

Phase 1 Habitat Survey

**Disused railway embankment between
Bolton-on-Dearne and Goldthorpe**

May 2009

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Annex 1 Phase one Habitat Survey Map

1.0 Introduction

Natural England, on behalf of the Dearne Valley Green Heart Partnership, conducted a Phase 1 Habitat Survey of the above site in order to inform a planning application for creation of a cycleway.

1.1 Site location

The disused railway embankment runs northeast from Carr Field Lane in Bolton-on-Dearne to Highgate Lane in Highgate, near Goldthorpe. The centre of the site is at grid reference E445199, N403536.

The site is bounded to the west by a small industrial and business estate and to the east by housing and allotments. The immediate surrounding area is urban in character.

1.2 Background

The Dearne Valley Green Heart project is a partnership project including Environment Agency, Natural England, and RSPB, and the local authorities of Barnsley, Rotherham, and Doncaster.

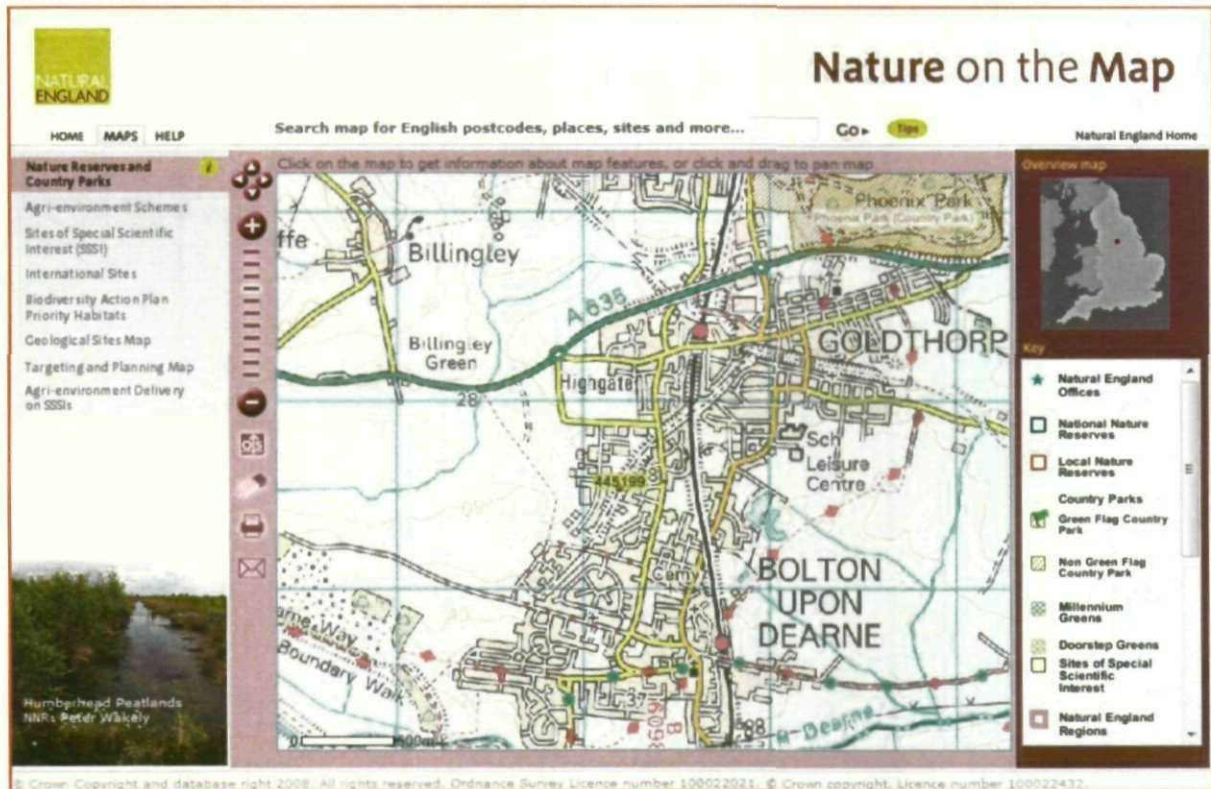
The partnership aims to bring about environmental improvements in the Dearne Valley for the benefit of wildlife and the residents of the valley. One aim of the partnership is to create and improve green networks of paths and cycleways. The Bolton to Goldthorpe link (B2G) will form part of this network.

