

Habitat Survey &
Protected Species Assessment
Land off Dodworth Road,
Barnsley,
South Yorkshire

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1.0 INTRODUCTION

Smeeden Foreman Limited has been commissioned by Bellway Homes to undertake an ecological assessment of an area of land off Dodworth Road in Barnsley, South Yorkshire, (Grid Reference SE 331 063). The site includes a large red brick building that is no longer in use. Two small garages are also present within the site boundary, a timber container unit, and a flat roofed breeze block structure; these buildings are no longer in use. The majority of the habitat on site comprises hardstanding/compacted gravel, which is slowly being colonised by ephemeral and short perennial herbaceous plants. A small area of woodland is also present along the eastern boundary of the site; this area includes a mixture of mature and semi-mature deciduous trees. Areas of tall ruderal vegetation are also present around the periphery of the site, with dominant species such as *Buddleja* and Japanese knotweed also identified in several areas.

The site was surveyed using the standard Phase I methodology, and was assessed for its potential to support protected species. Consultation has also been undertaken with relevant local record centres. The survey was undertaken on the 25th July, 2011. From the findings of the initial ecology survey it was ascertained that the main factory building on site has a moderate potential to support roost bats, and as such it was recommended that bat activity surveys would be required prior to its removal. This report also details the findings of bat activity surveys carried out in August, 2011. The proposed development is for the addition of residential properties, with associated gardens and parking.

2.0 SITE DESCRIPTION

Located within Barnsley, the site is approximately 1 mile to the west of Barnsley town centre. The land to the immediate west of the site is currently being developed by Bellway Homes to provide residential properties. Dodworth Road runs to the south of the site, with a semi-detached bungalow located between the road and the proposed development site. The site is surrounded by a combination of residential and commercial properties, with the grater area primarily used for agriculture. The M1 motorway is situated approximately 1 km to the east of the site. A rail line runs along the northern boundary of the site, buffered by a steep embankment.



Land for proposed development



The site incorporates a number of habitat types including: a woodland belt along the eastern boundary comprising mature and semi-mature hawthorn, sycamore, black poplar, cherry, elder, and ash trees. Tall ruderal vegetation is also present around the periphery of the site containing; bracken, rosebay willowherb, common nettle and brambles. The areas of hardstanding and compacted gravel that make-up the majority of the site have now become colonised by a range of ephemeral and short perennial herbaceous plant species, including: broad-leaved willowherb, pineappleweed, common ragwort, autumn hawksbit, canadian fleabane, weld, and *Buddleja*. Japanese knotweed is also present within the wooded area to the east, along the northern boundary line and alongside the western boundary.

Dearne Valley Park Local Nature Reserve (LNR) is located approximately 4.8km to the south east of the proposed development site. This area has been afforded protection due to the presence of relict habitats and reclaimed colliery/associated uses around a river valley. The area also includes managed amenity grassland, acidic oak woodland, and wetland habitats.

Worsbrough Country Park Local Nature Reserve (LNR) is located approximately 4km to the south of the proposed site. This area of protected habitat includes: a reservoir, willow carr, managed grassland/meadowland, reed bed and woodland, and also supports a diverse range of water fowl.

3.0 BASELINE INFORMATION

3.1 Methodology

The ecological interest of the site has been investigated by a combination of desk study, consultation, and field survey.

Information was requested from the following organisations:

- Sheffield Biological Records Centre
- South Yorkshire Bat Group
- Natural England

The following sources of information were consulted:

- www.magic.gov.uk (government web sites for nature conservation and environmental information)
- Local Biodiversity Action Plan – Barnsley
- National Biodiversity Network (NBN) Gateway
- Aerial photographs

3.2 Local Biodiversity Action Plan

Habitat types for which action plans have been prepared for the Barnsley Initiative include:

Upland Oak Woodland
Upland Mixed Ash Woodland
Wet Woodland
Parkland
Ancient and Species-Rich Hedgerows
Cereal Field Margins
Floodplain Grazing Marsh



Lowland Meadows
Lowland Dry Acidic Grassland
Lowland Heathland
Upland Heathland
Rush Pasture
Reedbeds
Ponds and Canals
Running Water
Standing Water
Urban Built-Up Areas
Post-Industrial Derelict and Degraded Land

Of the habitats afforded Biodiversity Action Plans in Barnsley, the proposed development site should be considered to contain: Post-Industrial Derelict and Degraded Land, this habitat type should be considered within the proposed development plans.

Protected species with Local Biodiversity Action Plans include:

Brown Hare
Water Vole
Great Crested Newt
White-Clawed Crayfish
Bittern
Grey Partridge
Little Ringed Plover
Skylark
Song Thrush
Tree Sparrow
Twite
Linnet
Corn Bunting
Otter
Pipistrelle Bat
Lapwing
Barn Owl
Bluebell
Glow Worm

Of the species afforded Biodiversity Action Plans in Barnsley, the proposed development site may provide suitable habitat for foraging pipistrelle bats, and for nesting and foraging song thrush, tree sparrow, and linnet.

3.3 Nature Conservation Designated Sites

Statutory designations

There are no statutory designated sites within 2km of the proposed development site, such as: Special Protection Area (SPA), Special Areas of Conservation (SAC), or Site of Special Scientific Interest (SSSI).



Non-statutory designations

There are no non-statutory designated sites within 2 km of the proposed development sites, such as: Local Nature Reserves (LNR), Sites of Ecological or Geological Importance, (SEGI), and Regionally Important Geological and Geomorphological Sites (RIGS).

Dearne Valley Park Local Nature Reserve (LNR) is located approximately 4.8km to the south east of the proposed development site. This area has been afforded protection due to the presence of relict habitats and reclaimed colliery/associated uses around a river valley. The area also includes managed amenity grassland and pockets of acidic oak woodland with mosaic a of wetland habitats.

Worsbrough Country Park Local Nature Reserve (LNR) is located approximately 4km to the south of the proposed site. This area of protected habitat includes: a reservoir, willow carr, managed grassland/meadowland, reed bed and woodland, and also supports a diverse range of water fowl.

3.4 Existing Species Records

Sheffield Biological Record Centre has provided records of protected species within 2km of the proposed development site, full details of which are provided within Appendix 2. The records within the closest proximity to the site are listed below:

UK Protected Species

The UK protected species records comprise:

- Water vole – SE 33 04 Brough Green – 01.01.85, 25.03.91, & 06.06.91 – field record approximately 2km south west of the site
- Leisler's bat – SE 33 07 – 12.07.05 & 18.08.05 – field records approximately 600m north west of the site

Priority Species (UK and Local Biodiversity Action Plans)

The desk study identified species that are listed in the UK Biodiversity Action Plan within 2km of the site including: common frog and hedgehog.

South Yorkshire Bat Group has provided records of bats within 2km of the proposed development site, full details of which are provided within Appendix 2. The records within the closest proximity to the site are listed below:

- Unknown bat species - SE 31 07 – 2003 – approximately 400m south west of the site

A search on the NBN gateway provided records for: slow worm, grass snake, common lizard, adder, great crested newt, red deer, pine marten, fallow deer, water vole, otter, red squirrel, badger, whiskered/Brandt's bat, whiskered bat, long-eared bat species, Leisler's bat, Daubenton's bat, common pipistrelle bat, unknown bat species, brown long-eared bat, Natterer's bat, noctule, pipistrelle species and soprano pipistrelle bat.



3.5 Bat Species in South Yorkshire

In the South Yorkshire area, ten species of bats are known to occur – Soprano and common pipistrelle bats, noctule, Daubenton's, whiskered, Brandt's, natterer's and brown long-eared bats – as well as the Leisler's bat which is rare and at the northern limit of its range in Yorkshire.

Common and soprano pipistrelle bats both roost frequently in buildings, often in modern houses and typically in confined spaces such as between roof tiles and roof felt, behind barge boards and in cavity walls. Common pipistrelle bats are found throughout the region. In general Soprano pipistrelles have a northerly distribution within Britain, and are commonly found in Yorkshire.

Brown long-eared bats are thought to be relatively common and widely distributed in Yorkshire. This species of bat generally requires large open roof spaces for pre-emergence flight within the roost, but they have been found roosting in tree holes and bat boxes in both summer and winter.

Noctule bats are considered to have a widespread distribution in the region. Noctule bats primarily roost in rot holes and crevices in large mature trees both in summer and winter but are also occasionally found using buildings and bat boxes.

Natterer's bats tend to roost in old stone buildings, wooden beams in barns, sometimes tree holes but most commonly in churches. In Yorkshire, this species is widely but thinly distributed.

Daubenton's bats are fairly common and widespread in the region and are often found roosting in bridges, tree holes, tunnels, and sometimes in stone buildings close to water in the summer.

Whiskered and Brandt's bats are difficult to separate and are often grouped together. They have similar physical features, habitat preference and roosting requirements, using houses, barns, churches and sometimes trees for summer roosting, and underground sites in the winter.

Leisler's bats have been found roosting in buildings, but are mainly found in suitable crevices and rot holes in mature trees. Leisler's bats have been recorded foraging in pasture and woodland as well as urban parks, but are at the northern limit of their range in this area. It is a highly mobile species, changing roosts frequently and using tree holes, bat boxes and buildings, both new and old. In buildings, they have been found in a variety of places, including around gable ends, between tiles and under-felt, under ridge tiles, above large soffit boards, behind hanging tiles, behind window shutters and in disused chimneys. Although not a common species in Britain with an estimated population of 10,000, this species is relatively common in Yorkshire, including within urban environments.

