the site are of widespread occurrence and are characteristic of the habitats present in the wider area and common nationally. No rare or locally uncommon plant species or invasive species as listed under the Wildlife and Countryside Act 1981 (as amended) were detected at the site.

The hedgerows, trees and buildings at the site are of local value to breeding birds and provide shelter and foraging opportunities for wildlife in general. It is considered that: hedgerow H3 may qualify as '*Important*' under the Hedgerows Regulations 1997 with regards to ecology; hedgerows H2 and H3 meet the criteria to be considered UKBAP priority habitat; hedgerow H3 is of local value in terms of wildlife connectivity; and, all are of local value to wildlife for sheltering and foraging opportunities.

It is understood that the pond within the site (P1) will be removed as part of the development proposals. It is considered that this will not result in a significant adverse impact on local biodiversity, as the pond within the site is of limited wildlife value to due to frequent disturbance from livestock and lack of aquatic, emergent and bankside vegetation.

In order to protect habitats of ecological value present within the site and ensure that the proposed development provides enhancement to wildlife, in accordance with the stated aims of the National Planning Policy Framework (NPPF), the following is recommended:

- The retention of the hedgerows and trees at the site where feasible, or replacement planting using native species;
- Use of temporary protective demarcation fencing to protect retained areas/features including those immediately adjacent to the site. The fencing must be in accordance with BS5837:2012 'Trees in Relation to Design, Demolition and Construction', extend outside the canopy of the retained trees, and remain in position until construction is complete;
- Implementation of a lighting scheme during construction and within proposals that minimises illumination of the northern and eastern site boundaries and hedgerows, shrubs and trees within the site;
- Native tree, hedgerow and shrub planting should be undertaken where feasible; and,
- Consideration of seeding of areas associated with hedgerows/tree planting or public open space with a suitable wildflower mix.

4.3. Protected Species

Survey of the site and review of existing ecological records has highlighted the potential for the following protected species within the search area or on site, upon which the potential affects of the proposed development are discussed below (see **Appendix 02** for relevant legislation).

4.3.1. Badger

There are local records for badger but no evidence of badger such as setts, digging, scratching, latrines, pathways, tracks or hairs were detected at the site or within 30m from it (where assessable). Habitat at the site is suitable but not favourable for foraging and sheltering badger. There is a large tract of woodland habitat associated with a disused railway line approximately 200m north-west of the site which is likely to provide favourable habitat for badger.

Presence of badger at the site is considered unlikely but cannot be completely discounted due to the presence of suitable habitat in the vicinity of the site. Therefore it is recommended that during the construction phase of the development the following precautionary measures are taken to prevent accidental harm or injury to any badger should one come onto site, capping any open pipe ends and covering open trenches or providing a means of access via sloping ends or planking.

4.3.2. Bats

There are local records for bats and their roosts, five trees (TI-T5) and one building (B9) at the site are considered to have bat potential, and the hedgerows and associated trees at the site provide suitable habitat for foraging and commuting bats.

Building B9 is considered to have **moderate to high** bat potential. As a result further assessment of this building is recommended to ascertain the presence/absence of roosting bats and the requirement for mitigation/licensing prior to any demolition works commencing. It is recommended that a loft inspection is carried out; and, up to three¹ emergence/re-entry surveys (high potential) are undertaken at dusk/dawn within the appropriate survey season (May – September). These surveys would aim to detect any bats emerging/re-entering the building, determine the species using the building and the type of roost present.

Four trees were assessed as having **moderate** bat potential and one tree as having **low** potential. This does not preclude the development, but if any works are proposed on these trees such as pruning, crown-lifting and felling, the trees must first be subject to further assessment for bats. Further assessment of these trees for bats would consist of either a climb and inspect survey looking for signs of bat use prior to works (no timing restrictions are applicable to this type of survey), or where a climb and inspect survey is not possible due to health and safety reasons, or cavity too large for thorough inspection, a bat emergence/re-entry survey carried out at the tree during the appropriate survey season (May to September).

In the event of bat roosts being found within trees or buildings to be affected by a development at the site, a licence from Natural England may be required, with appropriate mitigation and working methods.

Hedgerows H2 and H3, and tree lines TL1 and TL2 provide favourable commuting and foraging habitat for bats and connectivity to favourable habitat within the local area, such as the woodland edges northwest of the site. Given the above, based on current guidance (BCT 2016) the site is considered to be of **moderate** value to commuting and foraging bats. It is therefore recommended that bat transect surveys are carried out at the site within the active season (April to October inclusive).

To reduce any disturbance to foraging and commuting bats, it is recommended that any lighting during construction, and within the development, is appropriately designed to avoid illuminating the boundaries, hedgerows and trees at the site. For additional information refer to the Bat Conservation Trusts 'Bats and lighting in the UK' (2014).

