



**Burleigh Street, Barnsley
Ecological Appraisal**

Park Grove Burleigh Limited

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Summary

Ecus Ltd was commissioned by Park Grove Burleigh Limited in March 2016 to undertake an Ecological Appraisal of two small plots of land separated by Burleigh Street in Barnsley, ahead of proposed development works.

The plots, hereafter referred to as 'the site', comprise an area of semi-improved grassland with boundary introduced shrub planting and scattered trees and an existing car park with perimeter scrub and scattered trees.

The proposals include the construction of a new health centre, with associated access, parking and soft landscaping on the grassland area. Proposals affecting the existing car park are likely to comprise soft landscape planting only.

Habitats across the site are considered to be of importance for nature conservation at the site level only.

Amphibians, badger, reptiles and riparian mammals are not considered to be receptors to the proposed development.

Roosting bats are not currently considered to be a receptor to the development. However, should plans involve impacts to the ivy covered rock face, a nocturnal survey may become applicable, (see paragraph 4.4.4). General enhancement recommendations have been made as best practice.

The introduced shrub planting, scrub and trees have potential to support nesting birds. Where removal of these features is required, this should be undertaken outside of the bird nesting season, which runs from March-August. Should this not be possible, vegetation to be removed should be checked for nesting birds by an experienced ecologist no more than 72 hours prior to removal.

As hedgehogs may be active in the local area, all deep excavations should be covered overnight unless completely fenced off at ground level. Shallow excavations should have scaffold boards or equivalent placed in them overnight to allow any hedgehogs to exit, should they fall in. Should a hedgehog be encountered during works, it should be moved carefully by gloved hand to a suitable area outside the footprint of works.

Invasive plant species are present within the introduced shrub planting. Considerations as to working methods and appropriate disposal will be required where shrub removal is necessary.

No other ecological constraints to development have been identified during the Ecological Appraisal.

Ecological enhancement recommendations appropriate to the site have been included within the report.

1. Introduction

- 1.1.1 Ecus Ltd were commissioned by Park Grove Burleigh Limited in March 2016 to undertake an Ecological Appraisal of land off Burleigh Street in Barnsley (central National Grid Reference: SE 34766 05996). The appraisal was commissioned to inform proposals for development.
- 1.1.2 The purpose of the survey was to carry out an extended Phase 1 habitat survey and to review the potential for the site to contain, or be used by, species protected under both UK and European nature conservation legislation, namely the Wildlife & Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010 (as amended). Any impacts upon these habitats or species likely to result from the proposed development were then assessed.
- 1.1.3 This report details the findings of the survey work and subsequent assessment. Methodologies employed are described including site surveys and evaluation and the need for any further survey work and/or mitigation measures are included, where appropriate.

2. Methodology

2.1 Desk Study and Data Consultation

- 2.1.1 Data consultation was undertaken by Ecus Ltd in March 2016 with Sheffield Biological Record Centre (SBRC), which cover the Barnsley area, as part of the ecological assessment process to determine whether there are any existing biological records or locally designated sites of nature conservation interest within 1 km of the site.
- 2.1.2 Natural England's Multi-Agency Geographical Information for the Countryside (MAGIC) website (www.magic.gov.uk) was consulted in March 2016 for information on statutory designated sites of nature conservation interest within 1 km of the application site.
- 2.1.3 Information obtained from MAGIC and SBRC is included within the report as appropriate.

2.2 Extended Phase 1 Habitat Survey

- 2.2.1 The site was surveyed on 8th March 2016 by consultant ecologist Helen Lloyd MCIEEM following extended Phase 1 habitat survey methodology (JNCC, 2010). The habitats and vegetation types present were recorded on to a field map. This survey method aims to characterise habitats and communities present and is not intended to provide a complete list of all plants occurring across the site.
- 2.2.2 Notable, rare or scarce plant species were highlighted if present. Evidence of protected species or species of nature conservation importance was recorded where present at the time of survey. Species recorded are included within the report as appropriate and a full list of species recorded on the day of survey is provided in Appendix 2. Information is presented in Figure 1, using Target Notes (TN) to identify particular features of interest, where appropriate.
- 2.2.3 Habitats and species of principal importance listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 and habitats and species listed on the local Biodiversity Action Plan (LBAP) for Barnsley were noted where present.
- 2.2.4 The value and sensitivity of ecological features present on site were determined based on the guidance given in 'Guidelines for Ecological Impact Assessment' (CIEEM, 2016). Individual ecological receptors (habitats and species that could be affected by the development) for the scheme were assigned levels of importance for nature conservation. The highest level is international, then decreasing in order of importance through national, regional, county, local to lastly, site level only.