At the time of this survey being carried out, the works to the embankment were to include the following:

- Re-profiling of each end of the embankment to create Disability Discrimination Act compliant slopes.
- Installation of motor vehicle gates to prevent access for motorcycles.
- Creation of a new path along the embankment with a surface suitable for cyclists, wheelchairs and buggies.

2.0 Desk study

Natural England's Nature on the Map (www.natureonthemap.org.uk) and MAGIC (Multi-Agency Geographic Information for the Countryside www.magic.gov.uk) websites were used to detect whether there are any protected sites in the vicinity of the development site. The results are displayed below.



A single site was found on Nature on the Map, namely Phoenix Country Park, approximately 1.3km from the site. This site does not have any statutory nature conservation designations. The development will not impact upon Phoenix Country Park.



MAGIC identified RSPB Bolton Ings reserve within a 2km radius of the site. This newly-created wetland is an important site for breeding and wintering wetland birds. Bolton Ings does not have any statutory nature conservation designations. Bolton Ings will not be affected by the development.

It is normal practise to carry out a species records search for proposed development sites. However, as Barnsley does not have an ecological records centre, it was not possible to carry out a records search for European protected species records, Red or Amber listed species records, or BAP species records.

This project is being carried out by Environment Agency, Natural England and RSPB, amongst others. None of these three organisations hold any ecological records for the site.

The Barnsley Biodiversity Trust was approached for any records that they might hold, but they have no records for the site.

3.0 Phase 1 Habitat Survey

A Phase 1 Habitat Survey was carried out on the morning of 19th May 2009 by Claire Storey, an adviser at Natural England with four years experience in conducting Habitat Surveys, and Heather Rennie, an adviser at Natural England with nine months experience.

The weather was mixed and mild with sunny spells followed by heavy showers at the end of the survey period. The weather did not create any constraints on the survey.

The survey was conducted following the Joint Nature Conservancy Council guidelines for Phase 1 Habitat Surveys¹.

3.1 Constraints

Due to the need to complete this survey quickly, it was conducted at a sub-optimal time of year. May was deemed to be sub-optimal due to some flowering plant species developing later in the summer. However, based on the habitats and species present, it is considered that no rare species are likely to occur here.

3.2 Results

The habitat map included as Annex 1 to this report provides a spatial representation of the types of habitats present at this site and should be viewed in conjunction with this section.

Description of form of the site and overview of habitats

The site is a disused railway embankment. The tracks and railway sleepers have been removed from the embankment. There is a narrow, un-surfaced, footpath running along the embankment. Both ends of the footpath are relatively steep with a set of worn stairs. There are narrow desire lines running up the side of the stairs.

The habitat on both sides of the path generally consists of a grassy strip (Ephemeral short perennial) behind which is patchy to dense scrub. This scrub descends down the banking on both sides of the embankment. At the northern end of the embankment, the footpath drops down a set of steep worn stairs through a small semi-mature woodland area to Highgate Lane.

¹ JNCC, (2007), Handbook for Phase 1 habitat survey - a technique for environmental audit, Revised reprint 2003, reprinted 2007, 78 pages A4 softback, ISBN 0 86139 636 7

The area surrounding the embankment is urban in character, with an industrial estate to the west, housing to the north and south, and housing and allotments to the east.

3.3 Detailed description of habitats on site

Ephemeral short perennial

This habitat is characterised by short, patchy plant associations and is typical of derelict urban sites, and railway ballast. Such habitats are freely draining, and usually have shallow stony soil. Ephemeral short perennial habitat was found on both sides of the path along the embankment.

