

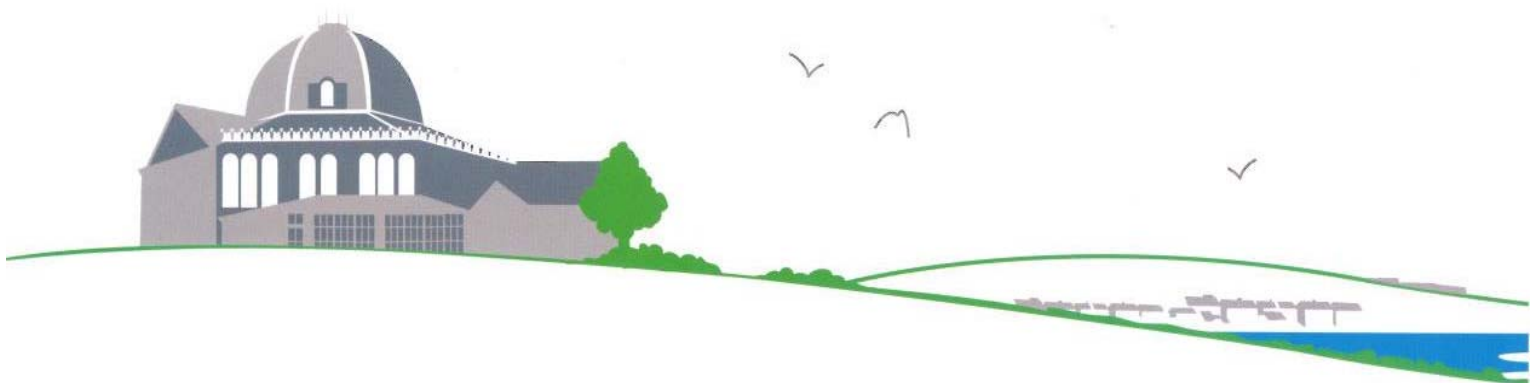


SUPERSEDED

KEIGAR HOMES LTD

DARTMOUTH ROAD, SCUNTHORPE

EXTENDED PHASE 1 HABITAT SURVEY AND
BIODIVERSITY MANAGEMENT PLAN



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DARTMOUTH ROAD, SCUNTHORPE



**EXTENDED PHASE 1 HABITAT SURVEY AND
BIODIVERSITY MANAGEMENT PLAN**

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This project has been undertaken in accordance with PAA policies and procedures on quality assurance.

Signed: _____



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1. INTRODUCTION

Background

- 1.1 Penny Anderson Associated Ltd (PAA) was commissioned in August 2018 by Keigar Homes Ltd to conduct an Extended Phase 1 habitat survey of land at Dartmouth Road, Scunthorpe (centred on NGR SE 875 101).
- 1.2 This report presents the findings of the Extended Phase 1 habitat survey, including the desk study results and methodologies used, and highlights the ecological constraints and opportunities associated with proposed development of the site for residential dwellings.
- 1.3 This report also sets out prescriptions for a Biodiversity Management Plan to enhance and maintain the biodiversity value of the completed development in the long-term.

Legislative Context

- 1.4 The text given below provides a brief summary of the legislation in relation to the species or species group in England and Wales. The original Acts, Regulations and any amendments should be referred to for the precise wording.
- 1.5 A range of international and national legislation has been established in the UK to protect important nature conservation sites and priority species. At the international level, European Union (EU) Directives require individual member states to implement their conservation provisions nationally for the benefit of Europe as a whole. These Directives have been transposed into UK law by the Conservation of Habitats and Species Regulations 2017; further details can be obtained from the Joint Nature Conservation Committee (JNCC) web site at www.jncc.defra.gov.uk.
- 1.6 Other international conventions include: the Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979), which requires the maintenance of populations of wild flora and fauna, giving particular protection to endangered and vulnerable species; and the Bonn Convention on the Conservation of Migratory Species of Wild Animals (1979), which requires the protection of migratory species throughout their entire range. The above conventions are implemented in England and Wales via the Wildlife and Countryside Act (WCA) (1981) (as amended) and Countryside and Rights of Way (CRoW) Act 2000. This legislation also protects important habitats and sites such as Sites of Special Scientific Interest (SSSI).
- 1.7 At the national level, the UK Post-2010 Biodiversity Framework published in 2012 is the Government's response to the Convention on Biological Diversity (2010). It describes the UK's biological resources, commits a detailed plan for the protection of these resources within the UK's devolved framework across England, Wales, Scotland and Northern Ireland. The document identifies future priorities for nature conservation and adopts a more strategic approach, including ecosystem services and sustainability alongside biodiversity. Despite administrative changes following devolution, there is still an underlying objective of protecting and enhancing a range of priority species and habitats, often still based on the objectives and classifications of the original UK Biodiversity Action Plan. *Biodiversity 2020* is England's national biodiversity strategy. Building on the *Natural Environment White Paper* published in 2011, this provides a means of delivering the international and EU commitments to biodiversity. Under Biodiversity 2020, Priority Species and Habitats referred to are those of 'Principal Importance' for the conservation of biodiversity in England listed on Section 41 (England) of the Natural Environment and Rural Communities (NERC) Act 2006.

