Former Goldthorpe Colliery (West Part) and Adjacent Land Goldthorpe, Barnsley

Extended Phase 1 Habitat Survey

Prepared by:	Checked by:
A. Virtue	B.Whittle

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Approved for issue A. J. Virtue

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RPS Planning, Transport & Environment
Wellfield House
33 New Hey Road
Huddersfield
HD3 3AL

Tel 01484 543124
Fax 01484 516682
Email rpshudds@rpsgroup.com

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Phase 1 Habitat Plan

1.0 Introduction

As part of a planning proposal, RPS was commissioned by St Robert Ogden CBE LLD to undertake an extended Phase 1 Habitat survey and desk top study for an area of land at Goldthorpe, some 11km east of Barnsley (Grid Ref. SE 466 042).

An amenity hedge and trees form the western boundary of the study area and a dismantled railway line forms the southern boundary. To the north of the study area can be found allotment gardens and residential properties, and to the east is an ongoing residential development.

The eastern 4.15ha of the study area is the subject of the current outline planning application for residential development (referred to as Stage 2 site in this report) and includes open grasslands and areas of ruderal vegetation, scattered scrub and trees. The study area also includes an additional parcel of land (Stage 3), to the west of the Stage 2 land, that was surveyed and includes industrial buildings, hard-standing, car parking, roads, paving and vegetation. Whilst this additional land is not subject to the present outline planning application, it is included as part of the ecological assessment in order to inform part of a future development proposals on the Stage 3 land in due course. References to study area boundaries therefore include this parcel of land, but the distinction between the two areas are clearly shown on Figure 1.

A Stage 1 housing development is already under construction to the east of the study area.

The Phase 1 habitat survey was undertaken on 11th July 2006.

2.0 Assessment Methodology

Desk Study

Information relating to sites designated for their nature conservation interest and records of protected (or otherwise important) species was requested from the following list of consultees:

English Nature

The Environment Agency

Sheffield Wildlife Trust

Barnsley Metropolitan Borough Council

Sheffield Biological Records Centre

North & East Yorkshire Records Centre

Sheffield Badger Group

Local Bat Recorder (Eric Bennett)

Local Bird Recorder (John Wint)

Barnsley Bird Study Group

In addition, reference was made to the local biodiversity action plan and websites for English Nature, the National Biodiversity Network (NBN) and the government website MAGIC.

The aim of this exercise is to supplement the field survey results by collating existing records for the site and surrounding area.

Extended Phase 1 Habitat Survey

The survey followed Phase 1 habitat survey methodology (JNCC, 1993) and was extended to assess faunal potential. This involves walking the whole site, mapping and describing different habitats (for example: woodland, grassland, scrub). Evidence of fauna and the potential for habitat to support protected (or otherwise important) species was also recorded (for example droppings, tracks or specialist habitat such as ponds for breeding amphibians). This modified approach to the Phase 1 survey is in accordance with the approach recommended by the *Guidelines for Baseline Ecological Assessment* (IEA, 1995). The search area adopted for this report (2km) follows guidelines recommended by IEA and IEEM.

3.0 Baseline Conditions

Desk Study

The desk study exercise was undertaken during July 2006, using a search area of 2km. The consultees and their responses are shown below in **Tables 1 & 2.** Due to the time constraints of this report, the desk study is incomplete. We will update the records as they come in and provide an addendum to this report at a later date.

Table 1 Summary of consultation

Consultee	Responded	Issues Highlighted
English Nature	07.07.06	One non-statutory site within search area (Bella Wood).
Environment Agency	21.07.06	One non-statutory site within search area. Pipistrelle records from within search area.
NBN Gateway	N/A	Historical record of grass snake from within 1km of site (1975). SE 4504.
Barnsley Metropolitan District Council	03.08.06	Awaiting data. Email contact suggests no protected species issues.
Sheffield Wildlife Trust	04.08.06	No sites within search area.
Sheffield Biological Records Centre	03.08.06	No records centre exists for Barnsley area. Contact Barnsley Council.
North & East Yorkshire Records Centre		Awaiting response.
Sheffield Badger Group		Awaiting response.
Local Bat Recorder		Awaiting response.
Local Bird Recorder	03.08.06	No records. Contact Barnsley Bird Study Group.
Barnsley Bird Study Group		Awaiting response.

