



Hallam Land Management Ltd

**Land West of Hook Lane, Pagham**

**Phase I Walkover & Badger Technical Note**

February 2019

FPCR Environment and Design Ltd

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## APPENDIX

Appendix A: Site Photograph 1-4

## FIGURES

Figure 1: Phase 1 Survey Plan 2019

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## 1.0 INTRODUCTION

- 1.1 The following Technical Note provides ecological updates from those surveys previously undertaken and reported in Ecological Appraisal (2017). A phase one survey was undertaken on 1<sup>st</sup> February 2019, to document any changes in the habitats from those previously recorded, which might coincidentally effect the assemblages of protected or notable species. Specific surveys were also undertaken to address Condition 29 of the planning decision, which states:

*“Prior to the commencement of development a badger survey should be undertaken to ensure badgers are not using the site...”*

- 1.2 The application site proposals will result in the loss of predominantly arable land, to facilitate the construction of residential properties and associated infrastructure. Areas of green infrastructure will be created around the development for recreational and biodiversity benefits.
- 1.3 The proposals will utilise existing linear habitats, including hedgerows and tree lines, with enhancements to increase ecological resources and to provide important corridors of movement for a variety of wildlife. Additional areas of grassland creation including species rich and tussock grassland mixtures are proposed in the north-western extent of the site, which will provide an important foraging and pollination resources.

## 2.0 METHODOLOGY

### *Phase 1 Habitat Survey*

- 2.1 The update phase one survey followed the standard Phase 1 Habitat Survey Methodology as recommended by Natural England<sup>1</sup>, identifying any changes to the specific habitats or features of ecological interest documented in the previous report.

### *Badgers*

- 2.2 The standard badger survey methodology, as recommended by Harris, Creswell and Jefferies (1991)<sup>2</sup>, was followed to complete a thorough search for evidence, which would indicate the presence of badgers both on the site and in the immediate vicinity, including the identification of:

- Setts: including earth mounds, evidence of bedding and runways between setts;
- Latrines: often located close to setts, at territory boundaries or adjacent to favoured feeding areas;
- Prints and paths or trackways;
- Hairs caught on rough wood or fencing; and
- Other evidence: including snuffle holes, feeding and playing areas and scratching posts

Where setts are found, their status and level of activity is noted. Sett status is broadly categorised as follows:

- Main sett – usually continuously used with many signs of activity around, a large number of holes and conspicuous spoil mounds;
- Annexe sett – usually located close to a main sett and connected to it by well used paths. Annexes may not be continuously occupied;
- Subsidiary sett – lesser used setts comprising a few holes and without associated well-used paths. Subsidiary setts are not continuously occupied; and
- Outlier sett – one or two holes without obvious paths. These are used sporadically.

Level of activity is described as:

- Well used – clear of debris, trampled soil mounds and obviously active, with signs of activity such as presence of prints, dislodged guard hairs around the entrances;
- Partially used – some associated debris or plants at the entrance. Could be used with minimal excavation and usually with signs of activity within the vicinity, for example, badger pathways;
- Dis-used – partially or completely blocked entrances.

<sup>1</sup> Joint Nature Conservation Committee. (1990). *Handbook for Phase 1 habitat survey – a technique for environmental audit* Peterborough: JNCC

<sup>2</sup> Harris, Cresswell and Jeffries (1991) (*Report*) *Surveying Badgers*. The Mammal Society, Bristol.

### 3.0 RESULTS

#### *Previous Phase 1 Habitat Survey*

- 3.1 An initial Phase 1 survey was completed in September 2015 and subsequently updated in 2016 and 2017. The majority of the site is dominated by two large areas of arable land bisected by a single ditch (D1), running from north west to south east. Field margins were approximately 3-4m in width supporting a typical species-poor grassland assemblage, including a mixture of arable margin and tall ruderal species. Notably along the northern boundary of the site, the margin width expands into a wide strip of semi-improved tussock grassland, characterised by a limited species diversity.
- 3.2 The arable field compartments were bordered by a total of six well managed hedgerows, providing moderate conservation value. Due to the hedgerow composition, supporting over 80% native species, all of the hedgerows onsite were identified as Habitats of Principle Importance under Section 41 of the NERC Act (2006).
- 3.3 A series of further drainage ditches encompass the northern extent of the site, supporting low water levels of approximately 0.5-1m, which dried up throughout the warmer seasons. These ditches supported a mixture of scrub, tall ruderal and marginal aquatic species.