1.8 Finally, the National Planning Policy Framework (NPPF), updated 2018, provides guidance for local authorities on the content of the Local Plans and is a material consideration in determining planning applications. Briefly, with an overall focus on sustainable development, the NPPF states that developments should aim to engender positive outcomes for habitats and biodiversity, with a particular focus on the maintenance and creation of ecological networks. Furthermore, the NPPF also states that any planning proposals for which significant negative impacts on biodiversity cannot be avoided, mitigated or compensated for should be refused. The NPPF states that the planning system should contribute to and enhance the natural environment through a range of actions, including:

- protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils;
- recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services; and
- minimising impacts on biodiversity and providing net gains for biodiversity including establishing coherent ecological networks that are more resilient to current and future pressures.

1.9 To protect and enhance biodiversity and geodiversity, plans should:

- Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
- promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

Protected Species

1.10 Protected species legislation relevant to the site is provided within Appendix 1.

2. METHODS

Desk Study

- 2.1 A data request was made to the Lincolnshire Environmental Records Centre (LERC) in August 2018 to provide information on protected and notable species and non-statutory designated sites within 2km of the centre of the site.
- 2.2 An internet search of the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.natureonthemap.naturalengland.org.uk) was made for European designated sites, SSSI and priority habitats and species within 2km.

Field Survey

Extended Phase 1 Habitat Survey

- 2.3 An Extended Phase 1 habitat survey of the site was undertaken on 13th August 2018 by Sacha Rogers (CEnv, MCIEEM¹). The survey method followed the standard JNCC (2010) technique for classifying and mapping British habitats. The survey aimed to provide a record of habitats that are present within the site and to further investigate those that are likely to be ecologically important.
- 2.4 The survey was 'extended' (Institute of Environmental Assessment 1995) to include a general assessment for the presence or potential presence of protected species, noting any areas of suitable habitat and the location and type of any field signs recorded. In particular, this component of the field survey focused on the following species: badger (*Meles meles*), bats, reptiles, amphibians, breeding birds and terrestrial invertebrates.
- 2.5 A botanical species list and DAFOR² rating was compiled for those plant species which were readily identifiable on the day of survey.

Survey Constraints

- 2.6 The Extended Phase 1 habitat survey was undertaken during suitable weather conditions at an optimal time of year, and all parts of the site were accessible on the day of survey. There were, therefore, no constraints to the survey.

¹ Full Member of the Chartered Institute of Ecology and Environmental Management (CIEEM)

² Where D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare and L = Locally

3. RESULTS

Desk Study

3.1 The results of the desk study are summarised below.

Designated Sites

Statutory Designated Sites

3.2 Statutory designated sites include all tiers of nature conservation sites that are legally protected, including SSSI, Special Areas of Conservation (SAC) and Special Areas of Protection (SPA) and National and Local Nature Reserves (NNR/LNR).

3.3 There are three LNR within the 2km search zone. The closest of these is Brumby Wood LNR which is located 0.22km to the east of the site and is designated for its semi-natural woodland and grassland habitats.

3.4 The other LNR are Atkinson's Warren LNR located 1.86km to the north and Frodingham LNR located 0.94km to the north east.

Non-statutory Designated Sites

3.5 There are eight locally designated sites known as Local Wildlife Sites (LWS) located within the search area. These are summarised in Table 1 below.

Table 1 Summary of Local Wildlife Sites

Name	Main Habitat of Interest	Distance from Site/Direction
Ashby Decoy Golf Course	Acid grassland	1.81km south
Atkinson's Warren	Grassland and woodland	1.86km north
Brumby Wood	Semi-natural woodland and grassland	0.22km east
Frodingham Railway Cutting	Semi-natural woodland, scrub, unimproved grassland and marshy grassland/fen	0.94km north east
Ridge Walk	Semi-natural woodland	0.43km south east
Westcliff Lagoon	Woodland, standing water, marsh/fen	0.84km south west
Brumby Common West	Plantation woodland	0.58km west
Kingsway Golf Course	Semi-natural woodland, wet woodland, acid grassland (semi-improved and unimproved) and improved grassland	0.49km north

- 3.6 The nearest of the LWS to the site is Brumby Wood LWS located 0.22km to the east and with habitat connectivity to the site.

Other Habitats

- 3.7 The MAGIC website identifies a number of Priority Habitats comprising scattered patches of semi-natural and plantation woodland within the 2km search zone, including a block of plantation woodland which adjoins the site at its north west corner.

Protected Species

- 3.8 The following species records were provided by LERC unless stated otherwise.

Badger

- 3.9 There are no badger records within the 2km search area.

Bats

- 3.10 There are a number of bat records in the search area, comprising common pipistrelle (*Pipistrellus pipistrellus*), brown long-eared bat (*Plecotus auritus*), noctule (*Nyctalus noctula*), a *Myotis* species and various un-named bat species, spanning the period from 2004 to 2014. The nearest recorded roost to the site is for an un-named bat species located 0.47km from the site in Scunthorpe. The other nearest records of bats are for a pipistrelle species located 0.26km south of the site, noctule bat 0.65km from the site and *Myotis* and brown long-eared bats located 0.75km and 0.83km from the site, respectively. There are no records of bats from within the site itself.

Other Mammals

- 3.11 There are several historic records for brown hare (*Lepus europaeus*) dating from 1977 including records from within the site itself. There are also two more recent brown hare records dating from 2016 for locations approximately 2km to the south west.
- 3.12 Similarly, there is a historic record for West European hedgehog (*Erinaceus europaeus*) also dating from 1977 within the site and four other records of hedgehog dated 2003, 2005 and 2016 located within a residential area to the west of the site and within parkland associated with the adjacent cemetery to the east.
- 3.13 Records of harvest mouse (*Micromys minutus*), also dating from 1977, were provided for locations between 0.45km and 1.9km from the site, and none from within the site itself.