Table 2 Summary of responses

Statutory Wildlife Sites	
Denaby Ings Site of Special Scientific Interest (SSSI). (From MAGIC website).	An area of wetland and flooded meadows 4.4 km to the southeast of the site.
Bilham Sand Pits SSSI, a geological site 3.3 km to the northeast of the site. (From MAGIC website).	A geological site 3.3 km to the northeast of the site.

Non-statutory Wildlife Sites	
Bella Wood Site of Scientific Interest (SSI)	An area of Ancient Woodland 700m to the east of the site (SE 466 042)
Protected Species	
WCA Schedule 8 Plants	
WCA schedule 9(2) controlled plants species	-
WCA Schedule 5 animals	-
Pipistrelle bat *(Pipistrellus pipistrellus)*	Records of bats at Goldthorpe (no grid reference)
WCA Schedule 6 animals	-
WCA Schedule 1 Birds	-
Grass snake (*Natrix natrix*)	Recorded at Goldthorpe (no grid reference) 1 km from site, 1975.

English Nature Natural Area

English Nature's Natural Areas are sub-divisions of England, each with a characteristic association of wildlife and natural features. Each Natural Area has a unique identity resulting from the interaction of wildlife, landforms, geology, land use and human impact.

Each Natural Area includes specific habitats highlighted as being of national and local significance.

The study area is located within the Coal Measures Natural Area.

Coal Measures

This Natural Area has the following habitat of national significance:

Earth heritage.

The Natural Area also has the following habitats of local significance:

Acid grassland;
Fen, marsh and swamp;
Lowland heathland;
Neutral grassland;
Rivers and Streams;
Standing open water and canals, and;
Wet woodland.

This Natural Area is characterised by dense populations centred on a number of towns and cities that developed largely as a result of the underlying coal fields. These are deposits of shales and sandstones of late Carboniferous age (c. 320-295 million years old), which were deposited in equatorial

swamps. Peat accumulated in these swamps and has subsequently been converted to coal. Associated shales yield rich and important fossil floras and the Coal Measures is an important area for Earth heritage features.

The topography of the Natural Area is gently undulating and the network of towns and cities is characterised by a matrix of acidic ancient and secondary woodlands, valley wetlands, neutral and acid grasslands, and mixed agriculture. Canals, mill-ponds and natural rivers are also important features.

Local Biodiversity Action Plan (LBAP)

The Barnsley Biodiversity Action Plan (BAP), produced by the Barnsley Biodiversity Trust, provides a practical plan for the conservation and enhancement of wildlife and habitats in the Borough including the study area. The BAP identifies priorities for nature conservation in Barnsley, comprising action plans for 19 species and 18 habitats.

Species Action Plans include:

Bluebell, otter, pipistrelle bat, brown hare, water vole, great crested newt, white-clawed crayfish, glow worm, barn owl, bittern, corn bunting, grey partridge, lapwing, linnet, little ringed plover, skylark, song thrush, tree sparrow and twite.

Habitat Action Plans include:

Upland oak woodland, upland mixed ash woodland, wet woodland, parkland, ancient & species-rich hedgerows, cereal field margins, floodplain grazing marsh, lowland meadows, lowland dry acidic grassland, lowland heathland, upland heathland, rush pasture, reedbeds, ponds & canals, running water, standing water, urban built-up areas and post-industrial derelict degraded land.

Results from Desk Study

Desk study results are relevant for both outline planning application site (Stage 2) and a potential further residential development scheme involving the Stage 3 land. At present, the desk study is incomplete. However, based on the information received so far it would appear that there are relatively few ecological constraints to this application at present.