Nathusius' pipistrelle have been recorded in South Yorkshire, however the population is currently thought to be relatively small. As an increasing number of Nathusius' pipistrelle are being recorded in England, suspected of migrating from mainland Europe, there is potential for this species to be found in increasing numbers. However, this species is mainly associated with woodlands and does not tend to roost in buildings, preferring tree roosting.



4.0 FINDINGS

4.1 Phase I Habitat Survey

A walk over survey was undertaken on the 25th July, 2011. Habitat types and key species were noted and are presented in the Phase I Habitat format proposed by the Joint Nature Conservation Committee (1993). During this initial survey an internal and external building inspection was also conducted, to establish if bats are present and assess the buildings' potential to support roosting bats. Refer Figure 1.

Ephemeral/short perennial



The majority of the site comprises compacted gravel and hadstanding, (**Target note 1**). These areas are slowly being colonised by ephemeral and perennial plant species indicative of waste land habitats. These species include: broad-leaved willowherb *Epilobium montanum*, pineappleweed *Matricaria discoidea*, common ragwort *Senecio jacobaea*, autumn hawksbit *Leontodon hispidus*, black medic *Medicago lupulina*, red valerian *Centranthus ruber*, teasel *Dipsacus fullonum*, brambles *Rubus fruticosus*,

red clover *Trifolium pratense*, broad-leaved dock *Rumex obtusifolius*, mugwort *Artemisia vulgaris*, canadian fleabane *Conyza canadensis*, common poppy *Papaver rhoeas*, creeping buttercup *Ranunculus repens*, creeping thistle *Cirsium arvense*, oxeye daisy *Leucanthemum vulgare*, common nettle *Urtica dioica*, great willowherb *Epilobium hirsutum*, spear thistle *Cirsium vulgare*, bindweed *Cornvolvulus* sp., bittersweet, hedge woundwort *Stachys sylvatica*, weld *Reseda luteola*, *Solanum dulcamara*, ribwort plantain *Plantago lanceolata*, cleaver *Galium aparine* yorkshire fog *Holcus lanatus*, cocksfoot *Dactylis glomerata*, wall barley *Hordeum murinum*, and crested dogstail *Cynosurus cristatus*. *Buddleja* and sycamore *Acer pseudoplatanus* saplings are also colonising the periphery of the site. These areas of vegetation are considered to be of low botanical interest.

Woodland



A wooded area forms the eastern boundary of the site, this area is on a steep gradient sloping down towards the residential properties to the east, (**Target note 2**). This area contains a mixture of mature and semi-mature trees including: sycamore, ash *Fraxinus excelsior*, hawthorn *Crataegus monogyna*, black poplar *Populus nigra*, cherry *Prunus* sp., elder *Sambucus nigra*, and leyland cypress *Cupressocyparis leylandii*. The ground flora within this area includes: common nettles, bramble, hedge woundwort, herb-robert *Geranium*

robertianum common ragwort, and feverfew *Tanacetum parthenium*. This area is considered to

be of botanical interest within the site boundary, and offers important nesting and foraging habitat for the local bird population.

Tall ruderal vegetation



Tall ruderal vegetation is present along the northern boundary of the site, (**Target note 3**). Species identified within this area include: rosebay willowherb *Chamerion angustifolium*, mugwort, bindweed sp., great willowherb, common nettle, false oatgrass *Arrhenatherum elatius*, creeping thistle, common ragwort, common dandelion *Taraxacum* agg., bramble, bittersweet, and smooth sow thistle *Sonchus oleraceus*. These species are indicative of wasteland habitat, and as such are considered to be of low botanical value.

Japanese Knotweed



Japanese knotweed *Fallopia japonica* is present at three locations within the site: within the tall ruderal vegetation along the northern boundary, at the west boundary alongside the entrance to the site, and within the wooded area that forms the eastern boundary of the site, (**Target note 4**). These patches of knotweed show signs of herbicide treatment. This plant is an invasive non-native species that will have to be removed as hazardous waste prior to the development of the site.

Mature and semi-mature trees



The northern boundary line and the north west corner of the site are dominated by a number of mature and semi-mature trees, (**Target note 5**). The species identified include: elder, sycamore, goat willow, and black poplar.

A mature black poplar situated along the northern boundary to the east supports a large hole within the central stem, (**Target note 15**). It is considered that the tree provides bat roost potential; it is recommended that this tree is retained. If works to the tree are required a further assessment of the tree will be necessary, to establish if bats are present. This should include a climb and inspect survey to establish if bats are roosting within the hole, or if signs of bats are present.



4.2 Building Assessment

Former Works



A red brick building supporting a corrugated asbestos/cement pitched roof, with corrugated plastic sky-lights (**Target note 6**). The building is no longer in use and is currently in a moderate state of repair. The western elevation of the building is of double height, however the eastern elevation is single storey due to an extended pitch. The western elevation has no windows or doors, the northern elevation supports a large timber loading door, and eastern elevation supports double glazed windows. A single storey wing is present to the south, this area was previously used as offices but is no longer in use. This section of the building has a single pitch roof, draining west to east, and supports timber framed doors and windows.

The internal space of the main building is primarily open plan, with a small enclosed office space at the north west corner, and an elevated office space at the centre of the northern elevation. The internal space is well lit due to the windows

to the east and the sky-lights, little opportunities for roosting bats were identified.

The internal space of the single storey wing was also well lit due to the windows to the east. A suspended ceiling is present within the offices, no further insulation or boarding is present between the ceiling and corrugated asbestos/cement roof.

Although no signs of bats were noted in or around the building, a number of features suitable of supporting bats were identified. These features include: damaged sections of roofing, providing access into the internal space (**Target note 7**), cracks in brick work, potentially providing access into the wall cavities or between the brick work (**Target note 8**), eroded mortar between bricks and roof (**Target note 9**), access into the internal space via gaps around door ways (**Target note 10**), eroded mortar between brick work and door lintel (**Target note 11**), and eroded mortar in brick work (**Target note 12**). Due to these features the building is considered to offer a moderate potential to support roosting bats, as such activity surveys of the building are recommended.

Timber garagelformer container



A small timber container unit which appear to have been used as a garage in more recent year, (**Target note 13**). The internal space is well lit due to the open west elevation. No evidence of bats or potential roost features were noted around the interior or exterior of the unit.

This structure is considered to offer no potential for roosting bats, and no further surveys of the structure are recommended.

Garage



A flat roofed breeze block garage, located along the southern boundary of the site, (**Target note 14**). The internal space is well lit due to the open west elevation. No evidence of bats or potential roost features were noted around the interior or exterior of the garage.

This structure is considered to offer no potential for roosting bats, and no further surveys of this building are recommended.

4.3 Bat Activity Surveys

From the findings of the initial building assessment it was considered that the former works offers a moderate potential to support roosting bats, due to a number of features around the exterior of the building. As such, it was recommended that bat activity survey were conducted. These surveys included a dusk and dawn survey conducted within a 24 hour period, followed by a further dusk survey.

A dusk and dawn activity survey was carried out on the 11th and 12th August, 2011, followed by a dusk survey on the 31st August, 2011. The aim of these surveys was to ascertain if any bats were observed leaving (at dusk) or entering (at dawn) the building. Refer to Figure 2.

Surveyors were positioned to monitor all elevations of the building. Batbox Duet heterodyne bat detectors were used during the surveys.

The table below summarises the conditions of the bat activity surveys carried out to determine if bat are currently using the former works building.

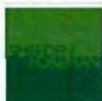


Table 1: Bat Activity Survey Records

Date	Start time	Finish time	Sunset/sunrise	Temp.	Cloud cover	Wind speed	Rain	Humidity
11 th Aug.	20:15	22:15	20:43	16°C to 14°C	100%	Still	Occasional light drizzle	Moderate
12 th Aug.	04:15	05:55	05:40	14°C to 13°C	100%	Still	0	Moderate
31 st Aug.	19:25	21:25	19:56	18°C to 15°C	100%	Still	0	Moderate

Dusk and Dawn Survey – 11th & 12th August, 2011

A single common pipistrelle bat was detected foraging around the eastern elevation of the building on four separate occasions during the dusk survey, at 21:07, 21:10, 21:17, and 20:20. On these occasions the bat detected, entered the site from no specific direction, and did not forage within the site boundary for an extended period of time.

Common pipistrelle bats were also detected foraging around the southern elevation of the building. With a single bat detected at 21:08, 21:17 and 21:19, again the bats entered this area from all directions and did not stay within the site boundary for an extended period of time. No bats were detected entering or exiting the building during the dusk survey.

No bats were detected foraging within or commuting through the site during the dawn survey. No bats were detected or observed entering or exiting the building during the dawn survey.

Dusk Survey – 31st August, 2011

A single common pipistrelle bat detected commuting over the building from west to east, at 20:19. A single common pipistrelle was also detected at 20:25, commuting over the building from the east, circling once along the south elevation then travel south away from the building.

Common pipistrelle bats were also detected commuting along the western and northern elevation of the building, between 20:09 and 21:10 single and pairs of bats were detected on six occasions.