Birds

- 3.14 There are a large number of bird records within the search zone, including within the site itself. The list of species comprises a diverse assemblage of passerine species, raptors, waders and wildfowl which are assumed to have been recorded flying over Scunthorpe *en route* to the Humber Estuary located c.10km to the north and east.
- 3.15 The list is extensive but includes the following species recorded flying over or close to the proposed development site: turtle dove (*Streptopelia turtur*), hobby (*Falco subbuteo*) swift (*Apus apus*), corn bunting (*Emberiza calandra*), pink-footed goose (*Anser brachyrhynchus*), tree sparrow (*Passer montanus*) and bullfinch (*Pyrrhula Pyrrhula*).

Amphibians

- 3.16 There is a single, historic record from 1977 for great crested newt (*Triturus cristatus*, GCN) located within the same 1km grid square as the site and a second, more recent record dating from 2004 and located 1.14km to the south west. There are also records for smooth newt (*Lissotriton vulgaris*) for the same dates and locations. Finally, there are several records for common toad (*Bufo bufo*), some also dating from 1997 and 2004 at the same locations as the great crested newt and smooth newt, and two further records from 2001 and 2009 located 0.15km south west and 1.98km north east of the site, respectively.

Reptiles

- 3.17 There are records for common lizard (*Zootoca vivipara*) within the search area including recent records from 2010 and 2011 located 0.45km to the east of the site. There are also historic records for adder (*Vipera berus*) and grass snake (*Natrix natrix*), dating from 1961 and 1997, respectively. The adder records is for a site located 1.45km to the east, and the grass snake records are from within the same 1km grid square as the proposed development site.

Terrestrial Invertebrates

- 3.18 There are a number of terrestrial invertebrate records comprising mainly moth and butterfly species with some spiders and molluscs and a beetle. The majority of records are fairly dated, spanning the period from the 1950s to 1990s. Records are widespread across the search area but include some records from Ridge Walk located approximately 0.2km east of the site, including small heath (*Coenonympha pamphilus*) and wall brown (*Lasiommata megera*) butterflies.

Notable and Invasive Plants

- 3.19 There are a large number of native and non-native plant species records from within the search area, including a number from within the same 1km grid square within which the site is located. This includes dated records for bluebell (*Hyacinthoides non-scripta*) from 1997 to 2001 and small-flowered catchfly (*Silene gallica*) dating from 1951/52. The majority of plant records from within the 1km grid square are common and widespread species e.g. common field-speedwell (*Veronica persica*), mugwort (*Artemisia vulgaris*), common vetch (*Vicia sativa*), hedge mustard (*Sisymbrium officinale*) and Oxford ragwort (*Senecio squalidus*).

Field Survey

- 3.20 The results of the field survey are summarised below. The scientific names of all plant species and birds/animals observed during the survey are listed in Appendix 2a and 2b and, for plant species, follow Stace 2010. A map to show the location of habitats is presented in Figure 1.

General Description

- 3.21 The site comprises a playing field of species-poor semi-improved grassland bounded by a well managed hedgerow to the east with woodland and grassland beyond, a line of mature hybrid black-poplar trees along the northern boundary with Quebell Park Stadium beyond and existing residential development to the south and west. There is an infrequently managed hedgerow along part of the southern boundary and two groups of trees, located on the western and southern boundary. The habitats within and adjacent to the site and key species are described in more detail below.



Habitats

Species-poor Semi-improved Grassland

- 3.22 The playing field comprises a closely mown sward of grassland which is dominated by a small number of grass species with herbaceous species occurring frequently to occasionally throughout with occasional patches of locally abundant species such as yarrow (see Plate 1). The grasses comprise predominantly Yorkshire fog, creeping bent, common bent, red fescue and perennial rye. Springy turf-moss is locally abundant in places. Herbaceous species include frequent to occasional ribwort plantain, dandelion, white clover, bird's-foot trefoil, greater plantain, cat's-ear, autumn hawkbit and doves-foot crane's-bill.
- 3.23 Around the edges of the field are scattered plants of common knapweed, bird's-foot trefoil, smaller cat's tail, creeping cinquefoil and hairy sedge indicating that the field was previously more species-rich and that diversity has declined over time due to addition of fertilisers and intensive management.
- 3.24 Some garden escapes were also recorded to the rear of adjacent residential areas along the western site boundary including fig, marigold, cotoneaster, yellow loosestrife, goldenrod and ornamental maple.



Plate 1 Species-poor semi-improved grassland with closely mown sward managed as a playing field and hedgerow H1 running along eastern site boundary

Hedgerows

- 3.25 A long, intact and mature hedgerow (H1) runs the entire length of the eastern boundary of the field and comprises predominantly hornbeam and garden privet with occasional lilac, sycamore, copper beech, field rose and Japanese barberry. This hedge is approximately 2m wide and 2m in height. The ground flora comprises species typical of a semi-improved grassland including

Yorkshire fog, cock's-foot, creeping bent, ribwort plantain, dove's-foot crane's-bill, creeping thistle, common field-speedwell, oxeye daisy, dandelion and smooth sow-thistle. Adjacent parkland trees associated with the cemetery to the east comprise mature hornbeam, ornamental flowering cherry, lilac, cotoneaster, common lime and ash.