There are no statutory sites within, or adjacent to the search area (within 2km of the study area). The nearest designated site is Bilham Sand Pits SSSI, a geological site 3.3 km to the northeast of the site. The nearest site designated for ecological reasons is Denaby Ings SSSI, an area of wetland and flooded meadows 4.4 km to the southeast of the site. This site is notable for its breeding bird community (e.g. little ringed plover and common sandpiper), and its wide range of passage wildfowl and wader species, including overwintering parties of whooper swan.

There is one non-statutory site within 2km of the application sites. Bella Wood SSI, an oak-birch ancient woodland is 700 km from the site to the east.

No watercourses exist within the application area, and no records of water vole or otter have been returned from within the 2 km search area. Records exist for *Pipistrelle* bats from within 1km of the search area, but these do not specify whether they are for foraging or roosting bats.

With the exception of neutral grasslands (Natural Area), and post-industrial derelict degraded land (LBAP), none of the habitats found during the Phase 1 habitat survey fall within the list of priority or local habitats listed within the Local BAP, or the list of habitats of National Significance within the relevant English Nature Natural Area.

Habitat Description

Stage 2 (Planning Application Site)

Figure 1 is the Phase 1 habitat plan for the study area. In general, the study area is comprised of a range of common habitats including semi-improved grassland, short ephemeral, ruderals, scrub and trees. There are no water bodies within, or adjacent to, the Stage 2 or Stage 3 areas. Notably, there are stands of Japanese knotweed *(Fallopia japonica)* within both the Stage 2 (current application site) and Stage 3 areas.

Semi-improved neutral grassland

Much of the Stage 2 site is dominated by grassland. To the north-east of the Stage 2 site is an extensive area of semi-improved grassland, which is dominated by false oat-grass *(Arrhenatherum elatius),* with abundant Yorkshire fog *(Holcus lanatus),* cocksfoot *(Dactylis glomerata)* and couch grass *(Agropyron repens).* Other grasses noted included barren brome *(Bromus sterilis),* creeping bent, *(Agrostis stolonifera),* rough-stalked meadow grass *(Poa trivialis),* yellow oat-grass, *(Trisetum flavescens),* black-grass, *(Alopecurus myosuroides),* and perennial rye-grass *(Lolium perenne).*

Around the edges of the grasslands, wall barley *(Hordeum murinum)* invades the sward, in addition to a number of herbs. These include dandelions *(Taraxacum officinale* agg), curled dock (*Rumex crispus*), creeping thistle *(Cirsium arvense),* ribwort plantain *(Plantago lanceolata),* creeping buttercup *(Ranunculus repens),* mugwort *(Artemisia vulgaris),* common ragwort *(Senecio jacobaea),* hogweed *(Heracleum sphondylium),* rosebay willowherb *(Chamerion angustifolium),* and stinging nettle *(Urtica dioica).*

Short Ephemeral

An large area dominated by short ephemeral vegetation can be found to the south of the Stage 2 site, in a region occupied by a former tip **(Target Note 1)**. Here, the soils are thin and patchy and the subsequent vegetation is a mosaic of wasteland and ruderal herbs, with few dominant grasses. Species includes weld *(Reseda luteola),* mugwort, docks, yarrow *(Achillea millefolium),* black medick *(Medicago lupulina),* birds foot trefoil *(Lotus corniculatus),* oxe-eye daisies *(Leucanthemum vulgare),* red clover *(Trifolium pratense),* white clover *(Trifolium repens),* white campion *(Silene alba),* greater plantain *(Plantago major),* bristly oxtongue *(Picris echoides),* scented mayweed *(Matricaria recutita),* and white dead nettle *(Lamium album).* To the south of this area is a 3m high bund **(TN2),** which separates the short ephemeral region from extensive scrub habitat leading down to a disused railway.

Tall Ruderal

Areas of tall ruderal vegetation can be found fringing much of the Stage 2 site, and dominating parts of the southern and western sections, including the bund described above. Willowherbs, mugwort, brambles *(Rubus fruticosus* agg*)*, common ragwort, nettles, cleavers *(Galium aparine)* and mayweeds are all common.