2.3 Protected and Key Species Survey

- 2.3.1 Any evidence of protected species or groups encountered during the survey was recorded. This included observations of field signs and an assessment of the suitability of the habitats present to support protected species. For full details of legislation relating to all habitats and species discussed within this report visit <http://www.legislation.gov.uk>.

Amphibians

- 2.3.2 Waterbodies within 500 m of the survey area, which are not separated from the site by a major barrier, were searched for using an Ordnance Survey (OS) map.
- 2.3.3 No ponds or other waterbodies, not separated from the site by a major barrier, are present within 500 m of the site. Consequently great crested newts (*Triturus cristatus*) are not considered to be a receptor in relation to the proposed development and are not discussed further within this report. The suitability of the site habitats to support common amphibians is considered.

Badger

- 2.3.4 Signs of badger (*Meles meles*) activity were searched for as part of the extended Phase 1 survey. Survey followed standard methodology detailed in Surveying Badgers (Harris *et al.*, 1989). This included survey for badger setts, along with survey of linear features and boundaries for signs of badger activity including dung pits, foraging marks, feeding signs and pathways.

Bats

- 2.3.5 There are no buildings present on site to offer roosting opportunities for bats; however, there is a sandstone rock face on the north-west facing boundary of the site that was assessed for bat roost/hibernation potential.

Tree inspection

- 2.3.6 Trees within the survey area were assessed for their potential to support roosting bats as part of the extended Phase 1 habitat survey.
- 2.3.7 An individual tree may have several features of potential interest to roosting bats associated with it. It is not always possible to confirm usage of a feature by bats as often the animals may be present on one day and no evidence of occupation may be found on the next. Consequently it is customary when undertaking such surveys to assign each feature to a defined category of roosting potential as follows: Negligible, Low, Moderate, High, Confirmed (Collins, 2016).
- 2.3.8 The survey area was also assessed for its suitability for foraging and commuting bats.

Birds

- 2.3.9 Formal bird survey was not undertaken as part of this assessment, however during the survey the opportunity was taken to record all species of birds encountered and to assess the suitability of the habitats present to support nesting and foraging birds.

Reptiles

- 2.3.10 The habitats present on site were assessed for their suitability to support basking, foraging and hibernating reptiles, with reference to their connectivity with other suitable habitat in the surrounding area.

Riparian mammals and white-clawed crayfish

- 2.3.11 Ecus Ltd typically search for watercourses located within 30 m of the survey

area, which are not separated from the site by a major barrier, using an Ordnance Survey (OS) map. No watercourses are present within 30 m of the site and consequently water vole (*Arvicola amphibius*), otter (*Lutra lutra*) and white-clawed crayfish (*Austropotamobius pallipes*) are not considered receptors for the proposed development. These species are not discussed further in this report.

Other protected and key species

2.3.12 The opportunity was taken whilst on the site to assess habitats for their potential to support any other nationally or locally scarce or otherwise notable species, or any species protected under national or international nature conservation law.

2.4 Invasive species

2.4.1 The opportunity was taken during the extended Phase 1 habitat survey to record the presence of any invasive plant or animal species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), where present.

2.5 Survey Limitations

2.5.1 Whilst the survey was undertaken outside the optimal botanical survey season, extended Phase 1 habitat survey methodology allows for habitats to be broadly characterised at any time of year and it is considered that sufficient information was gathered to undertake an accurate assessment of the site habitats and provide a robust evaluation of habitat types and the overall site character.