The following plants were noted at the site in this type of habitat:

Cow parsley (*Anthriscus sylvestris*)

White dead nettle (*Lamium album*)

Dandelion (*Taraxacum officinale*)

Knapweed (*Centaurea nigra*)

Common Hogweed (*Heracleum sphondylium*)

Red clover (*Trifolium pratense*)

White clover (*Trifolium repens*)

Thistle (*Cirsium* sp)

Common Ragwort (*Senecio jacobaea*)

Sheep's sorrel (*Rumex acetosella*)

Coltsfoot (*Tussilago farfara*)

Rosebay Willowherb (*Chamarion angustifolium*)

Ribwort plantain (*Plantago lanceolata*)

Lesser trefoil (*Trifolium dubium*)

Daisy (*Bellis perennis*)

Meadow vetchling (*Lathyrus pratensis*)

Mouse-ear-hawkweed (*Pilosella officinarum*)

Mugwort (*Artemisia vulgaris*)

Grasses

Cocksfoot (*Dactylis glomerata*)

Meadow grass sp (*Poa* sp)

Fescue sp (*Festuca* sp)

Bent sp (*Agrostis* sp)

Common horsetail (*Equisetum arvense*)

False oat-grass (*Arrhenatherum elatius*)

Yorkshire fog (*Holcus lanatus*)

Red fescue (*Festuca rubra*)

Scrub (dense and scattered)

Along the edges and on the sides of the embankment scrub habitat is present. The scrub is dense on the eastern side of the embankment but more scattered on the western side. The scrub includes semi-mature trees of the following species:

Hawthorn (*Crataegus monogyna*)

Silver birch (*Betula pendula*)

Sycamore (*Acer pseudoplatanus*)

Field maple (*Acer campestre*)

Ash (*Fraxinus excelsior*)

Hazel (*Corylus avellana*)

Willow (*Salix* sp)

Pedunculate oak (*Quercus robur*)

The ground flora under the scrub includes brambles (*Rubus fruticosus*), Common nettle (*Urtica dioica*), cleavers (*Galium aparine*) with a transition into ephemeral short perennial including the species listed for that habitat type above.

Semi—natural woodland

A small area of semi-natural woodland is present at the north of the embankment. This consists of semi-mature and sapling trees, with a fairly dense understory. Further detail is given below in Target Note 1.

Introduced shrub

This is vegetation dominated by species which are not locally native. At this site, the southern boundary was marked by a collection of non-native garden shrubs that had either been planted, or had self-seeded from local gardens.

3.4 Target notes

Ten target notes are marked on the Phase 1 Habitat map. Each target note refers to a notable feature at the site.

Target note 1: Semi-mature woodland and ground flora

This is a small area of woodland at the northern end of the embankment. A path with steps and a handrail runs up the centre of the small woodland area. To the east of the path, the woodland is dominated by semi-mature hawthorn, silver birch, ash, single sapling sycamore, oak and field maple.

To the west of the path the semi-mature woodland is much more dominated by sycamore with occasional hawthorn, ash, hazel and silver birch.

The understory consists of nettles, cleavers, cow parsley, grape hyacinth (presumed to be a garden escapee) and brambles, hogweed coltsfoot, moss (*bryophyte sp*), dandelion, ribwort plantain, winter cress (*Barbarea vulgaris*), forget-me-not (*Myosotis sp*) and Spanish bluebells (*Hyacinthoides hispanica*).

Target note 2: Rosebay willowherb and roses

There is a stand of rosebay willowherb, approximately 2m x 1.5 m, to the west of the path, surrounded by ephemeral short perennial habitat. Behind the rosebay willowherb, along the western edge of the embankment is a row of planted *rosa sp*.

Target note 3: Pedunculate oaks

The scrub at either side of the embankment is dominated by semi-mature pedunculate oaks at this point.

Target note 4: More open area dominated by horsetails

This area is more open with views over the industrial unit to the west. The ephemeral short perennial vegetation is characterised by common horsetail, common vetch, mugwort, lesser trefoil and sheep's sorrel.

Target note 5: Bare ground

This target note refers to two patches of open ground with bare shallow soils. Vegetation is sparse on these patches and includes mouse-ear-hawkweed, lesser trefoil, moss, plantain, red clover, and grass species (as listed on page 6).