#### *Previous Badger Survey*

- 3.4 A badger survey was completed during the initial Phase 1 survey in September 2015 and additional evidence was collected through further protected species surveys (2016 and 2017). A single badger faecal deposit and gnarled maize cobs, were recorded on one survey occasion, further evidence was absent including and sett constructions.
- 3.5 Due to the limited evidence identified onsite, as well as the lack of any topographical features for suitable sett construction, it was considered that this species utilises the site opportunistically.

### **Update Survey Evidence 2019 (Figure 1)**

#### *Phase 1 Habitat Survey*

- 3.6 The habitats have not show any significant changes from those described during the Phase 1 habitat surveys completed in 2015-2017. Notably the lack of management onsite had resulted in the deterioration in structure and species composition of certain habitats, particularly the hedgerows.
- 3.7 The hedgerows had undergone minor losses in structure due to lack of management, allowing the establishment of bramble *Rubus fruticosus* and blackthorn *Prunus spinosa* suckering into the field margins (*Appendix A Photograph 1*). Further presence of non-native laurel *Laurus sp.* and cotoneaster *Cotoneaster* species (*Photograph 2*) individuals, were recorded along the south-eastern boundary of the site (*TN1, Figure 1*). These plants are most likely escaped species from residential properties adjacent to the site. Additional bramble and blackthorn scrub establishment was also recorded along the central ditch (D1).
- 3.8 The semi-improved grassland compartment located along the northern boundary of the site supported an established tussock grassland structure, as well as a higher composition of tall ruderal species including broadleaved dock *Rumex obtusifolius*, creeping thistle *Cirsium arvense* and common nettle *Urtica dioica* (*Photograph 3*). While the growth of tall ruderal species, does not warrant a change from the initial phase 1 assessment, it does indicate a lack of management.

*Badger Survey*

- 3.9 A number of mammal paths, minor digging and feeding remains of natural material but also dumped food waste was recorded.
- 3.10 A number of squeezes were identified through hedgerows and scrub around the boundaries, however no badger evidence in the form hairs or footprints, were recorded confirming the presence of this species (Photograph 4). There were no large excavations to indicate sett construction and field evidence such as latrines were also absent.

## 4.0 CONCLUSION

### Phase 1 Habitat Survey

- 4.1 There was no significant change in the composition or structure of habitats from the initial Phase 1 assessment undertaken. It is considered that the original assessment remains accurate and reliable for the purposes assessing the conservation value of the site as a whole, as previously recorded. Furthermore, the assessments for protected species utilising the site are also unlikely to have changed over the intervening period, owing to the minimal changes of certain habitats.
- 4.2 The presence of non-native laurel and cotoneaster species along the south-western of the site are most likely the result of escapee from the nearby residential housing. As some cotoneaster species are listed as invasive species on Schedule 9 of the Wildlife and Countryside 1981 as amended, the individuals identified onsite should be removed by a professional contractor prior to development.

### *Badger Survey*

- 4.3 The lack of badger evidence recorded onsite during this update survey, further supports the initial assessment. The habitats onsite are likely to provide some foraging opportunities; however, the lack of recent evidence would suggest that the site is not an integral part of any clans foraging territory; especially as no territory marking latrines were recorded. Given this evidence, the habitats are not considered of significant ecological value for this species, and are not a constraint to the development.
- 4.4 Badgers are transient in nature and territory patterns can alter with food supply and population dynamic changes in the clan, whereby previous unused areas may be utilised. It is recommended that a supporting badger survey is completed prior to development starting, to ensure their occupation and utilisation of the site has not changed.

## **APPENDIX A – SITE PHOTOGRAPHS 2019**

**Photograph 1 – Blackthorn scrub suckering along the northern boundary of the site.**



**Photograph 2 – Cotoneaster species identified on the south-western boundary of site (Fig 1–TN1).**



**Photograph 3 – Tall ruderal species identified in semi-improved grassland headland strip along northern boundary.**



**Photograph 4 – Mammal path and squeeze through scrub habitat in southern extent of site.**





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-  Survey Area
-  Application boundary
-  Hedgerow with Reference
-  Scattered Scrub
-  Treeline
-  Tall Ruderal
-  Ephemerally Wet Ditch
-  Running Water
-  Gate/Culvert
-  Semi-Improved Grassland
-  Arable
-  Field Margin
-  Target Note 1 - Cotoneaster sp. present



Hallam Management Ltd

Land West of Hook Lane, Pagham,  
West Sussex

Phase 1 Habitat Plan