3. Survey Findings

3.1 General Site Description

- 3.1.1 The site comprises a c.0.2 ha area of semi-improved grassland with perimeter borders of introduced shrub planting and occasional scattered trees and a c.0.1ha existing car park with sandstone rock-face, partially covered by perimeter scrub and trees.
- 3.1.2 The site is bordered by the A61 dual-carriageway (Sheffield Road) to the north-east, with a mixture of housing and office buildings to the south-east, south-west and north-west and is set within close proximity to Barnsley town centre.

3.2 Designated Sites

- 3.2.1 No statutorily designated sites of importance to nature conservation were identified within 1 km of the site using MAGIC, however Dearne Valley Local Nature Reserve (LNR) was identified approximately 1.1 km north-east of the site, which is considered to be of importance to nature conservation at up to county level.
- 3.2.2 No non-statutorily designated sites of importance for nature conservation were identified within 1 km of the site by SBRC.

3.3 Habitats

Semi-improved grassland

- 3.3.1 The site is dominated by medium sward semi-improved grassland, comprising co-dominant perennial rye-grass (*Lolium perenne*) and cock's-foot (*Dactylis glomerata*) with frequent Yorkshire fog (*Holcus lanatus*) and bent (*Agrostis* sp.). Forb species present within the sward include abundant creeping buttercup (*Ranunculus repens*), white clover (*Trifolium repens*), ribwort plantain (*Plantago lanceolata*) and dandelion (*Taraxacum officinale* agg.) with occasional broadleaved dock (*Rumex obtusifolius*) and common ragwort (*Jacobaea vulgaris*) also recorded.
- 3.3.2 The species present are coarse, common species typically found within managed grassland and do not indicate a previously species-rich sward. Whilst semi-improved grassland is listed as priority habitat on the Barnsley LBAP, it is of limited extent on site and isolated from other similar habitat. As such, the grassland on site is not considered to be of importance to nature conservation outwith the site level.

Introduced shrub

- 3.3.3 Mature introduced shrub planting lines the perimeters of the grassland on all aspects, with occasional gaps at the corners which act as cut through points for pedestrian access. The north-eastern planted strip is the widest, encompassing an embankment which slopes down towards the A61. Recent pruning undertaken part way along this slope was evident.
- 3.3.4 A variety of introduced shrub species are present throughout the planting, which include a high proportion of Franchet's and small-leaved cotoneaster (*Cotoneaster franchetti*, *C. microphyllus*) and berberis species (*Berberis*

julianae, *B. thunbergii*), along with wall cotoneaster (*Cotoneaster horizontalis*), Wilson's honeysuckle (*Lonicera nitida*), yellow barked dogwood (*Cornus stolonifera flaviramea*), and Japanese rose (*Rosa rugosa*). Scattered native species, that have possibly self-set, also include dog rose (*Rosa canina*), elder (*Sambucus nigra*) and broom (*Cytisus scoparius*) with frequent ivy (*Hedera helix*) at ground level.

- 3.3.5 The introduced shrub is well established but predominantly comprises introduced, non-native species, including four species which are classed as invasive (see 3.5.1 below for further details). In addition, introduced shrub planting is likely to be frequent within the surrounding area and can be readily replaced post-development. As such, the introduced shrub planting on site is not considered to be of importance to nature conservation outwith the site level.

Scattered trees and scrub

- 3.3.6 Boundary trees within the introduced shrub comprise three semi-mature to early mature ash (*Fraxinus excelsior*) trees and an early mature silver birch (*Betula pendula*). An early mature sycamore (*Acer pseudoplatanus*) and group of young cherry (*Prunus* sp.) trees are present within the car park perimeters along with frequent scrub comprising yellow barked dogwood, Franchet's cotoneaster, and elder with occasional bramble and broom. Bracken (*Pteridium aquilinum*) is locally abundant along the south-western aspect of the car park area.
- 3.3.7 The trees comprise native species but are not notable specimens and similar scattered tree habitat is present within the local area. The scrub is moderately diverse but includes introduced species and similar habitat is available. As such, the trees and scrub on site are not considered to be of importance to nature conservation outwith the site level.