Target note 6: Enclosed area with dominant scrub

At this point scrub is found across the whole embankment creating a tunnel-like effect around the path. The path here is relatively winding and there is a poor line of sight around

corners. The scrub consists of elder (*Sambucus nigra*), apple (*malus sp*), hawthorn and rosa sp with a ground flora of cleavers, nettles and hogweed.

Target note 7: Bare ground patches

This target note consists of two patches of bare ground similar to those at Target note 5. The patches are located on the western side of the path, and are separated by a single mature hawthorn. The bare patches have similar sparse vegetation to those at target note 5 but are dominated by moss and mouse-ear-hawkweed.

Target note 8: Bare ground patch

This bare ground patch is similar to target notes 5 and 7 in that is an area of shallow soil with sparse vegetation. However, the species composition includes: mugwort, red clover, ribwort plantain, moss, sheep sorrel, grasses, common vetch and common mouse-ear (*Cerastium fontanum*).

Target note 9: Burnt ground

To the west of the path at this point is an area of burnt ground (approx 1.5m x 1m) and evidence of litter dropping.

Target note 10: Dense scrub and cow parsley area, with mature oak

At the very top of the steps, at the southern end of the path, scrub dominates the embankment with dense hawthorn on both sides of the path and a ground flora of nettles and cow parsley. This makes the path feel narrow and enclosed.

At the end of the embankment, there is a dense patch of cow parsley on both sides of the path. This area is almost completely dominated by cow parsley with the exception of small amounts of cleavers breaking through. Within this area is a single mature oak of considerable age.

4.0 Fauna

During the Phase 1 Habitat survey, birds, mammals or invertebrates seen at the site were noted by the surveyors. The following species were noted;

Birds:

Greenfinch (*Carduelis chloris*)

Blackbird (*Turdus merula*)

Great tit (*Parus major*)

Swift (*Apus apus*)

Unidentified warbler (possibly *Sylvia sp*)

Kestrel (*Falco tinnunculus*) seen offsite

Invertebrates:

Small white butterfly (*Pieris rapae*)

Large white butterfly (*Pieris brassicae*)

Honey bee (*Apis mellifera*)

5.0 Conclusions

This site contains habitats and species that are frequently found along disused railway embankments. None of the habitats are nationally or locally rare.

Habitats of interest at the site are the scrub areas which may offer nesting sites for birds and the patches of bare and sparsely vegetated land which may provide habitat for invertebrates.

Some scrub clearance will be carried out at this site for the purpose of widening the path and opening up the embankment to improve lines of sight. However, as the scrub habitat extends down the sides of the embankment which are outside of the area of works, the majority of the scrub will be preserved.

It is not anticipated that the planned work will significantly impact upon the habitats present at this site.

6.0 Recommendations

Additional planting of hedgerow/scrub species is planned to block existing desire lines down the steep sides of the embankment. These should be native species of local provenance in order to maximise their biodiversity value. At this site, hawthorn, blackthorn (*Prunus spinosa*), elder and field maple would be appropriate. If any specimen dies within five years it should be replaced.

It is advisable to avoid vegetation clearance during the bird breeding season (March to August inclusive). If vegetation is to be cleared during this time, a suitably qualified ecologist should check any vegetation prior to removal. If nests are found then work must cease in the immediate area until the chicks have fledged.

In order to maintain a variety of habitats at the site, bare ground patches should be preserved where possible.

Where works are to take place near to mature trees (e.g. the mature oak at target note 10) trees, and their roots, must be protected from plant by high-visibility fencing placed around the root protection zone. British Standard 5837:2005 'Trees in relation to construction'² includes a formula for calculating the size of the root protection zone from the diameter of the trunk at breast height.

² BS5837:2005. Published in 2005 and available from the British Standards Institution.