No bats were detected or observed entering or exiting the building during the second dusk survey.

5.0 IMPLICATIONS / RECOMMENDATIONS**5.1 Nature Conservation Designated Sites**

Dearne Valley Park Local Nature Reserve (LNR) is located approximately 3.5 miles to the south east of the proposed development site. This area has been afforded protection due to the presence of relict habitats and reclaimed colliery/associated uses around a river valley. Worsbrough Country Park Local Nature Reserve (LNR) is located approximately 4km to the south of the proposed site. This area of protected habitat includes: a reservoir, willow carr,



managed grassland/meadowland, reed bed and woodland, and also supports a diverse range of water fowl.

Due to the distance between these protected areas and the site; it is considered that the proposed development will have no detrimental affects on these protected areas of habitat.

5.2 Habitats

The site incorporates a number of habitat types including: a woodland belt along the eastern boundary comprising mature and semi-mature hawthorn, sycamore, black poplar, cherry, elder, and ash trees. Tall ruderal vegetation is also present around the periphery of the site containing; bracken, rosebay willowherb, common nettle and brambles. The areas of hardstanding and compacted gravel that make-up the majority of the site have now become colonised by a range of ephemeral and short perennial herbaceous plant species, including: broad-leaved willowherb, pineappleweed, common ragwort, autumn hawkbit, canadian fleabane, weld, and *Buddleja*. Japanese knotweed is also present within the wooded area to the east, along the northern boundary line and alongside the western boundary.

The wooded area to the east of the site is considered to hold value in terms of providing bird nesting habitats and foraging and commuting habitats for bats. This habitat also provides a natural barrier between the site and the residential properties, and as such should be considered to offer a natural buffer between the proposed development and the residential area to the east.

Recommendations

It is recommended that the woodland area is retained and protected during the construction phase. Tree root protection fencing should be installed along the woodland edge to prevent any encroachment of the building works into the wood, and discourage the storage of building materials around the trees. Where possible, the planting of forbs within the wooded area is recommended to enhance diversity. Species recommended include native bluebell *Hyacinthoides non-scripta*, wood anemone *Anemone nemorosa*, greater stitchwort *Stellaria holostea*, yellow archangel *Lamium galeobolus* and ramsons *Allium ursinum*, as these species are known to be nationally scarce. The planting of a native hedge between the woodland and the development would also create a natural buffer between the habitats.

Japanese knotweed *Fallopia japonica* is present within the site boundary. This will have to be removed as hazardous waste, prior to development works commencing, as the species is covered under Section 14(2) of the Wildlife Countryside Act 1981 (WCA 1981). This states that "if any person plants, or otherwise causes, to grow in the wild any plant which is included in Part II of the Schedule 9, he shall be guilty of an offence". Japanese knotweed is one of the plants listed on the schedule. Further information on the legislation and the removal of this species is provided in the Environment Agency's The Knotweed Code of Practice.

It is also recommended that the stand of semi-mature trees that line the northern boundary of the site are maintained and if possible improved/gapped-up with the addition of native shrub and tree species. This would form a natural boundary line between the proposed residential properties and the rail line. Species recommended to be planted include; blackthorn *Prunus spinosa*, dogwood *Cornus sanguinea*, guelder rose *Viburnum opulus*, hawthorn *Crataegus monogyna*, hazel *Corylus avellana*, holly *Ilex aquifolium* and spindle *Euonymus europaeus*.



Any landscaping works should aim to use native trees and shrubs, with tree species including ash, beech *Fagus sylvatica*, small-leaved lime *Tilia cordata*, field maple, common oak *Quercus robur* and rowan. Such planting will aim to continue to provide nesting and foraging habitat for birds and bats respectively. Where possible, plant material should be sourced from local provenance.

5.3 Species

Refer to Appendix I, which details the legal status of the species mentioned below.

Bat species

The former works was assessed as having a moderate potential to support roosting bats, and as such it was recommended that bat activity surveys were carried out. A dusk and dawn survey was conducted on the 11th and 12th August, followed by a dusk survey on the 31st August. During these surveys common pipistrelle bats were detected foraging and commuting singularly or in pairs around all elevations of the building. The bats detected during these surveys did not foraging within the site boundary for long periods of times, suggesting that this area does not provide important foraging habitat. The bats did not appear to be commuting through the site on specific routes, suggesting that the area does not provide any important commuting corridor.

It is recommended that any landscaping around the proposed development should aim to increase biodiversity. Providing a variety of berry, nut-bearing and flowering trees, shrubs and plants would offer year-round interest for a range of invertebrates, and as such providing feeding opportunities for the local bat population.

During the demolition works good working practices can be undertaken to eliminate any potential harm to bats using the buildings as temporary roost sites;

- Roofing material should be pulled away from the roofing supports, instead of being slid out of position.
- If timber treatments are required within the new properties a range of products suitable for bat roosts are available, full details of these products are available from Natural England.
- Where new roofing membrane is required a range of 'bat-friendly' products are available.

If bats are found during demolition works, or at any time during building works, works should be halt immediately and features replaced carefully. If bats are found contact with an appropriately qualified ecologist or Natural England should be sort, for further advice.

Features could be added to the new houses to provide roost sites for bats. These featured could include; the erection of bats boxes on trees within the site, the creation of gaps under new fascia boards, access slates within the roof, access into wall cavities via 'bat bricks' or gaps in the mortar, and access under ridge tiles via gaps in the mortar, (Appendix 3).

As no bats were recorded entering or leaving the building, no further bat activity surveys or a protected species licence is required for the extension of the house.

Low wattage lighting should be adopted within the proposed development, particularly along hedges and trees, so the site remains attractive to foraging bats. If flood-lighting is required, the lighting should not directly illuminate hedges and trees. Further information on lighting in



regards to bats can be obtained from the Bat Conservation Trust publication *Bats and Lighting in the UK*.

A mature black poplar situated along the northern boundary to the east, supports a large hole within the central stem. It is considered that the tree provides bat roost potential; it is recommended that this tree is retained. If works to the tree are required a further assessment of the tree will be required, to establish if bats are present. This should include a climb and inspect survey to establish if bats are roosting within the hole, or if signs of bats are present. This survey can be carried out at any point during the year.

Badgers

No signs of badger were noted on the site. Sheffield Biological Records Centre where consulted to establish the presence of badgers within the area. The records provided suggest that there is no badger activity on site or within close proximity to the area. The NBN Gateway database holds four records of badger from within a 10km tetrad, which includes the proposed development site. However it should be taken into consideration that the most recent record provided is dated pre-1970 and no specific location is given. The wood area along the eastern boundary of the site should be considered to offer suitable habitat for badger, and as such is retained and protected. No further survey for this species is therefore recommended.

To ensure this species is not impacted upon (if present within the wooded area) by the proposed development, it is recommended that the woodland is protected during and after the development. The addition of tree root protection fencing along the woodland edge will prevent any encroachment of the building works. This area could be further protected by the planting of a native hedge between the woodland and the development will act as a natural buffer between the habitats.

Breeding birds

During the survey, bird species recorded included wood pigeons, black birds, robin, blue tit, house sparrow. A number of these species may use the site for nesting, using the woodland habitat, and trees. A wood pigeon nest was identified within a mature elder to the north of the works building.

It would be of ecological benefit and would enhance the site if mitigation measures for breeding birds could be incorporated into the development of the site. The wooded area should ideally be retained, the northern stand of sycamore should also be retained and improved, and tree and shrub planting would be incorporated within the proposed development to mitigate for any loss. The erection of nest boxes would also benefit a range of cavity nesting species, and could be erected on trees or the proposed building within the site.

It should be noted that if the removal of trees are required, these works should be undertaken outside of the breeding bird season (March to August, inclusive), unless checks by an appropriately qualified ecologist have found all nests to be inactive immediately prior to works.

Reptiles

No reptiles or signs of reptiles were noted on site. Due to the site's urban location and limited amount of suitable habitat, the area is considered to be unsuitable for reptiles. The NBN Gateway database holds records of adder, slow worm common lizard and grass snake.



However it should be taken into consideration that these records are over 25 years old and are not in close proximity to the proposed development.

It is considered that the proposed development will have no adverse affects on reptiles; however it is recommended that directional vegetation clearance should be undertaken to allow fauna to move away from such works. No further survey for these species is therefore recommended.

Water Voles

No evidence of water vole was identified within the site. There are no water courses on site suitable for water voles. Sheffield Biological Records Centre provided four records of water vole from within a 2km radius of the site, however these records are not in close proximity to the site, and as the site offers no suitable habitat for this species it is considered that proposed development will have no adverse affect on water vole. No further survey for this species is therefore recommended.

Other protected species

There are no water courses or bodies of water on site or with commuting distance that are suitable for white-clawed crayfish, otter or great crested newts. Sheffield Biological Records Centre provided no records of these species, from within a 2km radius of the site. No further surveys of these species are recommended

6.0 SUMMARY

Smeeden Foreman Limited has been commissioned by Bellway Homes Limited to undertake an ecological assessment of an area of land off Dodworth Road, in Barnsley (Grid Reference SE 331 063). The site was surveyed using the standard Phase I methodology, and was assessed for its potential to support protected species. Consultation has also been undertaken with relevant local record centres. The survey was undertaken on the 25th July, 2011. During this initial survey the works building was also assessed for its potential to support roosting bats, as a result the building was considered to offer a moderate potential to support bats and bat activity surveys were recommended. A dusk and dawn activity survey was carried out, followed by a dusk survey in August. The proposed development is for the addition of residential properties with associated garden and parking facilities.