3.4 Species

Amphibians

- 3.4.1 No records of common amphibian species within 1 km of the site were returned by SBRC.
- 3.4.2 Whilst grassland and shrub bases on site may present some suitable habitat for common amphibian foraging and shelter, there are no existing records, no waterbodies on site or within 500 m and the site is surrounded by roads including a dual-carriageway, which presents a major barrier to amphibian movement. As such, common amphibians are not considered to be a receptor to the development and are not discussed further within the report.

Badger

- 3.4.3 No records of badger within 1 km of the site were returned by SBRC.
- 3.4.4 The site does not offer suitable sett building habitat, is frequently disturbed by pedestrians, is limited in extent and lacks connectivity with other suitable badger habitat. Badger are not considered to be a receptor to the proposed development and are not discussed further within the report.

Bats

- 3.4.5 A total of 21 bat records within 1 km of the site were supplied by SBRC. These comprise a single common pipistrelle (*Pipistrellus pipistrellus*) record, two soprano pipistrelle (*Pipistrellus pygmaeus*) records, 11 indeterminate pipistrelle species records (*Pipistrellus* sp.) and seven records where the species was undetermined. Thirteen of the records appear to pertain to roosts, whilst no details of the record type was available for the other records. The closest roost record is located 430 m north of the site and pertained to an indeterminate pipistrelle species in 1992.

Tree inspection

- 3.4.6 The trees on site were inspected from ground level, for features that may be of interest to roosting bats, such as missing limbs and cavities, rot holes and woodpecker holes. The main trunk of the sycamore is covered by ivy, which displays low bat roost potential. None of the other trees were found to contain any features considered to be of greater than negligible potential for roosting bats.

Rock face

- 3.4.7 No suitable cracks or fissures to offer bat roosting opportunities were observed on the exposed north-west facing rock face behind the car park (TN1, Figure 1), however the north-east facing rock face is covered by a dense covering of mature ivy growth with potential gaps behind stems that display up to low bat roost potential.
- 3.4.8 The boundary planting, trees and scrub on site have some potential to contribute to the foraging resource available for bats, should they be resident within the surrounding area. However, it is considered suboptimal due to its limited extent, lack of direct connectivity with any significant areas of high quality habitat and lightspill from the A61 and general street lighting. As such, the site is not considered to be of importance to foraging bats outwith the site level.

Birds

- 3.4.9 A total of thirty-two bird species records were supplied by SBRC, of which, none are Wildlife and Countryside Act 1981 (as amended) Schedule 1 list bird species.
- 3.4.10 In 2015, a re-assessment of Birds of Conservation Concern (BoCC) was published by Eaton et al. (2016), which defines rare and threatened bird species on two lists (Red and Amber) describing the level of threat to each species of concern.
- 3.4.11 “Red” is the highest conservation priority, with species needing urgent action due to either a historical decline in breeding population, severe (>50 %) decline in breeding or non-breeding population, or severe decline in breeding range over 50 years or more. “Amber” is the next most critical group, with species qualifying for this status as a result of either recovery from red list criterion, being classed as rare breeders in the UK, moderate (>25 %) decline in breeding or non-breeding population or moderate decline in breeding range over 25 years or more. These categories are followed by Green, indicating that the species are relatively unthreatened.

3.4.12 The SBRC records include five BoCC Red list species, eight Amber list species and 19 Green list species, as detailed within Table 1 below.

Table 1. Bird species recorded within 1 km of the site.