In order to enhance the site for bats, it is recommended that development at the site incorporates the installation of commercially available bat boxes, within trees, bat bricks/panels/tubes, within new buildings, at locations deemed suitable by an ecologist, and planting of native trees and shrubs that are known to be of value to wildlife.

4.3.3. Birds

The scrub, shrubs, hedgerows, trees and buildings (B4-B9) at the site provide suitable habitat for breeding birds. All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended) during breeding. It is, therefore, recommended that any suitable breeding bird habitat is only removed



outside of the breeding bird season (March to August inclusive) or subsequent to a checking survey by an appropriately qualified ecologist.

If nesting birds are identified advice will be sought. The advising ecologist will issue guidance in relation to the protection of the nesting birds in conjunction with the scheduled works. Measures such as applying a set boundary around the nest may be necessary until the young birds have fledged.

4.3.4. Great Crested Newt

There are no local records for great crested newt (GCN), the majority of the site (improved pasture) is considered to provide sub-optimal terrestrial habitat for GCN, the pond within the site was assessed as being of 'poor' suitability to support breeding GCN, but there was one pond (P3) within an unobstructed 500m which was assessed as being of 'good' suitability to support breeding GCN, and another pond that was not accessible (unknown potential). However both of these ponds lie between 400-450m from the site, with no other ponds that may act as a stepping stone between them and the site.

Given the above it is considered reasonable to discount presence of GCN at the site.

4.4. Notable Species

4.4.1. Bird species (UKBAP)

The scrub, shrubs, hedgerows, trees and buildings within and adjacent to the site at the site are suitable for UKBAP priority species, such as house sparrow, tree sparrow, swallow and dunnock, for which there are local records. It is recommended that these features (vegetation) are retained where feasible or replaced with native species.

Development at the site offers the opportunity to enhance the site for UKBAP priority bird species and birds in general. In order to enhance the site for such species the following is recommended:

- Installation of small bird boxes at the site, in trees;
- Installation of house sparrow nesting terraces on the new building; and,
- Incorporation into the landscape planting plan of species known to be of value to wildlife, such as those that promote invertebrate diversity and/or produce fruit (e.g. hawthorn, crab apple, dog rose and wild cherry).

4.4.2. Brown Hare (UKBAP)

There are local records for brown hare and habitat (agricultural pasture) within the site is suitable for brown hare. However this habitat is abundant and widespread within the local area and consequently it is considered that loss of habitat within the site will not result in a significant adverse impact on the local population status of this species.

4.4.3. Common Toad (UKBAP

There are local records for common toad, common frog and smooth newt, but habitats within the site are considered to be of limited value to these species. It is considered that development at the site will not have a significant adverse impact on the local conservation status of these species.

4.4.4. Hedgehog (UKBAP)

There are local records from 2002 for hedgehog, and habitats within and around the site are suitable for foraging and sheltering hedgehog. Presence of hedgehog at the site cannot be discounted.

In order to maintain connectivity across the site for hedgehog, it is recommended that small gaps (0.2m) are left under sections of any new fencing/walls within the development to allow passage of hedgehog across the site.



In order to protect hedgehog during construction precautionary working methods should be adopted, as per those described above for badger (refer to Section 4.3.1), plus checking of any piles of debris/vegetation prior to burning them.

SUMMARY

Smeeden Foreman Limited has been commissioned by KCS Developments Limited to undertake a preliminary ecological appraisal of their site at Ferrand Lane, Gomersal, West Yorkshire, hereafter referred to as the 'site'.

Generally the site is classified as having a low conservation value. The hedgerows, trees and buildings at the site are of local value to breeding birds and provide shelter and foraging opportunities for wildlife in general. It is considered that: hedgerow H3 may qualify as '*Important*' under the Hedgerows Regulations 1997 with regards to ecology; hedgerows H2 and H3 meet the criteria to be considered UKBAP priority habitat; hedgerow H3 is of local value in terms of wildlife connectivity; and, all are of local value to wildlife for sheltering and foraging opportunities. The pond within the site is of limited value to wildlife due to disturbance from livestock and lack of aquatic, emergent and bankside vegetation.

In order to protect habitats of ecological value present within and adjacent to the site and ensure that the proposed development provides enhancement to wildlife, in accordance with the stated aims of the National Planning Policy Framework (NPPF), the following is recommended:

- retention of the hedgerows and trees if feasible, or replacement planting;
- use of temporary protective demarcation during construction;
- implementation of a lighting scheme during construction and within proposals that minimises illumination of the northern and eastern site boundaries and hedgerows, shrubs and trees within the site;
- native tree, hedgerow and shrub planting should be undertaken where feasible;
- consideration of seeding of areas with a suitable wildflower mix; and,
- installation of bat and bird boxes.