Habitats

The site incorporates a number of habitat types including: a woodland belt along the eastern boundary comprising mature and semi-mature hawthorn, sycamore, black poplar, cherry, elder, and ash trees. Tall ruderal vegetation is also present around the periphery of the site containing; bracken, rosebay willowherb, common nettle and brambles. The areas of hardstanding and compacted gravel that make-up the majority of the site have now become colonised by a range of ephemeral and short perennial herbaceous plant species, including: broad-leaved willowherb, pineappleweed, common ragwort, autumn hawksbit, canadian fleabane, weld, and *Buddleja*. Japanese knotweed is also present within the wooded area to the east, along the northern boundary line and alongside the western boundary.

The wooded area to the east of the site is considered to hold value in terms of providing bird nesting habitats and foraging and commuting habitats for bats. It is recommended that tree root protection fencing is installed along the woodland edge to prevent any encroachment of the building works into the wood, and discourage the storage of building materials around the



trees. The addition of a native hedge between the proposed development and the woodland would offer further protection to this important area of habitat. Where possible, the planting of forbs within the wooded area is recommended to enhance diversity, (Ref. Section 5.2).

Japanese knotweed *Fallopia japonica* is present within the site boundary. This will have to be removed as hazardous waste, prior to development works commencing, as the species is covered under Section 14(2) of the Wildlife Countryside Act 1981 (WCA 1981). This states that "if any person plants, or otherwise causes, to grow in the wild any plant which is included in Part II of the Schedule 9, he shall be guilty of an offence". Japanese knotweed is one of the plants listed on the schedule. Further information on the legislation and the removal of this species is provided in the Environment Agency's The Knotweed Code of Practice.

It is also recommended that the stand of semi-matures that from the northern boundary of the site are maintained and if possible improved with the addition of native shrub and tree species. This would form a natural boundary line between the proposed residential properties and the rail line, (Ref. Section 5.2). Any landscaping works should aim to use native trees and shrubs. Such planting will aim to continue to provide nesting and foraging habitat for birds and bats respectively. Where possible, plant material should be sourced from local provenance.

Protected Species

The former works building was assessed as having a moderate potential to support roosting bats, and as such it was recommended that bat activity surveys were carried out. A dusk and dawn survey was conducted on the 11th and 12th August, followed by a dusk survey on the 31st August. During these surveys common pipistrelle bats were detected foraging and commuting singularly or in pairs around all elevations of the building. The bats detected during these surveys did not foraging within the site boundary for long periods of times, suggesting that this area does not provide important foraging habitat. The bats did not appear to be commuting through the site on specific routes, suggesting that the area does not provide any important commuting corridor.

It is recommended that any landscaping around the proposed development should aim to increase biodiversity. Providing a variety of berry, nut-bearing and flowering trees, shrubs and plants would offer year-round interest for a range of invertebrates, and as such providing feeding opportunities for the local bat population.

During the demolition works good working practices can be undertaken to eliminate any potential harm to bats using the buildings as temporary roost sites. Features could be added to the new houses to provide roost sites for bats. These features could include; the erection of bat boxes on trees within the site, the creation of gaps under new fascia boards, access slates within the roof, access into wall cavities via 'bat bricks' or gaps in the mortar, and access under ridge tiles via gaps in the mortar, (Appendix 3).

A mature black poplar situated along the northern boundary to the east, supports a large hole within the central stem. It is considered that the tree provides bat roost potential; it is recommended that this tree is retained. If works to the tree are required a further assessment of the tree will be required, to establish if bats are present. This should include a climb and inspect survey to establish if bats are roosting within the hole, or if signs of bats are present. This survey can be carried out at any point during the year.

To ensure badgers are not impacted upon (if present within the wooded area) by the proposed development, it is recommended that the woodland is protected during and after



the development. The addition of tree root protection fencing along the woodland edge will prevent any encroachment of the building works.

During the survey, bird species recorded included wood pigeons, black birds, robin, blue tit, house sparrow. A number of these species may use the site for nesting, using the woodland habitat, and trees. A wood pigeon nest was identified within a mature elder to the north of the works building. It would be of ecological benefit and would enhance the site if mitigation measures for breeding birds could be incorporated into the development of the site. The wooded area should ideally be retained, the northern stand of sycamore should also be retained and improved, and tree and shrub planting would be incorporated within the proposed development to mitigate for any loss. The erection of nest boxes would also benefit a range of cavity nesting species, and could be erected on trees or the proposed building within the site. It should be noted that if the removal of trees are required, these works should be undertaken outside of the breeding bird season (March to August, inclusive), unless checks by an appropriately qualified ecologist have found all nests to be inactive immediately prior to works.

In summary mitigation for the proposed development includes:

- Retention of the wooded area to the east of the site.
- Installation of tree root protection fencing along the line of the woodland, to prevent any encroachment of building works.
- Proposed landscaping to include native trees and shrubs to benefit local wildlife.
- The sympathetic use of lighting within the development, so that the site does not become unattractive for local wildlife.
- Timings of vegetation clearance to avoid the breeding bird season.
- Directional clearance of vegetation to allow fauna to move away from works.
- Bird and bat boxes to be erected.

Recommended further surveys:

- If the removal of trees and shrubs are required within the breeding bird season (March-August inclusive), checks for active nests should be carried out by an appropriately qualified ecologist prior to works commencing.
- If works to, or the removal of the black poplar tree along the northern boundary are required, a climb and inspect survey to establish the presence of bats.



FIGURES

FIGURE 1: Phase I Habitat Map

FIGURE 2: Bat Activity Survey

APPENDICES

APPENDIX 1: Legal Status of Protected Species

APPENDIX 2: Protected Species Records

APPENDIX 3: Bat Roost Creation Features



APPENDIX I: LEGAL STATUS OF PROTECTED SPECIES

Great Crested Newt

The Wildlife and Countryside Act 1981 (as amended) transposes into UK law and the Convention on the Conservation of European and Wildlife and Natural Habitats (commonly referred to as the 'Bern Convention'). The 1981 Act was amended by the Countryside and Rights of Way ['CRoW'] Act 2000. The great crested newt is listed on Schedule 5 of the 1981 Act, and is therefore subject to the provisions of Section 9, which make it an offence to:

- Intentionally kill, injure or take a great crested newt [Section 9 (1)]
- Possess or control any live or dead specimen or anything derived from a great crested newt [Section 9 (2)]
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt [Section 9 (4)(a)]
- Intentionally or recklessly disturb a great crested newt while it is occupying a structure or place which it uses for that purpose [Section 9(4)(b)]

The Conservation (Natural Habitats &c.) Regulations 1994 (the Habitats Regulations) transpose into the UK law Council Directive 92/43/EEC of 21st May 1992 on the conservation of Natural Habitats and of Wild Fauna and Flora (often referred to as the 'Habitats [and Species] Directive'). The great crested newt is listed on Annex II and Annex IV of the Directive. The former Annex relates to the designation of Special Areas of Conservation (SACs) for this species; even where great crested newts occur outside SACs, the inclusion on Annex II serves to underline their conservation significance. Inclusion of the Annex IV ('European Protected Species') means that member states are required to put in place a system of strict protection as outlined in Article 12, and this is done through inclusion on Schedule 2 of the Regulations. Regulation 39 makes it an offence to:

- Deliberately capture or kill a great crested newt [Regulation 39 (1)(a)]
- Deliberately disturb a great crested newt [Regulation 39(1)(b)]
- Deliberately take or destroy the eggs of a great crested newt [Regulation 39 (1)(c)]
- Damage or destroy a breeding site or resting place of a great crested newt [Regulation 39(1)(d)]

The legislation applies to all life stages of great crested newts.

Bats

Bats and their roosts are afforded full legal protection under both UK and European legislation. The Conservation (Natural Habitats & c.) Regulations 1994 (as amended, 2007) transpose the Habitats Directive into UK law, making it an offence to-

- deliberately disturb a bat
- deliberately kill, injure or capture a bat
- 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 bat roost *,
- disturb a bat at a roost *



- 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
- possess articles for the purposes of committing offences against bats

[*= intentional and reckless offences covered]

This protection applies whether bats are present within the roost at the time or not.

Badgers

Badgers and their setts are protected by the Protection of Badgers Act 1992. Under this act it is illegal to: (1) wilfully kill, injure, take a badger or attempt to do so, (2) cruelly ill-treat a badger or (3) interfere with a sett, including disturbing a badger while occupying a sett.

Breeding Birds

The Wildlife and Countryside Act 1981 (as amended) gives protection to all wild nesting birds, which makes it an offence to intentionally kill, injure, or take any wild bird or their eggs or nests. This protection applies from the moment the nest is being built. Additional protection against disturbance on the nest or of dependant young is provided for birds included on Schedule 1.

Reptiles

The Wildlife and Countryside Act 1981 makes it an offence to intentionally kill any of our native snakes and lizards. The sand lizard and smooth snake receive additional protection; for these species, it is unlawful to capture or possess them, or to damage/obstruct access to places they use for shelter or protection, or to disturb them whilst in such a place.