Common name	Latin name	Status
House sparrow	<i>Passer domesticus</i>	Red
Mistle thrush	<i>Turdus viscivorus</i>	Red
Song thrush	<i>Turdus philomelos</i>	Red
Starling	<i>Sturnus vulgaris</i>	Red
Tree pipit	<i>Anthus trivialis</i>	Red
Black-headed gull	<i>Chroicocephalus ridibundus</i>	Amber
Dunnock	<i>Prunella modularis</i>	Amber
House martin	<i>Delichon urbica</i>	Amber
Kestrel	<i>Falco tinnunculus</i>	Amber
Nightjar	<i>Caprimulgus europaeus</i>	Amber
Pink-footed goose	<i>Anser brachyrhynchus</i>	Amber
Shoveler	<i>Anas clypeata</i>	Amber
Swift	<i>Apus apus</i>	Amber
Blackbird	<i>Turdus merula</i>	Green
Blackcap	<i>Sylvia atricapilla</i>	Green
Blue tit	<i>Cyanistes caeruleus</i>	Green
Carrion crow	<i>Corvus corone</i>	Green
Chaffinch	<i>Fringilla coelebs</i>	Green
Coal tit	<i>Periparus ater</i>	Green
Collared dove	<i>Streptopelia decaocto</i>	Green
Goldfinch	<i>Carduelis carduelis</i>	Green
Great tit	<i>Parus major</i>	Green
Greenfinch	<i>Carduelis chloris</i>	Green
Jackdaw	<i>Corvus monedula</i>	Green
Magpie	<i>Pica pica</i>	Green
Nuthatch	<i>Sitta europaea</i>	Green
Robin	<i>Erithacus rubecula</i>	Green
Siskin	<i>Carduelis spinus</i>	Green
Sparrowhawk	<i>Accipiter nisus</i>	Green
Waxwing	<i>Bombycilla garrulus</i>	Green
Wood pigeon	<i>Columba palumbus</i>	Green
Wren	<i>Troglodytes troglodytes</i>	Green

3.4.13 Dunnock, blackbird and blue tit (*Carduelis carduelis*) were observed utilising habitats on site on the day of survey.

3.4.14 The introduced shrub planting and scattered trees on site provide good habitat structure for nesting and sheltering birds and contribute to foraging resources within the local area. However site habitats are limited in extent and are not considered to be critical to any one bird species in particular. As similar habitat is present within the local area, the habitats present on site are

considered to be of importance to nesting and foraging birds at the site level only.

Reptiles

- 3.4.15 No records of reptiles within 1 km of the site were received from SBRC.
- 3.4.16 The grassland and shrub bases are suitable to support basking and sheltering reptiles, however these habitats are limited in extent and severed from other suitable reptile habitat in the wider area by the high density road network. As such, reptiles are not considered to be a receptor to the proposed development and are not discussed further within the report.

Other protected/notable species

Hedgehog

- 3.4.17 A single hedgehog (*Erinaceus europaeus*) record was supplied by SBRC, relating to Worsborough Common, approximately 800 m south of the site.
- 3.4.18 The existing record is a considerable distance from the site, however the grassland and shrub bases on site provide suitable habitat for foraging hedgehog, should they be present within the local area and move across the site as part of a wider territory. However, the setting of the site is sub optimal due to the roads surrounding it and therefore the habitats are not considered to be of importance to hedgehog outwith the site level.

Fox

- 3.4.19 No records of fox (*Vulpes vulpes*) were included within those supplied by SBRC.
- 3.4.20 The urban setting of the site presents high potential to be used by urban fox. No evidence of an active den was recorded on site during the survey, however signs that indicated fox cross the site as part of a wider area were present, including two fox scats within the semi-improved grassland (TN2 and TN3, Figure 1) and a narrow train leading down through ivy on the north-western site boundary (TN4, Figure 1).

3.5 Invasive species

- 3.5.1 A single record of unidentified cotoneaster (*Cotoneaster* sp.) and three records of Japanese knotweed (*Fallopia japonica*) have been made within 1 km of the site. Records relate to a single location approximately 530 m north-east of the site.
- 3.5.2 A total of four species, comprising Franchet's cotoneaster, small leaved cotoneaster, wall cotoneaster and Japanese rose, that are present within the introduced shrub planting on site are listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). Franchet's and small-leaved cotoneaster comprise a large component of the introduced shrub planting, whilst the wall cotoneaster and Japanese rose appear to be single specimens only (TN5 and TN6, Figure 1 respectively).
- 3.5.3 No other high risk invasive species such as Japanese knotweed were noted on site during the survey.