Scrub

There are extensive areas of continuous scrub across the Stage 2 site, in particular to the south and west. These areas are dominated by hawthorn with associated bramble, dog-rose *(Rosa canina* agg.*)*, blackthorn *(Prunus spinosa)* and elder *(Sambucus nigra)*. Scrub to the south of the site is considered particularly good nesting potential for birds **(TN3).** A mixture of young planted ash *(Fraxinus excelsior)*, alder *(Alnus glutinosa)*, birch *(Betula sp.)*, hawthorn *(Crataegus monogyna)*, lilac *(Syringa vulgaris)*, English oak *(Quercus robur)*, sycamore *(Acer pseudoplatanus)* and hazel *(Corylus avellana)* line the northern border of the Stage 2 site **(TN10).**

Trees

There are a number of mature and semi-mature trees scattered across the Stage 2 site. Some of these have been planted as a shelterbelt to the far east of the Stage 2 site **(TN4)**, whilst others are naturally occurring within areas of scrub to the north, south and west of this area.

Japanese knotweed

Japanese knotweed was noted in one location, to the western edge of the Stage 2 site **(TN 7).**

Stage 3 (Land west of the Stage 2 planning application site)

Semi-improved neutral grassland, scrub and ephemeral areas have similar species composition as Stage 2.

Marshy grassland **(TN5)**

An area of impeded grassland occurs in the west of the Stage 3 land. This area contains a high proportion of soft rush *(Juncus effusus)* with hoary willowherb *(Epilobium parviflorum)* and creeping buttercup.

Hard standing

A mixture of car parks, road and hard standing covers approximately 70% of the Stage 3 land. These offer very little ecological value, other than potential basking sites for reptiles.

Buildings **(TN6)**

Within the north part of the Stage 3 land are a collection of industial buildings, a coal merchants yard and a telephone exchange. In total, there are six buildings surrounding a local road from the north (Beever Street), which terminates at the centre of the Stage 3 land. Access was not possible to all the buildings, and cursory internal inspections were conducted using binoculars from outside the main entrances to each building. Buildings 1 and 2 are corrugated sheds. Building 3 is a redbrick store with a corrugated roof. Building 4 is a two-storey telephone exchange, with a concrete structure overlain with corrugated sheeting and a flat roof. Buildings 5 and 6 are large hangar-style buildings with brick walls and sloping corrugated roofs.

None of the buildings offer potential roosting value to bats as they all lack roof voids, and do not appear to have any loose brickwork that could allow for the entry of crevice-dwelling species of bat, such as *Pipistrelles.*

Japanese knotweed

Japanese knotweed was noted in two locations in the Stage 3 part of the study area **(TNs 8 and 9).**

Protected Species

The potential for protected species for both Stage 2 and 3 are considered below.

Protected species are those with statutory protection measures:

- Listed on Schedules of the Wildlife and Countryside Act 1981 (as amended);
- Under the Protection of Badgers Act (1992); and
- Listed on Annexe's of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora (implemented by the Conservation Regulations 1994 as amended).

Based on the consultation information and the findings of the Phase 1 habitat survey, **reptiles** and **nesting birds** are the main protected species constraints identified.

Reptiles

Historical records exist for grass snakes within 1km of the site (NBN Gateway, 1975). The areas of bare, open ground to the west of the Stage 3 land and the ephemeral/short perennial areas to the east of the Stage 2 application site are considered to be good potential reptile habitats. The presence of a disused railway line to the south of the study area is also good reptile habitat, and would additionally offer a potential migration route for reptiles into the area.

Nesting Birds

The scrub and trees found within and lining both the Stage 2 and 3 land offer suitable nesting habitat for birds. The habitats on the study area are most likely to support common urban or woodland-edge bird species, and no particularly important species or bird assemblage is likely for this area.

Bats (Stage 3)

The buildings appeared to offer no opportunities for roosting bats. Most of the buildings had corrugated sloping or flat roofs and lacked a roof void. Elsewhere across the site opportunities for roosting bats were not identified within any of the trees.

Both the Stage 2 and Stage 3 land offer potential foraging habitat for bats, which may utilise the large areas of open space. In addition, the rows of trees and scrub to the north and east of the Stage 2 site could be utilised as flight lines for bats (they like to follow linear features). However, significant areas of alternative habitat exist to the south-east of the Stage 2 site, and the loss of habitat for bats would not be considered significant.