- 3.26 Two shorter sections of hedge (H2 and H3) are present in the south west of the site. H2 is a managed leylandii (Leyland cypress) hedge. H3 is an infrequently managed native hedgerow approximately 1.5m wide and 3m in height containing predominantly hawthorn with occasional to frequent holly, English elm, honeysuckle, and bramble. The ground flora is similar to that associated with H1 but with additional species comprising field horsetail, hedge woundwort, great willowherb and white bryony.

Trees

- 3.27 A row of hybrid black-poplar are present on the outside of a security fence on the northern site boundary (see Plate 2). The ground flora here comprises abundant red fescue, with some shrubs - hawthorn and holly - and a sparse herbaceous flora including creeping cinquefoil, common knapweed, nipplewort, creeping thistle, ground ivy and common field-speedwell.
- 3.28 In the north-west corner of the site is a small group of mature, native shrubs comprising elder and damson/wild plum with a ground flora of common nettle, spear thistle, ivy and white bryony (see Plate 2).
- 3.29 A further small group of trees is present adjacent to the site entrance in the south comprising self-set sycamore, ornamental flowering cherry, cotoneaster and bay laurel.



Plate 2 Row of mature hybrid black poplar along northern boundary and small group of elder and plum/damson at north-west corner

Protected and Notable Species

Badger

- 3.30 There was no evidence of use of the site by badger. However, the species-poor semi-improved grassland does provide suitable foraging habitat, as do the neighbouring residential gardens, playing fields and parkland which are likely to provide suitable foraging habitat in the wider area, should this species be present.

Bats

- 3.31 There are no buildings or trees within or adjacent to the site which provide suitable features for roosting bats and the site has only limited potential to support foraging bats due to a general lack of habitat and species diversity. Any bats which utilise the site for foraging are likely to be restricted to the site boundaries, particularly adjacent to the parkland which adjoins the site to the east.

Breeding Birds

- 3.32 The mature hedgerows and trees on the site boundaries are likely to provide cover and nesting opportunities for breeding bird species associated with urban/suburban and woodland edge habitats, and the interior of the site offers some foraging potential for species which probe grassland for invertebrates e.g. common starling (*Sturnus vulgaris*). A single, old bird's nest was found in hedgerow H1. Black-billed magpie³, common wood pigeon, blue tit, European robin, common blackbird, European goldfinch, winter wren and barn swallow were observed on the day of survey.

Amphibians and Reptiles

- 3.33 There are no waterbodies within or adjacent to the site likely to support breeding GCN or other amphibians, and the site provides only limited cover for common amphibian species e.g. common toad. However, its relatively small size and isolation from suitable aquatic habitats suggest that it is unlikely that amphibians would be present in significant number.
- 3.34 There no habitat features capable of supporting reptile species such as common lizard which require a mosaic of open, sunny areas and dense cover that provide basking opportunities close to places of shelter and shade. The lack of suitable vegetation and cover suggests that reptiles are unlikely to be present.

West European Hedgehog

- 3.35 The boundary hedgerows and trees and semi-improved grassland habitat provides some cover and foraging opportunities for hedgehog, particularly given the proximity to neighbouring, mature residential gardens, playing fields and parkland. Indeed hedgehog droppings were found at the north-east corner of the site, adjacent to hedgerow H1.

³ See Appendix 2b for scientific names of faunal species recorded on site

Terrestrial Invertebrates

- 3.36 The site has very limited habitat potential for important terrestrial invertebrate species/groups due to a lack of structural and species diversity. A single small white butterfly was observed on the day of survey, but the site generally lacks the botanical diversity necessary to support an important assemblage of butterfly or other day-flying invertebrate species. There is also a lack of features such as dead wood and temporary waterbodies that would otherwise increase the value of the site for invertebrates.

4. DISCUSSION AND RECOMMENDATIONS

Evaluation of Features and their Function for Wildlife

Designated Sites

- 4.1 There are three statutory designated sites and eight non-statutory sites within the 2km search area (see paras.3.2 to 3.7 for details) but none of these are sufficiently close to the proposed development site to be likely to be affected. The nearest of the designated sites is Brumby Wood LNR and LWS which is located 0.22km to the east.

Habitats

- 4.2 The habitats within and forming the boundaries of the site are common and widespread within the UK. None of the habitats were particularly notable in terms of botanical species diversity or vegetation structure and there were no notable plant species present. Hedgerows and individual trees along the boundaries of the site have limited intrinsic value, lacking in significant species or structural diversity and features such as standing and fallen deadwood, but they do provide habitat corridors and connectivity around the site and to the wider area.
- 4.3 Overall, the habitats present are considered to be of value at no greater than a site level only.

Fauna

- 4.4 The site has relatively limited potential for protected or notable species due to the homogenous character of the vegetation.
- 4.5 Hedgehog are present and likely to be using the grassland and boundary hedgerows/tree lines for foraging and could potentially also use the dense hedgerow along the eastern boundary as a hibernation site.
- 4.6 The hedgerows and individual trees provide some cover and foraging opportunities for nesting birds and provide foraging and commuting habitat for bats, though the interior of the site is of limited value for both of these species groups. There are no features within the site capable of supporting roosting bats.
- 4.7 The potential for the site to support important assemblages of amphibians and terrestrial invertebrates is low and reptiles are considered unlikely to be present.
- 4.8 Overall, therefore, the site is considered to be of value at a no more than a site level for notable and protected species, with the key constraints being foraging and possibly overwintering hedgehog and potential for nesting birds within the boundary hedgerows and individuals trees. These habitats also provide some suitable habitat and connectivity for foraging and commuting bats, particularly associated with the mature hedgerow along the eastern site boundary.