4. Ecological Assessment & Mitigation

4.1 Proposed Development

- 4.1.1 The assessment of any impacts of the proposed development upon species and habitats present is based on the proposed site layout produced by P+HS dated March 2016 (Drawing Ref: 2562-D-00-SK21 Rev A). The proposals include the construction of a health centre, with associated access, parking and soft landscaping and possible new soft landscaping around the existing car park.
- 4.1.2 Total landtake of the semi-improved grassland will be required to accommodate the proposal. Whilst some retention of introduced shrub planting, such as on the embankment slope, may be possible, landtake to accommodate the building footprint and create access will be required.

4.2 Sites of Nature Conservation Importance

- 4.2.1 There are no statutorily or non-statutorily designated sites within 1 km of the site to be affected by the proposed development, with Dearne Valley LNR located 1.1 km from site. The LNR is located a significant distance away, with connectivity limited by high density infrastructure. No mechanism has been identified by which the LNR, or the habitats and species that its supports, will be affected by the proposed development.

4.3 Habitats

Semi-improved grassland

- 4.3.1 Complete landtake of the grassland on site is required to accommodate the proposed development. The grassland is of limited botanical interest and landtake is considered to be of importance to nature conservation at the site level only.

Introduced shrub

- 4.3.2 The extent of introduced shrub removal required is currently unconfirmed. However, from the supplied preliminary site plan, landtake of the majority of shrub along the south-western and north-western boundaries is considered likely. Retention along the majority of the south-eastern and north-eastern boundaries appears feasible.
- 4.3.3 Retention of established shrub, where practicable, is encouraged to retain habitat structure and ecological value on site. However, where removal is required, landtake would not be considered of importance to nature conservation at greater than the site level. As the shrub includes invasive species, consideration to minimizing spread off site will be required. See section 4.5 below for further details.
- 4.3.4 Following a best practice approach, it is recommended that consideration be given to planting of native or known wildlife-attracting species within the landscaping scheme to replace and enhance the habitat lost. An ecologically sensitive landscaping plan has the potential to benefit invertebrates and birds and enhance the ecology of the proposed scheme, hereby complying with the National Planning Policy Framework (NPPF) aim that "opportunities to

incorporate biodiversity in and around developments should be encouraged" (NPPF, 2012).

- 4.3.5 Where possible, native species should be favoured and species chosen should maximise flowering, pollen/nectar production and/or berries/fruit production to benefit invertebrates, birds and small mammals.

Scattered trees and scrub

- 4.3.6 As the trees on site are of such limited number and not of particular note in terms of age, should landtake be required, it would not be considered of importance to nature conservation outwith the site level.
- 4.3.7 Scrub on site appears self-set and can be readily replaced and enhanced, therefore landtake is not considered to be of importance to nature conservation at greater than the site level.
- 4.3.8 Enhancement through additional tree planting and replacement native shrub planting could be included within the proposed landscaping scheme. Where practicable, new planting should comprise native species of local provenance, which will increase species diversity and compliment the local area. Where feasible, heavy standard trees are recommended to reduce establishment time and provide immediate structure and habitat.
- 4.3.9 Taking a best practice approach to nature conservation issues, should boundary trees be retained, British Standard 5837 (2012): Trees in relation to Design, Demolition and Construction, should be followed. Root Protection Zones (RPZ's) should be calculated and implemented to prevent harm to, and possible subsequent failure of, the tree from root and soil compaction.

4.4 Species

Bats

- 4.4.1 All species of bat occurring within the UK are included in Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (as amended). Under regulation 41 bats are protected from deliberate capture, injury or killing, from deliberate disturbance and from deliberate damage or destruction of a breeding site or resting place (roost).
- 4.4.2 All UK bats are also included on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). However, their protection is limited to certain offences. Under the 1981 Act (as amended) it is an offence to intentionally or recklessly disturb bats while they are occupying a structure or place used for shelter or protection, or to obstruct access to any such place.
- 4.4.3 Barbastelle (*Barbastella barbastellus*), Bechstein's (*Myotis bechsteini*), brown long-eared (*Plecotus auritus*), greater horseshoe (*Rhinolophus ferrumequinum*), lesser horseshoe (*Rhinolophus hipposideros*), noctule (*Nyctalus noctula*) and soprano pipistrelle bats are included as priority species under Section 41 of the NERC Act 2006.
- 4.4.4 Impacts to the ivy covered sycamore and rock face are not currently anticipated, however should plans change to include actions such as direct removal of the ivy or excavating the rock, further survey in the form of one

nocturnal bat survey is recommended, between mid-May and September inclusive, as per recommended guidelines (Collins, 2016). If the ivy were to be killed and left in-situ i.e. cut at the base, no survey is considered necessary.