Annex 1 Phase One Habitat Map (see separate document)

Phase 1

Habitat Survey Map

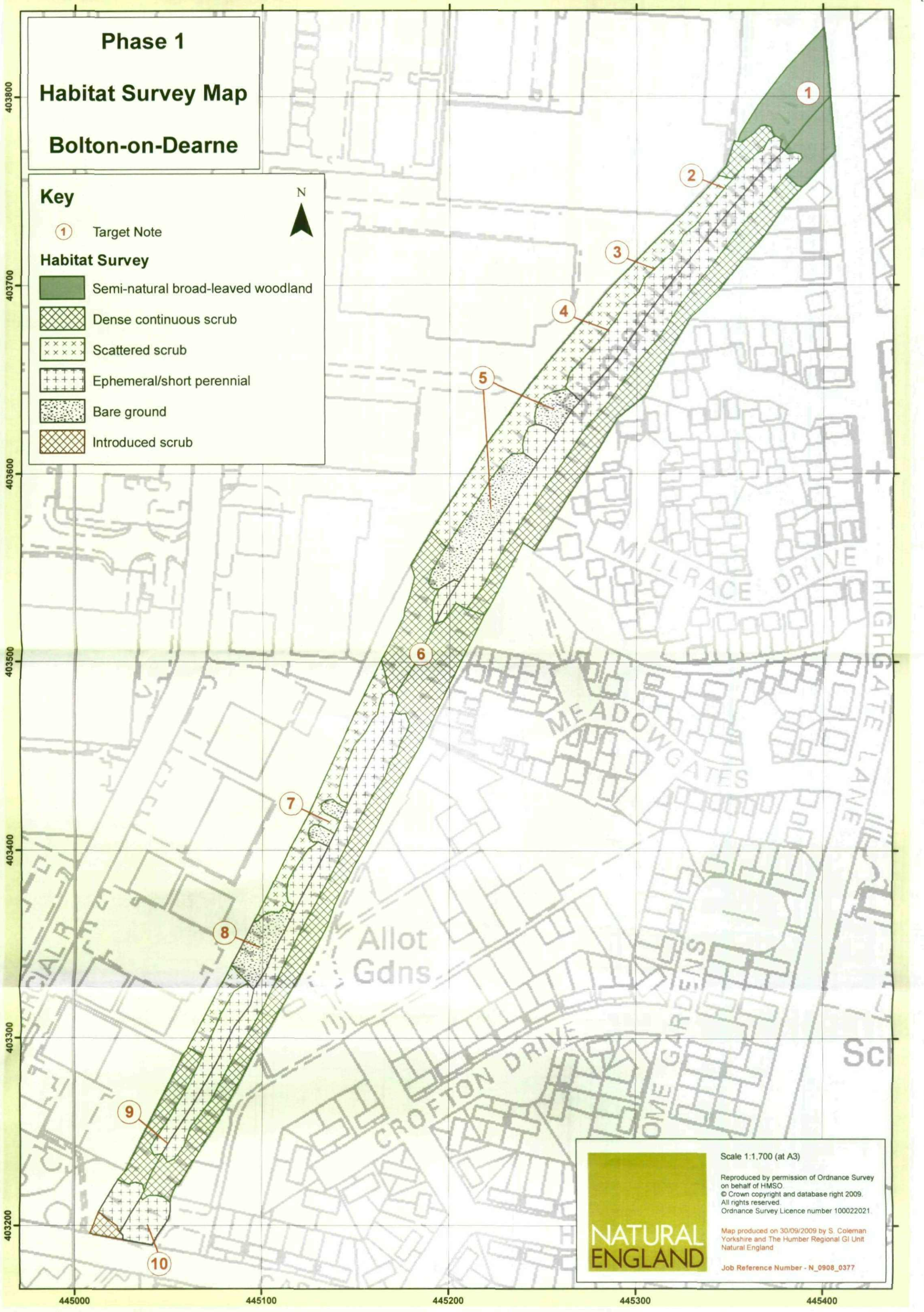
Bolton-on-Dearne

Key

① Target Note

Habitat Survey

- Semi-natural broad-leaved woodland
- Dense continuous scrub
- Scattered scrub
- Ephemeral/short perennial
- Bare ground
- Introduced scrub



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Scale 1:1,700 (at A3)

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