Otter

Otter and their habitats are given full protection under Section 9 of the Wildlife and Countryside Act 1981 (as amended). The species is also listed on Annexes II and IV of the EC Habitats Directive (Council Directive 92/43/EEC) which is implemented in the UK by The Conservation (Natural Habitats and Conservation) Regulations 1994 (as amended). It is a priority species in the UK Biodiversity Action Plan.

Water vole

Water voles are given full protection under Section 9 of the Wildlife and Countryside Act 1981 (as amended). It is a priority species in the UK Biodiversity Action Plan.

White-clawed crayfish

This species is protected under section 14 of the Wildlife and Countryside Act 1981. Designate "no-go" areas for the keeping of non-native crayfish under the Import of Live Fish (England and Wales) Act 1980 and the Import of Live Fish (Scotland) Act 1978.



APPENDIX 2: PROTECTED SPECIES RECORDS

Records provided by South Yorkshire Bat Group – from within a 2 km radius of the proposed development site:

Grid Reference	Location Name	Date	Species	Abundance	Record Type
SE 31 07	Higham Common Road, Barnsley	2005	Unknown	1	Field record
SE 33 06	Dodworth Road, Barnsley	2003	Unknown	1	Field record
SE 03 06	Sackville Street, Barnsley	2003	Unknown	1	Field record



Records provided by Sheffield Biological Records Centre – from within a 2 km radius of the proposed development site:

Common Name	Scientific Name	Grid Ref	Location Name	Date	Location
Water Vole	<i>Arvicola terrestris</i>	SE3204	Stainborough Lowe	13/09/1981	'BARNSELY MDC'
Water Vole	<i>Arvicola terrestris</i>	SE3304	brook	01/01/1985	Brough Green
Water Vole	<i>Arvicola terrestris</i>	SE3304	brook	25/03/1991	Brough Green
Water Vole	<i>Arvicola terrestris</i>	SE3304	brook	06/06/1991	Brough Green
Common Frog	<i>Rana temporaria</i>	SE3307		16/10/1980	Barnsley Canal
Leisler's Bat	<i>Nyctalus leisleri</i>	SE3207	Oakworth Close, Barnsley MDC	02/07/2003	
Leisler's Bat	<i>Nyctalus leisleri</i>	SE3307	Barnsley MDC	12/07/2005	
Leisler's Bat	<i>Nyctalus leisleri</i>	SE3307	Barnsley MDC	18/08/2005	
Hedgehog	<i>Erinaceus europaeus</i>	SE3304	Houndhill	20/07/1980	'BARNSELY MDC'
Hedgehog	<i>Erinaceus europaeus</i>	SE327061	Broadway	11/09/1980	'BARNSELY MDC'
Hedgehog	<i>Erinaceus europaeus</i>	SE3304	Houndhill	27/09/1980	'BARNSELY MDC'
Amblystegium serpens	<i>Amblystegium serpens</i>	SE3105		21/03/2007	Dodworth
Amblystegium serpens	<i>Amblystegium serpens</i>	SE3304		16/07/2007	Brough Green
Amblystegium serpens	<i>Amblystegium serpens</i>	SE3207		22/11/2007	Gawber
Anomalous Bristle- moss	<i>Orthotrichum anomalum</i>	SE3105		21/03/2007	Dodworth
Bank Haircap	<i>Polytrichum formosum</i>	SE3105		21/03/2007	Dodworth
<i>Barbula cylindrica</i>	<i>Barbula cylindrica</i>	SE3105		21/03/2007	Dodworth
<i>Barbula cylindrica</i>	<i>Barbula cylindrica</i>	SE3204		16/07/2007	Gilroyd
<i>Barbula cylindrica</i>	<i>Barbula cylindrica</i>	SE3307		22/11/2007	Old Town
<i>Barbula hornschuchiana</i>	<i>Barbula hornschuchiana</i>	SE3105		21/03/2007	Dodworth
<i>Barbula recurvirostra</i>	<i>Barbula recurvirostra</i>	SE3204		16/07/2007	Gilroyd
<i>Barbula trifaria</i>	<i>Barbula trifaria</i>	SE3304		16/07/2007	Brough Green
Bird's-claw Beard- moss	<i>Barbula unguiculata</i>	SE3105		21/03/2007	Dodworth
Bird's-claw Beard- moss	<i>Barbula unguiculata</i>	SE3204		16/07/2007	Gilroyd
Bird's-claw Beard- moss	<i>Barbula unguiculata</i>	SE3307		22/11/2007	Old Town
Bog Groove-moss	<i>Aulacomnium palustre</i>	SE3105		21/03/2007	Dodworth
<i>Brachythecium albicans</i>	<i>Brachythecium albicans</i>	SE3105		21/03/2007	Dodworth
<i>Brachythecium albicans</i>	<i>Brachythecium albicans</i>	SE3204		16/07/2007	Gilroyd
<i>Brachythecium rutabulum</i>	<i>Brachythecium rutabulum</i>	SE3105		21/03/2007	Dodworth
<i>Brachythecium rutabulum</i>	<i>Brachythecium rutabulum</i>	SE3204		16/07/2007	Gilroyd
<i>Brachythecium rutabulum</i>	<i>Brachythecium rutabulum</i>	SE3207		22/11/2007	Gawber

Bristly Haircap	<i>Polytrichum piliferum</i>	SE3105		21/03/2007	Dodworth
Bristly Haircap	<i>Polytrichum piliferum</i>	SE3204		16/07/2007	Gilroyd
Broom Fork-moss	<i>Dicranum scoparium</i>	SE3105		21/03/2007	Dodworth
Brown Rat	<i>Rattus norvegicus</i>	SE3407	The Fleets, Barnsley MDC	31/08/1988	
<i>Bryum bicolor</i>	<i>Bryum bicolor</i>	SE3204		16/07/2007	Gilroyd
<i>Bryum bicolor</i>	<i>Bryum bicolor</i>	SE3307		22/11/2007	Old Town
Bud-headed Groove-moss	<i>Aulacomnium androgynum</i>	SE3105		21/03/2007	Dodworth
<i>Calliergon cuspidatum</i>	<i>Calliergon cuspidatum</i>	SE3105		21/03/2007	Dodworth
<i>Calliergon cuspidatum</i>	<i>Calliergon cuspidatum</i>	SE3204		16/07/2007	Gilroyd
<i>Calliergon cuspidatum</i>	<i>Calliergon cuspidatum</i>	SE3307		22/11/2007	Old Town
<i>Calypogeia arguta</i>	<i>Calypogeia arguta</i>	SE3207		22/11/2007	Gawber
Capillary Thread-moss	<i>Bryum capillare</i>	SE3105		21/03/2007	Dodworth
Capillary Thread-moss	<i>Bryum capillare</i>	SE3204		16/07/2007	Gilroyd
Capillary Thread-moss	<i>Bryum capillare</i>	SE3307		22/11/2007	Old Town
<i>Cheilosia fraterna</i>	<i>Cheilosia fraterna</i>	SE3407		07/06/1986	Barnsley Canal
<i>Chiloscyphus polyanthos</i>	<i>Chiloscyphus polyanthos</i>	SE3207		22/11/2007	Gawber
<i>Chrysotoxum arcuatum</i>	<i>Chrysotoxum arcuatum</i>	SE3407		07/06/1986	Barnsley Canal
Common Cord-moss	<i>Funaria hygrometrica</i>	SE3105		21/03/2007	Dodworth
Common Crystalwort	<i>Riccia sorocarpa</i>	SE3304		16/07/2007	Brough Green
Common Pincushion	<i>Dicranoweisia cirrata</i>	SE3304		16/07/2007	Brough Green
Common Pocket-moss	<i>Fissidens taxifolius</i>	SE3204		16/07/2007	Gilroyd
Common Pocket-moss	<i>Fissidens taxifolius</i>	SE3207		22/11/2007	Gawber
Common Shrew	<i>Sorex araneus</i>	SE3204	Stainborough Lane	22/07/1980	Stainborough Park
Common Smoothcap	<i>Atrichum undulatum</i>	SE3207		22/11/2007	Gawber
Crimson-tuber Thread-moss	<i>Bryum rubens</i>	SE3304		16/07/2007	Brough Green
Cylindric Ditrichum	<i>Ditrichum cylindricum</i>	SE3304		16/07/2007	Brough Green
Cypress-leaved Plait-moss	<i>Hypnum cupressiforme</i> var. <i>cupressiforme</i>	SE3105		21/03/2007	Dodworth
Cypress-leaved Plait-moss	<i>Hypnum cupressiforme</i> var. <i>cupressiforme</i>	SE3304		16/07/2007	Brough Green
<i>Dicranella staphylina</i>	<i>Dicranella staphylina</i>	SE3105		21/03/2007	Dodworth
<i>Dicranella staphylina</i>	<i>Dicranella staphylina</i>	SE3207		22/11/2007	Gawber
<i>Epistrophe eligans</i>	<i>Epistrophe eligans</i>	SE3407		07/06/1986	Barnsley Canal
<i>Eristalis horticola</i>	<i>Eristalis horticola</i>	SE3407		07/06/1986	Barnsley Canal
<i>Eristalis intricarius</i>	<i>Eristalis intricarius</i>	SE3407		07/06/1986	Barnsley Canal
<i>Eurhynchium praelongum</i>	<i>Eurhynchium praelongum</i>	SE3105		21/03/2007	Dodworth