Mitigation Measures

- 4.9 Mitigation prescriptions to avoid disturbance or harm to individual species comprising hedgehog, nesting birds, foraging and commuting bats and amphibians are presented in the Biodiversity Management Plan in the next section of this report.

5. BIODIVERSITY MANAGEMENT PLAN

Introduction

- 5.1 Policy CS5 and CS17 of the North Lincolnshire Core Strategy, in particular CS17, sets out a number of requirements for biodiversity in the context of built development as follows:
- Ensuring development retains, protects and enhances features of biological and geological interest and provides for the appropriate management of these features;
 - Ensuring development seeks to produce a net gain in biodiversity by designing in wildlife, and ensuring any unavoidable impacts are appropriately mitigated for;
 - Supporting wildlife enhancements that contribute to the habitat restoration targets set out in the North Lincolnshire's Nature Map and in national, regional and local biodiversity action plans; and
 - Improving access to and education/interpretation of biodiversity sites for tourism and the local population, providing their ecological integrity is not harmed.
- 5.2 In this case, the proposed development site comprises an intensively managed area of species-poor semi-improved grassland which is used as a playing field and mature boundary hedgerows and individual trees. The site supports hedgehog and has some, albeit limited, potential to support nesting and foraging birds, foraging and commuting bats, and possibly common amphibian species.
- 5.3 This Biodiversity Management Plan (BDMP) has been prepared to specify precautionary methods of working that will be implemented in relation to protected and notable species. It also specifies ecological enhancement measures that will be implemented comprising sensitive use of lighting, access points for hedgehogs, provision of artificial bird and bat boxes and wildlife-friendly landscaping planting.
- 5.4 The final section of the BDMP presents prescriptions for long-term management of landscape planting for wildlife and bird/bat boxes.

Precautionary Methods of Working

Nesting Birds

- 5.5 If construction commences during the bird nesting season (March to August inclusive) a check for the presence of nesting birds will be undertaken prior to commencement of works, including a check for the presence of ground-nesting bird species.
- 5.6 This will be undertaken by a suitably experienced ecologist no more than 48hrs prior to the commencement of works. Should evidence of nesting birds be found, then a suitable, undisturbed buffer zone will be retained around any active nests, demarcated using suitable methods, such as temporary barrier tape or flags. The size of the buffer zone will be determined by the ecologist but is likely to be c.5m.
- 5.7 A toolbox talk will be given to the site contractor to alert the contractor to the presence of nesting birds.

- 5.8 The demarcated area will remain undisturbed until any young have fledged. This may take several weeks, depending on the species involved.
- 5.9 Once the ecologist has confirmed that any young have fledged the nest, the area will be cleared within the next 48hrs.

West European Hedgehog/Amphibians

- 5.10 Any sections of hedgerow which need to be removed to facilitate the development will first be trimmed down to 150mm, avoiding periods of very cold weather when hedgehogs and amphibians may be in hibernation, to allow wildlife to disperse prior to soil stripping. Site contractors will remain vigilant to the potential for hedgehog/amphibians to be found during site clearance and any animals found will be carefully relocated to a suitable undisturbed area.

Bird and Bat Boxes

- 5.11 To increase the value of the proposed development for biodiversity, a range of artificial bird nesting boxes and integrated bat roost features will be incorporated into 10% of the proposed dwellings.
- 5.12 Bird and bat box types and locations will comprise:
- Istock integrated bat bricks to be installed on south, west or east facing elevations a minimum of 4m above ground level with unobstructed access for roosting bats; and
 - Istock swift box and sparrow terrace box be installed at a minimum height of 5m above ground level for swifts and 2m above ground level for house sparrow (*Passer domesticus*) on south, west or east facing aspects with open, uncluttered entrances to allow access/egress by nesting birds.

West European Hedgehog Access Points

- 5.13 Hedgehog populations have undergone significant decline in urban and rural areas in recent years (Wilson and Wembridge 2018) and planning authorities are increasingly requiring the adoption of measures to avoid and reduce the effects of built development upon hedgehog.
- 5.14 One of the key requirements for hedgehog is a well-connected habitat for foraging. Hedgehogs roam on average c.2km a night and an urban population is thought to need at least c.1km² of well-connected habitat to remain viable (Wilson and Wembridge 2018).
- 5.15 In this case, habitat connectivity will be maintained throughout the development site by the inclusion of hedgehog gates through garden fences and between gardens and public open space.
- 5.16 The hedgehog access points will comprise 13cm x 13cm gaps or pipes through the base of each garden fence, linking each garden to the next. The photographs below (Plates 3 and 4) illustrate examples of gates and pipes that will be used to provide hedgehog access points. A combination of these features will be used.



Plates 3 and 4 Example Hedgehog Access Points

Wildlife-Friendly Landscape Planting

5.17 Street tree planting will comprise native or wildlife-friendly plant species such as those which provide nectar, fruit or seeds to attract invertebrates and, in turn, provide a foraging resource for bats and nesting birds. The species mix will comprise the following native tree species which are all suitable to provide both amenity and biodiversity value:

- Bird cherry (*Prunus padus*);
- Downy birch (*Betula pubescens*);
- Hornbeam (*Carpinus betulus*);
- Rowan (*Sorbus aucuparia*);
- Hawthorn (*Crataegus monogyna*); and
- Silver birch (*Betula pendula*).