Concerning protected species the following further surveys for protected species are recommended in order to inform the planning application for the proposed development at the site:

- a loft inspection is carried out at building B9 (no timing restrictions);
- bat emergence/re-entry surveys are undertaken at building B9 (May September);
- if trees with bat potential are to be affected, a climb and inspect survey is carried out prior to works (no timing restrictions); and,
- bat transect surveys are carried out at the site (April to October inclusive).

Concerning protected and notable species at the site, the following general recommendations have been highlighted:

- during the construction phase precautionary measures are taken to prevent accidental harm or injury to any badger should one come onto site;
- breeding bird habitat is only removed outside the breeding season (March to August inclusive) or subsequent to a checking survey by an appropriately qualified ecologist; and,
- small gaps (0.15m) are left under sections of new fencing/walls to allow passage of hedgehog.

FIGURES

Figure 02: Map of Non-Statutory Sites provided by WYJS Figure 03: Phase I Habitat Map

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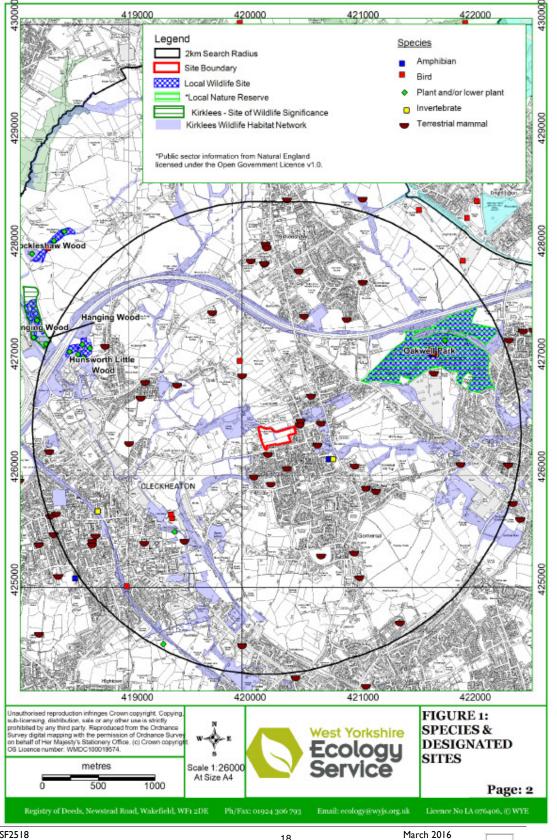




Figure 03: Phase | Habitat Map



🔘 Target Note

- X Scattered scrub/shrubs
- XX Dense scrub copy
- I improved grassland
 - Amenity grassland
- Standing water
- Bare ground / tarmac
- Running water
- 📕 Site boundary



Job: SF2518 Client: KCS Developments Ltd Drawn by: OM Checked by: CW Date: 16/03/2016



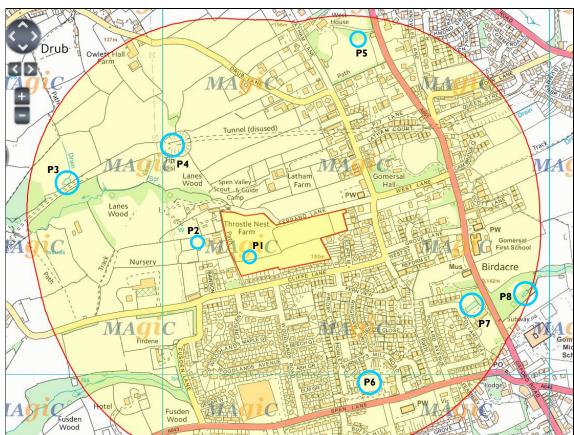
Somerset House, Low Moor Ln, Scotton, North Yorkshire HG5 9JB E-mail : office@smeedenforeman.co.uk Tel : 01423 863369

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APPENDIX 01: HABITAT SUITABILITY INDEX ASSESMENT FOR GCN

Introduction

A desk study found a total of eight ponds (PI-P8) to be present within 500 metres of the site, refer to the figure below.





Water bodies within 500m

Of these, major barriers to newt movements are present between ponds P6, P7 and P8, and pond P5 is located approximately 450m north-east with no other ponds present that may act as a stepping stone between it and the site. As a result ponds P5 - P8 were not included in any further assessment of potential impacts on GCN. A Habitat Suitability Index (HSI) assessment was undertaken at ponds P1 to P4 during the walkover survey in March 2016.