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Eurhynchium praelongum	Eurhynchium praelongum	SE3204	16/07/2007	Gilroyd
Eurhynchium praelongum	Eurhynchium praelongum	SE3307	22/11/2007	Old Town
Eurhynchium swartzii	Eurhynchium swartzii	SE3207	22/11/2007	Gawber
Grey-cushioned Grimmia	Grimmia pulvinata	SE3204	16/07/2007	Gilroyd
Grey-cushioned Grimmia	Grimmia pulvinata	SE3207	22/11/2007	Gawber
Heath Star Moss	Campylopus introflexus	SE3105	21/03/2007	Dodworth
Hypnum jutlandicum	Hypnum jutlandicum	SE3105	21/03/2007	Dodworth
Hypnum jutlandicum	Hypnum jutlandicum	SE3207	22/11/2007	Gawber
Isopterygium elegans	Isopterygium elegans	SE3207	22/11/2007	Gawber
Juniper Haircap	Polytrichum juniperinum	SE3105	21/03/2007	Dodworth
Lesser Bird's-claw Beard-moss	Barbula convoluta	SE3105	21/03/2007	Dodworth
Lesser Bird's-claw Beard-moss	Barbula convoluta	SE3204	16/07/2007	Gilroyd
Lesser Pocket-moss	Fissidens bryoides	SE3204	16/07/2007	Gilroyd
Lesser Pocket-moss	Fissidens bryoides	SE3207	22/11/2007	Gawber
Leucozona lucorum	Leucozona lucorum	SE3407	07/06/1986	Barnsley Canal
Lophocolea bidentata	Lophocolea bidentata	SE3105	21/03/2007	Dodworth
Lophocolea bidentata	Lophocolea bidentata	SE3204	16/07/2007	Gilroyd
Lophocolea heterophylla	Lophocolea heterophylla	SE3304	16/07/2007	Brough Green
Lophocolea heterophylla	Lophocolea heterophylla	SE3207	22/11/2007	Gawber
Lunularia cruciata	Lunularia cruciata	SE3304	16/07/2007	Brough Green
Melanostoma scalare	Melanostoma scalare	SE3407	07/06/1986	Barnsley Canal
Neoscia podagrica	Neoscia podagrica	SE3407	07/06/1986	Barnsley Canal
Neoscia tenur	Neoscia tenur	SE3407	07/06/1986	Barnsley Canal
Nodding Thread-moss	Pohlia nutans	SE3105	21/03/2007	Dodworth
Pea Bryum	Bryum ruderae	SE3105	21/03/2007	Dodworth
Plagiomnium undulatum	Plagiomnium undulatum	SE3305	16/07/2007	Locke Park
Plagiothecium curvifolium	Plagiothecium curvifolium	SE3204	16/07/2007	Gilroyd
Plagiothecium undulatum	Plagiothecium undulatum	SE3105	21/03/2007	Dodworth
Platycheirus albimanus	Platycheirus albimanus	SE3407	07/06/1986	Barnsley Canal
Pohlia carnea	Pohlia carnea	SE3304	16/07/2007	Brough Green
Pottia truncata	Pottia truncata	SE3105	21/03/2007	Dodworth
Pottia truncata	Pottia truncata	SE3204	16/07/2007	Gilroyd
Pottia truncata	Pottia truncata	SE3207	22/11/2007	Gawber
Pseudephemerum nitidum	Pseudephemerum nitidum	SE3304	16/07/2007	Brough Green
Pseudephemerum nitidum	Pseudephemerum nitidum	SE3207	22/11/2007	Gawber
Pseudoscleropodium purum	Pseudoscleropodium purum	SE3105	21/03/2007	Dodworth
Redshank	Ceratodon purpureus	SE3105	21/03/2007	Dodworth



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Report: Ecology Report SF 1904