- 4.4.5 Taking a best practice approach to nature conservation issues, it is recommended that consideration could be given to incorporating long term bat roosting provision within the fabric of the new building, where practicable, as an ecological enhancement to the site. Suitable examples of integral roosting provision include Schwegler 1FR tubes or Habibat bat boxes. These provide integral roosting provision that is both discreet and secure, creating a self-contained unit that does not provide access into the wall cavity. Bat tubes/boxes should be placed a minimum of 4 m from ground level ideally on southerly facing aspects, close to eaves level. Further information on installing bat roosting provision can be provided by Ecus if required.

Birds

- 4.4.6 All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended) against destruction of the nest during the bird nesting season, which falls between March and August, inclusive.
- 4.4.7 Partial landtake of shrub habitat and standard trees will be required. Given the presence of similar habitat within the wider area and the limited extent of the landtake required, the landtake associated with the proposed development is not considered to be of importance to nesting and foraging birds outwith the site level.
- 4.4.8 Without mitigation there is potential for active bird nests to be destroyed during vegetation clearance on site. Therefore, it is recommended that where possible any vegetation removal should be scheduled outside of bird breeding season i.e. undertaken between September and February inclusive. If it is not possible to schedule clearance works for these months, a breeding bird check undertaken by a suitably qualified ecologist will be required no more than two days prior to clearance, to check for the presence of active bird nests. An active nest would require an exclusion zone to be established and adhered to until chicks have fledged (to be monitored and confirmed by an ecologist).
- 4.4.9 Inclusion of bird nesting provision across the development would be considered a positive enhancement for nature conservation and would comply with the NPPF aims for biodiversity (2012). Suitable provision may include general bird boxes with 26 mm and 32 mm entrance holes suitable for a range of bird species, such as the Schwegler 1B and Avianex bird boxes. The bird box(es) should be fitted to the new building at a minimum height of 3 m. If siting multiple boxes, they should be in a number of locations facing different aspects to maximise the chances of occupation. However, full south aspects which receive full sun all day during the summer months present a risk of overheating and should therefore be avoided.

Other protected/notable species

Hedgehog

- 4.4.10 Hedgehog are listed as a species of principal importance on the NERC Act 2006 and whilst they do not receive a high degree of legal protection, they are

a species in decline and should be taken into consideration during works.

- 4.4.11 As hedgehogs may be active in the local area and could move across the site at any time, taking a best practice approach, all deep excavations should be covered overnight unless completely fenced off at ground level. Shallow excavations should have scaffold boards or equivalent placed in them overnight to allow any hedgehogs to exit, should they fall in.
- 4.4.12 Should a hedgehog be encountered during works, it should be moved carefully by gloved hand to a suitable area of shelter outside the footprint of works.

Fox

- 4.4.13 Foxes are protected under the Animal Welfare Act 2006 against unnecessary suffering.
- 4.4.14 As no den was recorded on site, it is assumed that foxes are not resident and therefore no specific mitigation measures are recommended in relation to this species.

4.5 Invasive Species

- 4.5.1 Whilst the presence of invasive species on site is not an offence in itself, Schedule 9 of The Wildlife and Countryside Act 1981 (as amended) states that, 'if any person plants or otherwise causes to grow in the wild any plant which is included in Part II of Schedule 9, he shall be guilty of an offence'.
- 4.5.2 Works in areas where cotoneaster and Japanese rose are present can inadvertently result in an offence through spread of seeds via people or machinery and disposal of contaminated waste material from a site.
- 4.5.3 As an initial measure, contractors should be made aware of their presence to avoid inadvertent spread. Following best practice, it is recommended that any cotoneaster and Japanese rose due to be removed should be grubbed out and chipped, with care taken to avoid spread through transfer of berries in particular. The chipped arisings should be transported to a licenced composting/green waste facility in a covered container to avoid inadvertent spread of plant material. The receiving waste facility should be made aware of the nature of the green material.
- 4.5.4 It is recommended that any new landscape planting should incorporate native species, where practicable, and avoid any species listed on Schedule 9.