<u>Methodology</u>

The HSI can be used to provide an indication of the probability that a pond may support great crested newt based on ten suitability factors (method follows Oldham *et al.* (2000)). The index quantifies ten factors (suitability indices) which can affect great crested newt occurrence, such as the presence of fish and wildfowl, shading, coverage of aquatic vegetation, etc. and provides a score which can indicate the suitability of a pond to support breeding great crested newts. The HSI is calculated as a geometric mean of the ten suitability indices using the formula below:

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 $\mathsf{HSI} = (\mathsf{SI}_1 \times \mathsf{SI}_2 \times \mathsf{SI}_3 \times \mathsf{SI}_4 \times \mathsf{SI}_5 \times \mathsf{SI}_6 \times \mathsf{SI}_7 \times \mathsf{SI}_8 \times \mathsf{SI}_9 \times \mathsf{SI}_{10})^{1/10}$

The score can range from 0 to 1, 0 indicating low suitability and 1 indicating a high suitability.

The HSI has been adapted by the National Amphibian and Reptile Recording Scheme (NARRS) who have categorised the suitability of a pond to support great crested newts by the HSI obtained, as follows:

HSI	Pond Suitability
<0.5	Poor
0.5-0.59	Below average
0.6-0.69	Average
0.7-0.79	Good
>0.8	Excellent

<u>Results</u>

	PI		P2		P3	
SI ₁ Location	Area A	1.00	Area A	1.00	Area A	1.00
SI ₂ Pond area (m ²)	50	0.10	80	0.16	360	0.72
Sl ₃ Pond drying	Rarely	1.00	Never	0.90	Rarely	1.00
SI₄ Water quality	Poor	0.33	Bad	0.01	Moderate	0.67
SI ₅ Perimeter Shade (%)	0	1.00	0	1.00	20	1.00
SI ₆ Fowl	Major	0.01	Absent	1.00	Absent	1.00
SI ₇ Fish	Absent	1.00	Minor	0.33	Possible	0.67
SI ₈ Ponds within 1km	4	0.72	4	0.72	4	0.72
SI, Terrestrial habitat	Moderate	0.67	Poor	0.33	Moderate	0.67
SI ₁₀ Macrophytes (%)	20	1.00	0	0.08	20	1.00
HSI Score	poor	0.42	poor	0.31	good	0.83
SI ₁ Location	P4 Area A	1.00				
SI ₂ Pond area (m ²)	700	1.00				
SI ₃ Pond drying	Sometimes	0.50				
SI₄ Water quality	Poor	0.33				
SI_5 Perimeter Shade (%)	100	0.20				
SI ₆ Fowl	Absent	1.00				
SI ₇ Fish	Absent	1.00				
SI ₈ Ponds within 1 km	4	0.72				
	Moderate	0.67				
SI, Terrestrial habitat	rioderate	1 1				
Sl ₉ Terrestrial habitat Sl ₁₀ Macrophytes (%)	0	0.08				

The HSI score for ponds has been calculated below.

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Due to a combination of poor water quality and small size, ponds P1 and P2 were assessed as being of 'poor' suitability to support breeding GCN. Due to high shading, poor water quality and lack of macrophytes, pond P4 was assessed as being of 'below average' suitability. Pond P3 was assessed as being of 'good' suitability.



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APPENDIX 02: LEGISLATION: PROTECTED SPECIES



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Badger

Badgers and their setts are protected under the Protection of Badgers Act 1992, in England and Wales (the law is different in Scotland) making it an offence to:

- wilfully kill, injure or take a badger (or attempt to do so); •
- cruelly ill-treat a badger; ٠
- dig for a badger;
- ٠ intentionally or recklessly damage or destroy a badger sett, or obstruct access to it;
- cause a dog to enter a badger sett; and,
- ٠ disturb a badger when it is occupying a sett.

Bats

All British bats are afforded full protection under both UK and European legislation.

The Conservation of Habitats & Species Regulations 2010 transpose the Habitats Directive into UK law, making it an offence to:

- deliberately disturb a bat;
- deliberately kill or capture a bat; and
- damage, destroy or obstruct access to a breeding site or resting place (note this applies to both • deliberate and reckless actions).

The Wildlife and Countryside Act 1981 (as amended) (Schedule 5) made it an offence to:

- intentionally kill, injure or take a bat
- damage, destroy or obstruct a resting place *, •
- disturb the species in a resting place *
- possess or control a bat or any part thereof •
- sell, offer for sale, possess or transport for sale any bat or part thereof •
- set traps for catching, killing or injuring bats ٠
- possess articles for the purposes of committing offences against bats •
- [*= intentional and reckless offences covered]

Legal protection under the Habitats Directive applies to their breeding sites and resting places. This means that bat roosts are fully protected, whether they are in use at the time or not. Where roosts or resting/breeding sites are identified, any works which may contravene the protection afforded to them require derogation from the provisions of the legislation in the form of a licence from Natural England.

Breeding birds

The Wildlife and Countryside Act 1981 gives protection to all bird's nests (whilst being built or in use) and eggs from intentional damage or destruction. Additional protection against disturbance on the nest or of dependant young is provided for birds included on Schedule I.

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