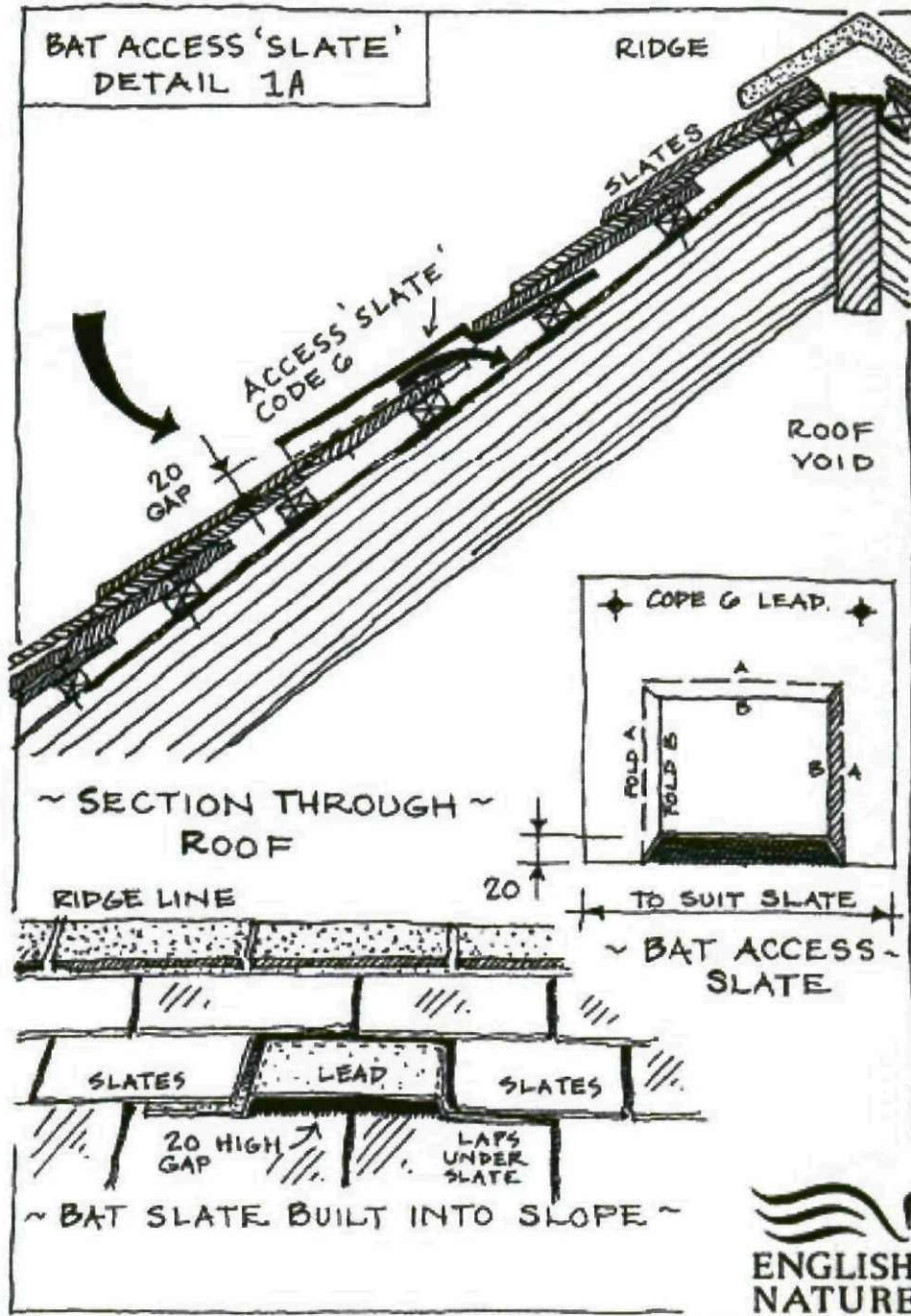
Site: Land off Dodworth Road, Barnsley

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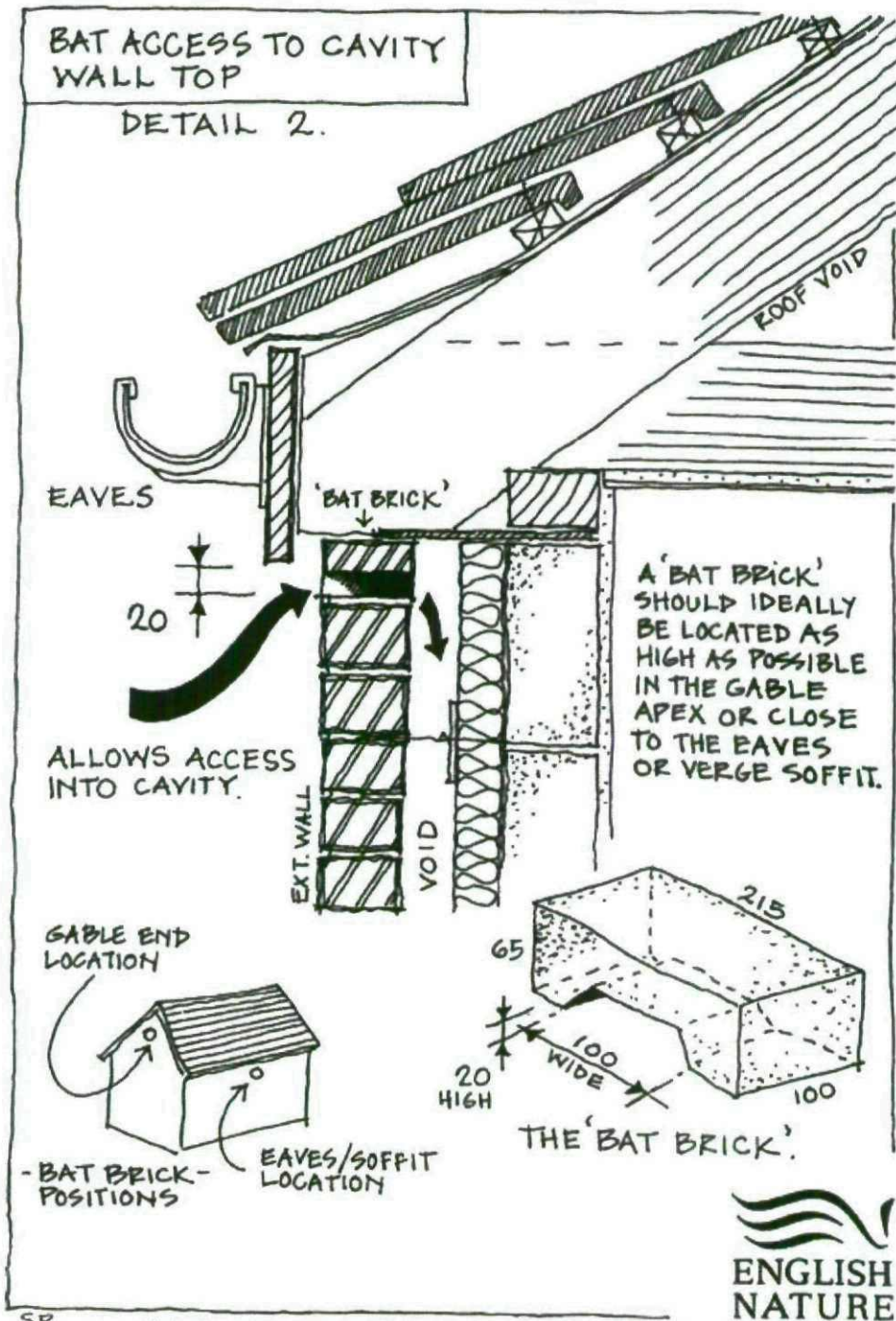
Redshank	Ceratodon purpureus	SE3204		16/07/2007	Gilroyd
Redshank	Ceratodon purpureus	SE3307		22/11/2007	Old Town
Rhynchostegium confertum	Rhynchostegium confertum	SE3204		16/07/2007	Gilroyd
Rhynchostegium confertum	Rhynchostegium confertum	SE3207		22/11/2007	Gawber
Rhynchostegium riparioides	Rhynchostegium riparioides	SE3207		22/11/2007	Gawber
Schistidium apocarpum	Schistidium apocarpum	SE3105		21/03/2007	Dodworth
Schistidium apocarpum	Schistidium apocarpum	SE3204		16/07/2007	Gilroyd
Schistidium apocarpum	Schistidium apocarpum	SE3207		22/11/2007	Gawber
Silky Forklet-moss	Dicranella heteromalla	SE3204		16/07/2007	Gilroyd
Silky Forklet-moss	Dicranella heteromalla	SE3207		22/11/2007	Gawber
Silver-moss	Bryum argenteum	SE3204		16/07/2007	Gilroyd
Silver-moss	Bryum argenteum	SE3307		22/11/2007	Old Town
Springy Turf-moss	Rhytidiadelphus squarrosus	SE3105		21/03/2007	Dodworth
Springy Turf-moss	Rhytidiadelphus squarrosus	SE3307		22/11/2007	Old Town
Swan's-neck Thyme- moss	Mnium hornum	SE3207		22/11/2007	Gawber
Syrphus ribesii	Syrphus ribesii	SE3407		07/06/1986	Barnsley Canal
Thuidium tamariscinum	Thuidium tamariscinum	SE3105		21/03/2007	Dodworth
Tortula intermedia	Tortula intermedia	SE3204		16/07/2007	Gilroyd
Tortula intermedia	Tortula intermedia	SE3307		22/11/2007	Old Town
Ulot crispa var. norvegica	Ulot crispa var. norvegica	SE3105		21/03/2007	Dodworth
Wall Screw-moss	Tortula muralis	SE3105		21/03/2007	Dodworth
Wall Screw-moss	Tortula muralis	SE3204		16/07/2007	Gilroyd
Wall Screw-moss	Tortula muralis	SE3307		22/11/2007	Old Town
White-tipped Bristle-moss	Orthotrichum diaphanum	SE3105		21/03/2007	Dodworth
White-tipped Bristle-moss	Orthotrichum diaphanum	SE3204		16/07/2007	Gilroyd
White-tipped Bristle-moss	Orthotrichum diaphanum	SE3207		22/11/2007	Gawber
Wood Bristle-moss	Orthotrichum affine	SE3105		21/03/2007	Dodworth
Wood Bristle-moss	Orthotrichum affine	SE3204		16/07/2007	Gilroyd
Wood Bristle-moss	Orthotrichum affine	SE3207		22/11/2007	Gawber



APPENDIX 3: BAT ROOST CREATION FEATURES



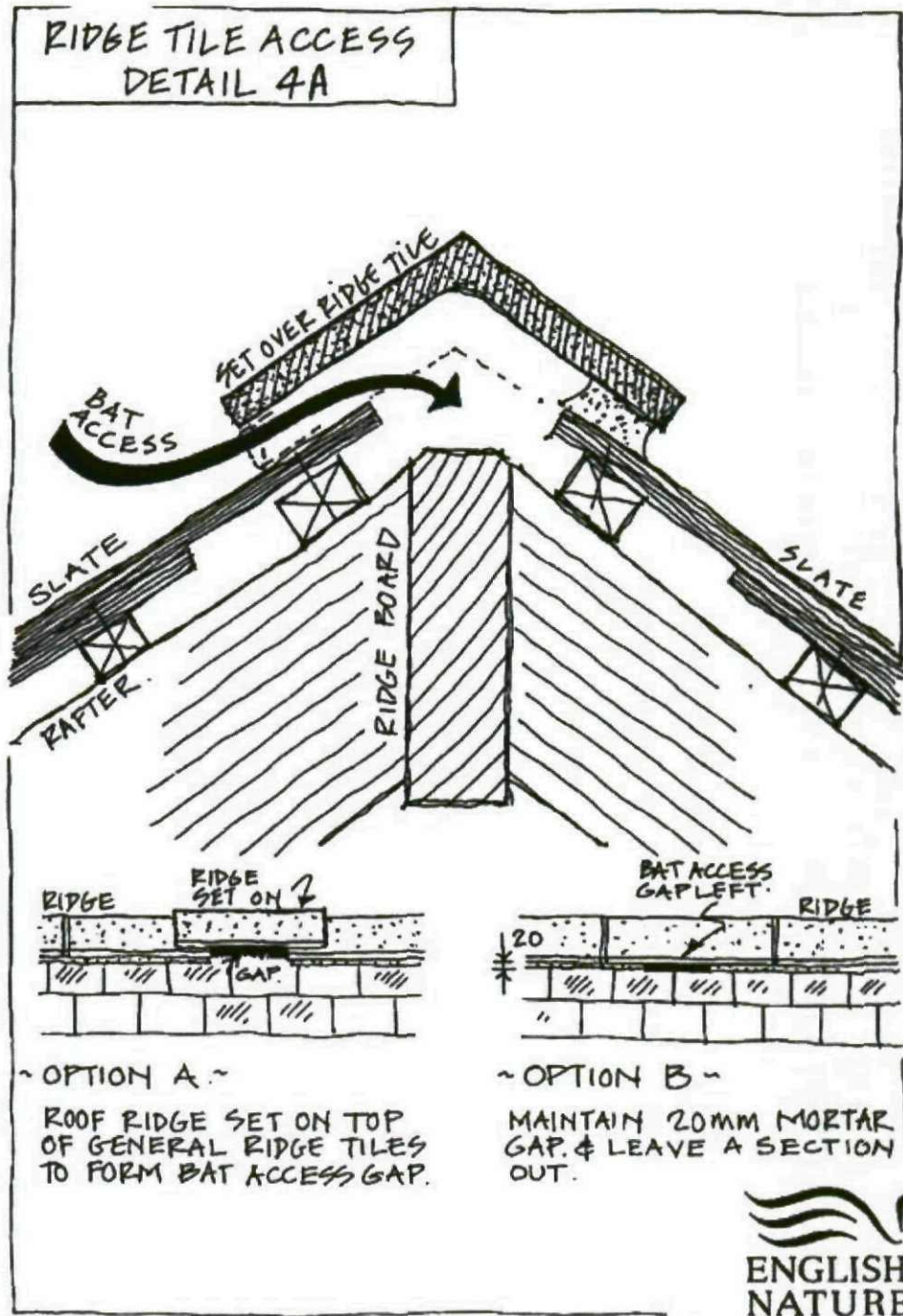
SP The above information is for guidance only and may not be appropriate in all circumstances. It is advised that professional advice is sought. English Nature Cumbria Team, Juniper House, Marley Moss, Quakerholme Road, Kendal LA9 7BE. Tel: 01524 762000 Fax: 01524 762001 Email: cumbria@englishnature.org.uk