5.18 The detail of proposed landscape planting is presented in a separate Landscape Masterplan document.

5.19 Shrub planting (Shrub mix 'B' on separate Landscape Masterplan) will comprise a mix of native and non-native 'wildlife friendly' species which are rich in nectar sources to provide a foraging habitat for day and night flying invertebrates.

5.20 The rain garden will be sown with a suitable grass/wildflower meadow mix suited to moisture retentive soils e.g. Minster Meadows Heavy soil mix.

Management Prescriptions

Street Trees

5.21 Standard horticultural practices will be undertaken to ensure the successful establishment of street trees for the first five years, including staking and watering as necessary. The trees will be subject to an annual inspection for the first five years to assess establishment and replace any failures.

5.22 Once the trees have become established it is expected that occasional arboricultural works may be required to retain tree shape and vigour.

Rain Garden

- 5.23 The rain garden grass/wildflower mix will be mown at monthly intervals for the first year of establishment. From the second year onwards the grassland will be allowed to grow and flower with a single cut only, in August, which will enable later flowering species to set seed.

Maintenance of Bat and Bird Boxes

- 5.24 All bird and bat boxes to be installed across the site will be subject to the following management for the first five years:

- An annual inspection to assess any damage; and
- Repair or replacement of any damaged or missing boxes.

Management Programme

Table 2 Proposed Management Programme

Feature	Proposed Management	Timing
Street Trees	Following initial establishment period, occasional thinning and crown/formative pruning only.	As required: October to March.
Rain Garden	Following an initial establishment period, grassland will be mown annually.	Monthly mowing in first year Single cut in August, year two onwards.
Bird and Bat Boxes	Inspect and repair/replace and damaged or missing boxes	Annually.

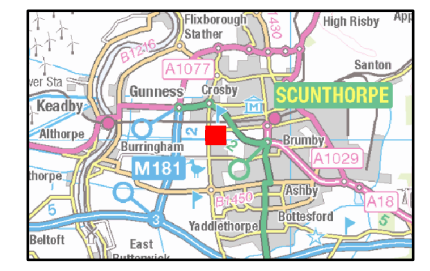
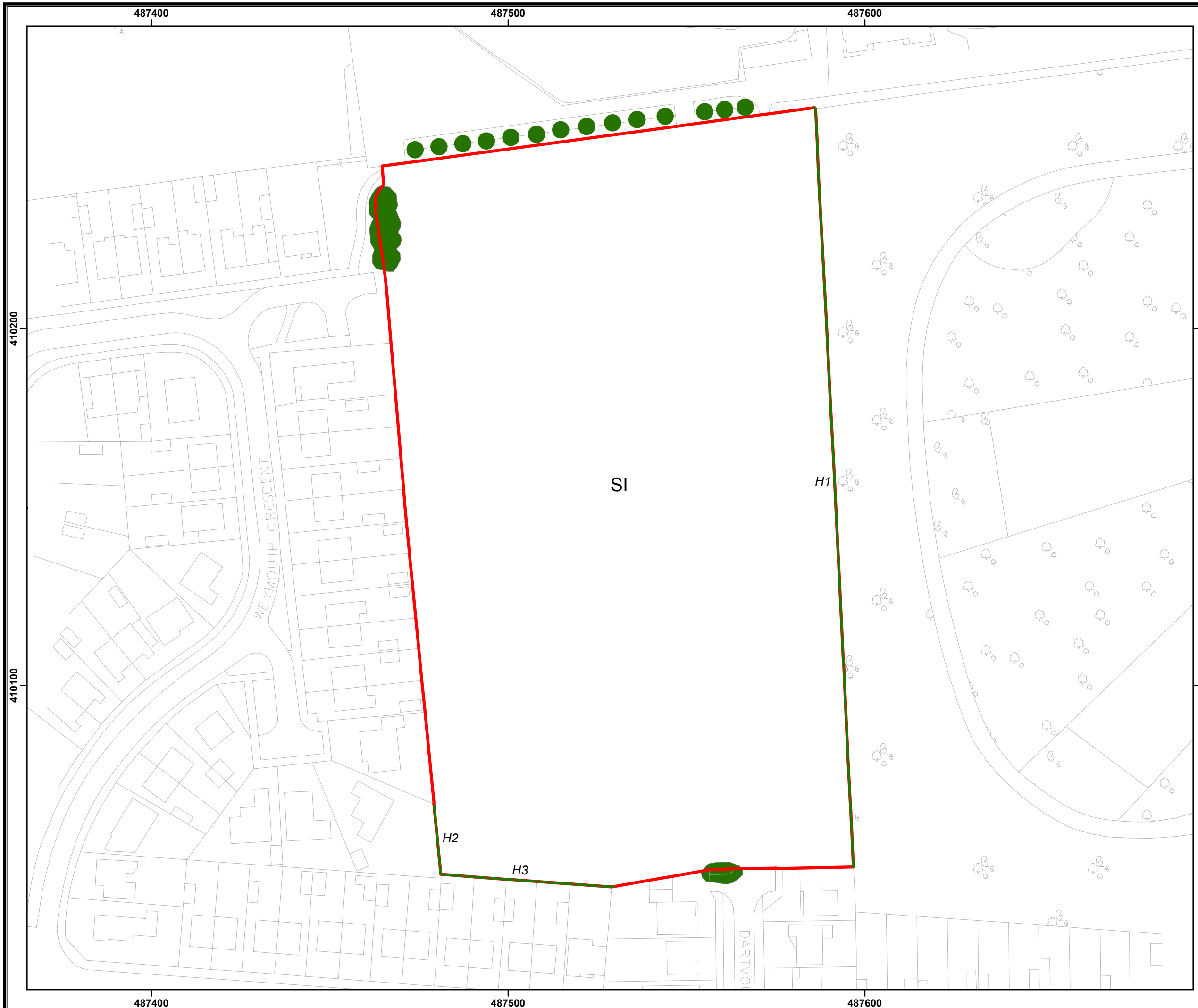
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7. ABBREVIATIONS