Badgers

The Phase 1 survey did not reveal any direct evidence of resident badgers (e.g. setts or latrines), or of foraging badgers (e.g. snuffle pits, badger paths, scratch marks on trees). Whilst no direct evidence of badgers were seen during the Phase 1 survey, the presence of foraging badgers cannot be ruled

out as the open ground and scrub areas represents a potential feeding habitat. The disused railway line would also offer a potential migration route for badgers into the area, and may well hold badger setts. However, as no signs of foraging were found and no setts occur on site, further work for badger at this stage is considered unnecessary. An additional survey for badger should be made immediately prior to the commencement of works to check the situation regarding badgers.

Great crested newts (GCN)

There are no water bodies on-site, or within 500m of the site. As GCN will rarely migrate more than 500m from their natal breeding ponds, it can be concluded that GCN will not be an issue for this application.

4.0 Evaluation and Recommendations

Habitats

All of the habitats on the Stage 2 (application site) and Stage 3 land are typical urban habitats some of which result from previous disturbance and recolonisation. They are easily replaced. No rare, scarce or red data book plant species were noted on site and the presence of plant species of particular importance being present is considered highly unlikely.

Japanese knotweed is present on both Stage 2 and Stage 3 sites. Japanese knotweed is listed in Schedule 9 of the Wildlife and Countryside Act (1981), *as amended*, as a controlled weed. This makes it an offence to cause knotweed to grow elsewhere by incorrect handling and removal. A strategic *document for the safe treatment and removal of this species will be required* prior to any works taking place.

Species

Reptiles

There is some, albeit low, potential for reptiles to be present on the Stage 2 and Stage 3 land, possibly using the railway line to the south as connection to other reptile habitat. Due to the size and diversity of habitats within the study area, a significant reptile population is considered unlikely. However, all reptiles are protected against death and injury under the Wildlife and Countryside Act (1981 *as amended*). Therefore it is recommended that a reptile survey be undertaken prior to any development. This could be appropriately dealt with by planning condition. If reptiles are present on the Stage 2 application site then either they must first be removed before vegetation clearance, or a safe system of working devised to allow reptiles to vacate the area as it is being cleared. This approach would need to be adopted in relation to any future proposals involving the Stage 3 land.

Reptile surveys are seasonally dependent and best undertaken in either September or April/ May.

Vegetation clearance with regard to nesting birds

All birds, their nests and young are protected against death, injury or destruction by the Wildlife and Countryside Act 1981 (as amended). Nesting birds will occur within trees and scrub. In order to avoid conflict with nesting birds it is recommended that all vegetation clearance, and building demolition take place outside of the bird-nesting season, which generally runs from March to August inclusive.

Bats

None of the buildings on the Stage 3 land were considered to have bat potential, and no gaps or cracks in roof tiles, fascia boards or other structures were seen. No staining around holes or droppings around windows or floors was observed during the Phase 1 survey. However, bats are opportunistic and can move into buildings at any time. Therefore a pre-demolition inspection for bats would be recommended for all these buildings.

5.0 Conclusion

Within both the Stage 2 application site and the Stage 3 potential future development land all habitats and species identified are common and representative of an urban fringe setting. The most important ecological features are the trees and scrub to the south of the Stage 2 and Stage 3 land, which separates the study area from the disused railway. If possible these should be retained within landscape designs.

Neither the Stage 2 application site nor the Stage 3 land appears to contain any rare or unusual habitats or species. None of the buildings on the Stage 3 land were considered to have bat potential, and no gaps or cracks in roof tiles, fascia boards or other structures were seen.

There is some potential for reptiles to be present on the Stage 2 application site and also the Stage 3 land and an additional survey is required prior to development on each respective parcel of land. Update surveys will also be required for bats and badger prior to any development.