SP

The above information is for guidance only and may not be appropriate in all circumstances. If in doubt seek professional advice.
English Nature Cumbria Team, Juniper House, Moseley Moss, Overholme Road, Kendal LA9 7PL. Tel: 01539 792800 Fax: 01539 792850 Email: cumbria@english-nature.org.uk





SP

The above information is for guidance only and may not be appropriate in all circumstances. If in doubt seek professional advice.
English Nature Countryside Team, Juniper House, Hurley Moss, Ossett Road, Kendal LA9 7PL. Tel: 01539 792000 Fax: 01539 792530 Email: countryside@english-nature.org.uk

Land off Dodworth Road, Barnsley, South Yorkshire

KEY:



Target note



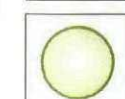
Site boundary



Tall ruderal



Buildings



Tree (Broadleaf)



Ephemeral/ short perennial

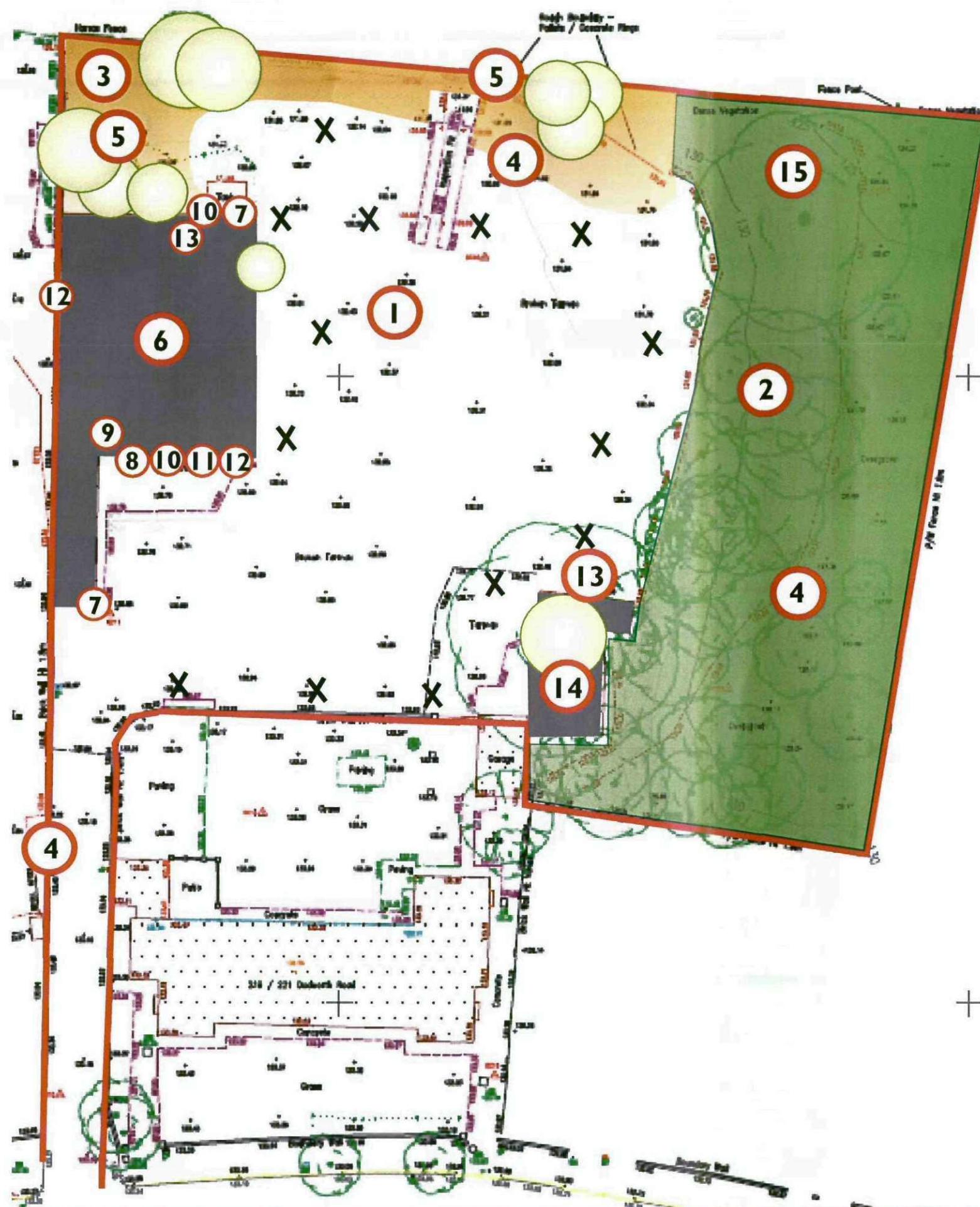


Woodland plantation

Topographical Survey provided Latitude
Surveys, Chartered Land Surveyors
Drawing No: BL1005/002
Scale 1:500

Phase I Habitat Plan

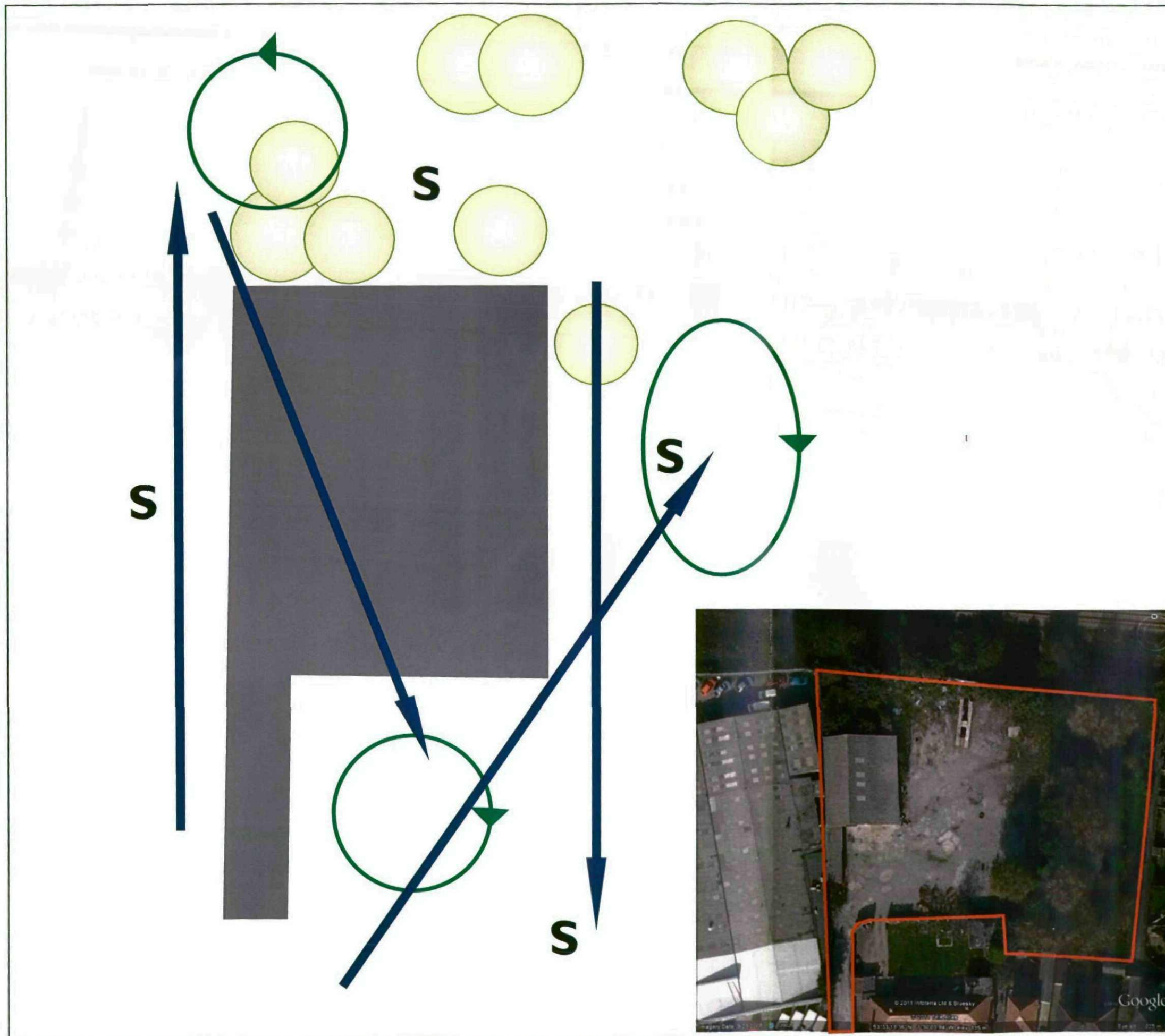
SF 1904 Figure 1



**Land off Dodworth Road,
Barnsley,
South Yorkshire**

KEY:

- S** Surveyor
- Commuting route
- Foraging route
- Buildings - former works
- Tree (Broadleaf)



Bat Activity Survey

SF 1904 Figure 2