- BDMP Biodiversity Management Plan
- CIEEM Chartered Institute of Ecology and Environmental Management
- CRoW Countryside and Rights of Way
- EU European Union
- GCN Great Crested Newt
- JNCC Joint Nature Conservation Committee
- LERC Lincolnshire Environmental Records Centre
- LNR Local Nature Reserve(s)
- LWS Local Wildlife Site(s)
- MAGIC Multi-Agency Geographic Information for the Countryside
- NERC Natural Environment and Rural Communities
- NNR National Nature Reserve(s)
- NPPF National Planning Policy Framework
- PAA Penny Anderson Associates Ltd
- SAC Special Area(s) of Conservation
- SPA Special Protection Area(s)
- SSSI Site(s) of Special Scientific Interest
- WCA Wildlife and Countryside Act

FIGURE



Legend

- Boundary
- Habitat**
- SI Species-poor semi-improved grassland
- Group of trees
- Species-poor intact hedge
- Individual trees

British National Grid
 Projection: Transverse Mercator
 False Easting: 400000.000000
 False Northing: -100000.000000
 Central Meridian: -2.000000
 Scale Factor: 0.999601
 Latitude Of Origin: 49.000000

ISO A3

Metres

0 5 10 20 30 40

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Project Name
Dartmouth Road, Scunthorpe

Discipline
Ecology

Title:
**Extended Phase 1
 Habitat Map**

Scale: 1:1,000	Drawing No. Figure 1
Drawn By MDM	Originator SRG Date 11/09/2018
PAA Ref: G:\KEIG04_Dartmouth_Road_Scunthorpe\Map1	Revision 1.0

KEIG04_Phase1_MDM_060918.mxd

APPENDICES

APPENDIX 1

Summary Protected Species Legislation Breeding Birds

SUMMARY OF THE LEGISLATION RELATING TO BREEDING BIRDS

All wild species of breeding birds and their nests are protected under Part 1 of the Wildlife and Countryside Act (WCA) 1981, as amended by later legislation including the Countryside and Rights of Way (CRoW) Act 2000. This legislation applies in England and Wales.

Part 1 (Section 1:1) of the WCA states that:

'If any person intentionally,

- (a) kills, injures or takes any wild bird;
- (b) takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or
- (c) takes or destroys an egg of any wild bird,

he shall be guilty of an offence.'

Part 1 (Section 1:5) of the WCA (amended by the CRoW Act 2000) refers to specific birds listed on Schedule 1 of the WCA, and states that:

'If any person intentionally or recklessly,

- (a) disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or
- (b) disturbs dependent young of such a bird,

he shall be guilty of an offence and liable to a special penalty.'

Schedule 1 includes birds such as barn owl (*Tyto alba*), black redstart (*Phoenicurus ochrurus*), wood lark (*Lullula arborea*) and Cetti's warbler (*Cettia cetti*). Please refer to the WCA for a complete list of Schedule 1 species.

Some provisions are made to allow the killing and taking of certain species under certain circumstances, as follows:

- Birds listed on Schedule 2 (Part 1) of the Act may be taken or killed outside of the 'close season' for each individual species (the 'close season' is defined by the Act). This includes various wild duck and geese species.
- Birds listed on Schedule 2 (Part 2) of the Act may be killed or taken by authorised persons at all times. This includes species such as carrion crow (*Corvus corone*), black-billed magpie (*Pica pica*), feral pigeon (*Columba livia*) and greater Canada goose (*Branta canadensis*). An 'authorised person' is defined as a person who has written authorisation to undertake the act from the relevant statutory authority. The written authority is in the form of a licence, either a general licence which covers a number of the more typical 'pest' species, or an individual licence for other individual species. In England these licences are issued by Natural England and in Wales by the Welsh Assembly Government.

Please note: the above text provides a brief summary of the legislation in relation to breeding birds in England and Wales and the original Act and any amendments should be referred to for the precise wording.