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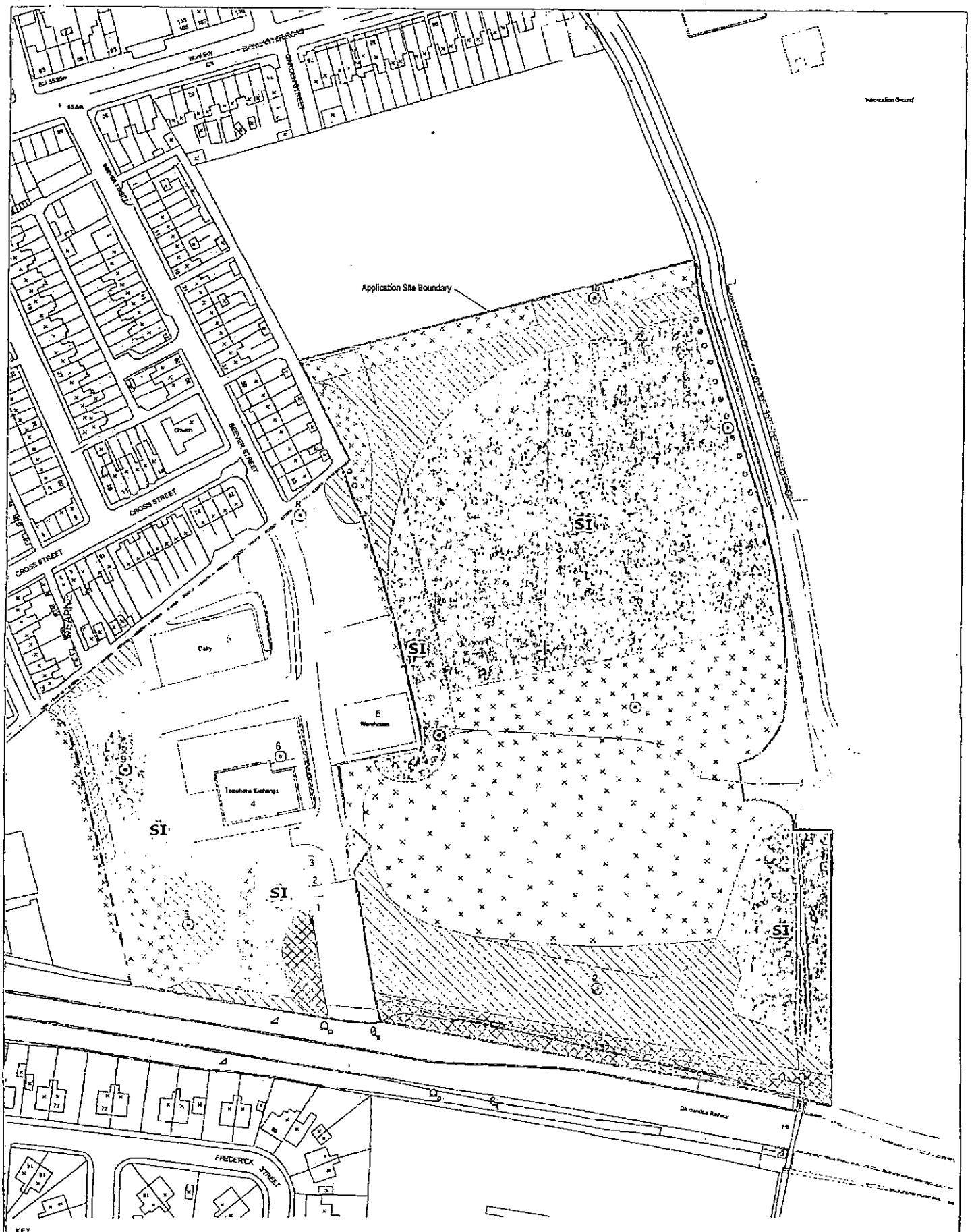
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Figures

Figure 1 Habitat Base Map



RPS	Project: Goldthorpe
	Title: Phase 1 Habitat Base Plan
Date: 25th July 06 Scale: 1:1250 Rev:	Figure No: Figure 1
Job Ref: DHL2735 Drawn: SA Checked: AV	

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