5. References

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
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Figure 1. Survey Findings

Legend

-  Survey area
-  SI Semi-improved grassland
-  Introduced shrub
-  Dense scrub
-  Hardstanding
-  Scattered trees (indicative)
-  Target note
-  Pedestrian trodden track



Park Grove Burleigh Limited
Burleigh Street, Barnsley
Ecological Appraisal

Figure 1
Survey Findings

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Appendix 1. Target Notes

TN1. Ivy covered rock face, displaying low bat roost potential.

TN2. Likely fox scat in grassland.

TN3. Likely fox scat in grassland.

TN4. Likely fox trail leading down through ivy.

TN5. *Cotoneaster horizontalis* x 1 specimen noted adjacent to access gap.

TN6. Japanese rose x 1 specimen noted on the inside edge of the introduced shrub.

Appendix 2. Site Images

Legend

Plate 1. Looking south-east across semi-improved grassland and boundary introduced shrub planting.

Plate 2. Looking westwards across semi-improved grassland and introduced shrub planting.

Plate 3. Exposed north-west facing rock face at back of car park.

Plate 4. Ivy covered north-east facing rock face at back of car park.



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Site Images

Appendix 2. Site Images

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Appendix 3. Species List

Species List

Table A3.1. Species recorded on day of survey

Common name	Scientific name	DAFOR
Semi-improved grassland		
Cock's-foot	<i>Dactylis glomerata</i>	CoD
Perennial rye-grass	<i>Lolium perenne</i>	CoD
Creeping buttercup	<i>Ranunculus repens</i>	A
Ribwort plantain	<i>Plantago lanceolata</i>	A
White clover	<i>Trifolium repens</i>	A
Bent sp.	<i>Agrostis sp.</i>	F
Dandelion	<i>Taraxacum officinale agg</i>	F
Yorkshire fog	<i>Holcus lanatus</i>	F
Broadleaved dock	<i>Rumex obtusifolius</i>	O
Common ragwort	<i>Jacobaea vulgaris</i>	O
Introduced shrub		
Franchet's cotoneaster	<i>Cotoneaster franchetti*</i>	D
Berberis	<i>Berberis julianae</i>	A
Small-leaved cotoneaster	<i>Cotoneaster microphyllus*</i>	A
Dog rose	<i>Rosa canina</i>	F
Berberis	<i>Berberis thunbergii</i>	O
Elder	<i>Sambucus nigra</i>	O
Yellow barked dogwood	<i>Cornus stolonifera</i> <i>Flaviramea</i>	O
Broom	<i>Cytisus scoparius</i>	R
Japanese rose	<i>Rosa rugosa*</i>	R
Wall cotoneaster	<i>Cotoneaster horizontalis*</i>	R
Wilson's honeysuckle	<i>Lonicera nitida</i>	R
Scattered trees and scrub		
Ash	<i>Fraxinus excelsior</i>	D
Cherry	<i>Prunus sp.</i>	O
Silver birch	<i>Betula pendula</i>	O
Sycamore	<i>Acer pseudoplatanus</i>	R
Bracken	<i>Pteridium aquilinum</i>	LoA
Yellow barked dogwood	<i>Cornus stolonifera</i> <i>Flaviramea</i>	LoA
Common hogweed	<i>Heracleum sphondylium</i>	A
Franchet's cotoneaster	<i>Cotoneaster franchetti*</i>	A
Elder	<i>Sambucus nigra</i>	O
Broom	<i>Cytisus scoparius</i>	R

*Wildlife and Countryside Act 1981 (as amended) Schedule 9 listed invasive species.