APPENDIX 2

- 2a Plant Species Recorded on Site**
 - 2b Faunal Species Recorded on Site**
-

Appendix 2a Plant Species List

Common Name	Scientific Name	Species-poor Semi-improved Grassland	Trees and Hedgerows
Woody Species			
Ash	<i>Fraxinus excelsior</i>		R
Bay laurel	<i>Laurus nobilis</i>		O
Blackthorn	<i>Prunus spinosa</i>		LA
Bramble	<i>Rubus fruticosus agg.</i>		F
Common lime	<i>Tilia europaea</i>		O
Copper beech	<i>Fagus sylvatica purpurea</i>		O
Cotoneaster species	<i>Cotoneaster sp.</i>		R
Elder	<i>Sambucus nigra</i>		O
English elm	<i>Ulmus minor</i>		R
Field rose	<i>Rosa arvensis</i>		O
Fig	<i>Ficus carica</i>		R
Garden privet	<i>Ligustrum ovalifolium</i>		A
Hawthorn	<i>Crataegus monogyna</i>		O
Hazel	<i>Corylus avellana</i>		R
Holly	<i>Ilex aquafolium</i>		R
Honeysuckle	<i>Lonicera periclymenum</i>		R
Hornbeam	<i>Carpinus betulus</i>		A
Hybrid black-poplar	<i>Populus sp.</i>		F
Ivy	<i>Hedera helix</i>		F
Japanese barberry	<i>Berberis thunbergii</i>		R
Leyland cypress	<i>Cupressus leylandii</i>		O
Lilac	<i>Syringa vulgaris</i>		R
Maple species	<i>Acer sp.</i>		R
Ornamental cherry	<i>Prunus sp.</i>		O
Pedunculate oak	<i>Quercus robur</i>		X
Sycamore	<i>Acer pseudoplatanus</i>		O
Wild plum/Damson	<i>Prunus domestica spp.</i>		O
Herbs, Grasses and Ferns			
Autumn hawkbit	<i>Scorzonerooides autumnalis</i>	R	
Bird's-foot trefoil	<i>Lotus corniculatus</i>	R	
Bracken	<i>Pteridium aquilinum</i>	O	
Broad-leaved dock	<i>Rumex obtusifolius</i>	F	
Canadian fleabane	<i>Conyza canadensis</i>	O	
Cat's-ear	<i>Hypochaeris radicata</i>	F	
Cleavers	<i>Galium aparine</i>	O	
Cock's-foot	<i>Dactylis glomerata</i>	F	
Common bent	<i>Agrostis capillaris</i>	F	
Common couch	<i>Elytrigia repens</i>	O	
Common field-speedwell	<i>Veronica persica</i>	F	
Common knapweed	<i>Centaurea nigra</i>	O	
Common nettle	<i>Urtica dioica</i>	O	
Common ragwort	<i>Senecio jacobaea</i>	R	
Creeping bent	<i>Agrostis stolonifera</i>	F	
Creeping buttercup	<i>Ranunculus repens</i>	F	
Creeping cinquefoil	<i>Potentilla reptans</i>	O	
Creeping thistle	<i>Cirsium arvense</i>	F	
Daisy	<i>Bellis perennis</i>	O	
Dandelion	<i>Taraxacum officinale agg.</i>	F	
Dove's-foot crane's-bill	<i>Geranium molle</i>	LF	
Field horsetail	<i>Equisetum arvense</i>	R	
Goldenrod	<i>Solidago virgaurea</i>	R	
Great willowherb	<i>Epilobium hirsutum</i>	R	
Greater plantain	<i>Plantago major</i>	O	
Ground-ivy	<i>Glechoma hederacea</i>	O	
Hairy sedge	<i>Carex hirta</i>	R	
Hedge woundwort	<i>Stachys sylvatica</i>	R	

Common Name	Scientific Name	Species-poor Semi-improved Grassland	Trees and Hedgerows
Marigold species	<i>Tagetes sp.</i>	R	
Nipplewort	<i>Lapsana communis</i>	O	
Oxeye daisy	<i>Leucanthemum vulgare</i>	R	
Perennial rye-grass	<i>Lolium perenne</i>	F	
Prickly sow-thistle	<i>Sonchus asper</i>	O	
Red fescue	<i>Festuca rubra</i>	O	
Ribwort plantain	<i>Plantago lanceolata</i>	O	
Rough chevril	<i>Chaerophyllum temulentum</i>	R	
Rough hawkbit	<i>Leontodon hispidus</i>	R	
Slender false-brome	<i>Brachypodium sylvaticum</i>	R	
Smaller cat's tail	<i>Phleum bertolonii</i>	R	
Smooth meadow-grass	<i>Poa pratensis</i>	F	
Smooth sow-thistle	<i>Sonchus oleraceus</i>	O	
Spear thistle	<i>Cirsium vulgare</i>	O	
Violet/pansy (cultivated variety)	<i>Viola sp.</i>	R	
White bryony	<i>Bryonia dioica</i>		O
White clover	<i>Trifolium repens</i>	F	
Wood avens	<i>Geum urbanum</i>	R	
Yarrow	<i>Achillea millefolium</i>	LA	
Yellow loosestrife	<i>Lysimachia vulgaris</i>	R	
Yorkshire fog	<i>Holcus lanatus</i>	F	
Mosses			
Springy turf-moss	<i>Rhytidiadelphus squarrosus</i>	A	

Dafor Key

D = dominant
A - abundant
F = frequent
O = occasional
R = rare

Appendix 2b Faunal Species List

Common Name	Scientific Name
Birds	
Barn swallow	<i>Hirundo rustica</i>
Black-billed magpie	<i>Pica pica</i>
Blue tit	<i>Cyanistes caeruleus</i>
Common blackbird	<i>Turdus merula</i>
Common wood pigeon	<i>Columba palumbus</i>
European goldfinch	<i>Carduelis carduelis</i>
European robin	<i>Erithacus rubecula</i>
Winter wren	<i>Troglodytes troglodytes</i>
Insect	
Small white butterfly	<i>Artogeia rapae</i>
Mammals	
Common mole	<i>Talpa europaea</i>
West European hedgehog	<i>Erinaceus europaeus</i>

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