PLANNING DESIGN ENVIRONMENT

Station Road
Royston
Ecological Assessment
(TEP Report Ref: 4186.002)
May 2014
Version 1.0

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Written:	Checked:	Approved:
VG	LG	LG

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APPENDICES

DRAWINGS

1.0 SUMMARY

1.1 TEP was commissioned in Autumn 2013 by Aries Trading UK Limited to carry out an ecological assessment of land off Station Road, Royston near Barnsley. This assessment has been requested to inform proposals for residential development of the site. TEP originally surveyed the site in August 2010. Following this, Outline Planning Application was granted for development of the site. A refresher survey was commissioned to verify and update the original survey data.

Habitat

1.2 The most significant features for wildlife are the broad-leaved trees scrub, native hedgerow and acid grassland bordering much of the site. These provide opportunities for wildlife, particularly bats, birds and small mammals. These features should be retained where possible.

1.3 A small area of heath/acid grassland mosaic was noted during the original survey undertaken in August 2010; no evidence of this mosaic habitat was noted during the 2013 survey. It is recommended that planting of heather plugs is undertaken in the remaining area of acid grassland to ensure this habitat is still represented in the local area.

Invasive species

1.4 Himalayan cotoneaster and montbretia were recorded on site. If development of the site will result in the disturbance of the areas where these invasive plants are found on site control measures should be taken to eradicate these prior to commencement of works. A method statement detailing the measures to be implemented will need to be produced and subsequently agreed to by the Local Planning Authority.

Bats

1.5 No potential roosting habitat for bats is present on site; however features present along the northern and southern boundaries provide foraging and commuting opportunities. As part of the proposed development a sensitive lighting scheme avoiding the spread of light onto potential foraging and commuting routes is recommended.

Birds

1.6 Vegetation clearance, including tree and scrub removal and cutting back overhanging trees along boundaries should be implemented outside the bird nesting season (typically taken to extend from March to August inclusive).

1.7 The loss of nesting bird habitat and bat habitat should be mitigated through replacement planting in landscape proposals.

Reptiles

1.8 The mix of habitats present on site offer potential for reptiles. Confirmation of the presence or absence of reptiles is required to ensure these species do not come to any harm as a result of developing this site.

Opportunities for enhancement

1.9 Biodiversity within the site could be maintained and enhanced by including a mix of wildlife friendly species into the planting scheme. Native species, ideally of local stock, should be used. Species could include hawthorn, blackthorn *Prunus spinosa*, mountain ash *Sorbus aucuparia* and silver birch. Further input to the detailed design can be provided on request.

1.10 Within the proposed development, boundary features should ideally include native hedgerow planting using a variety of native woody species. Alternatively, green trellising using ivy, honeysuckle *Lonicera periclymenum* or other scented and berry producing climbers could be installed on buildings, boundary walls or fences within the new build to provide additional foraging and sheltering opportunities for insects, birds and bats

1.11 Both bird and bat boxes could be incorporated onto any building which is constructed on site and examples of these are provided in Appendix C. This would provide breeding opportunities for both bird and bat species. These should be located an appropriate height and aspect, with suitable lighting levels and close to vegetation

2.0 INTRODUCTION

2.1 TEP was commissioned in Autumn 2013 by Aries Trading UK Limited to carry out an ecological assessment of land off Station Road, Royston near Barnsley. This assessment has been requested to inform proposals for residential development of the site.

2.2 TEP originally surveyed the site in August 2010. Following this, Outline Planning Application was granted for development of the site. In view of the time that has elapsed, a refresher survey was commissioned to verify and update the survey data. The second survey captured a slightly enlarged site boundary.

2.3 This report has the following objectives:

- to describe the existing vegetation and give an overview of the habitats present on the site;
- to identify whether there are any features of conservation value such as legally protected species or habitats of biodiversity importance;
- to advise of further surveys or mitigation requirements that might be needed prior to development of the site; and
- to outline opportunities to provide biodiversity enhancement within any future site proposals.

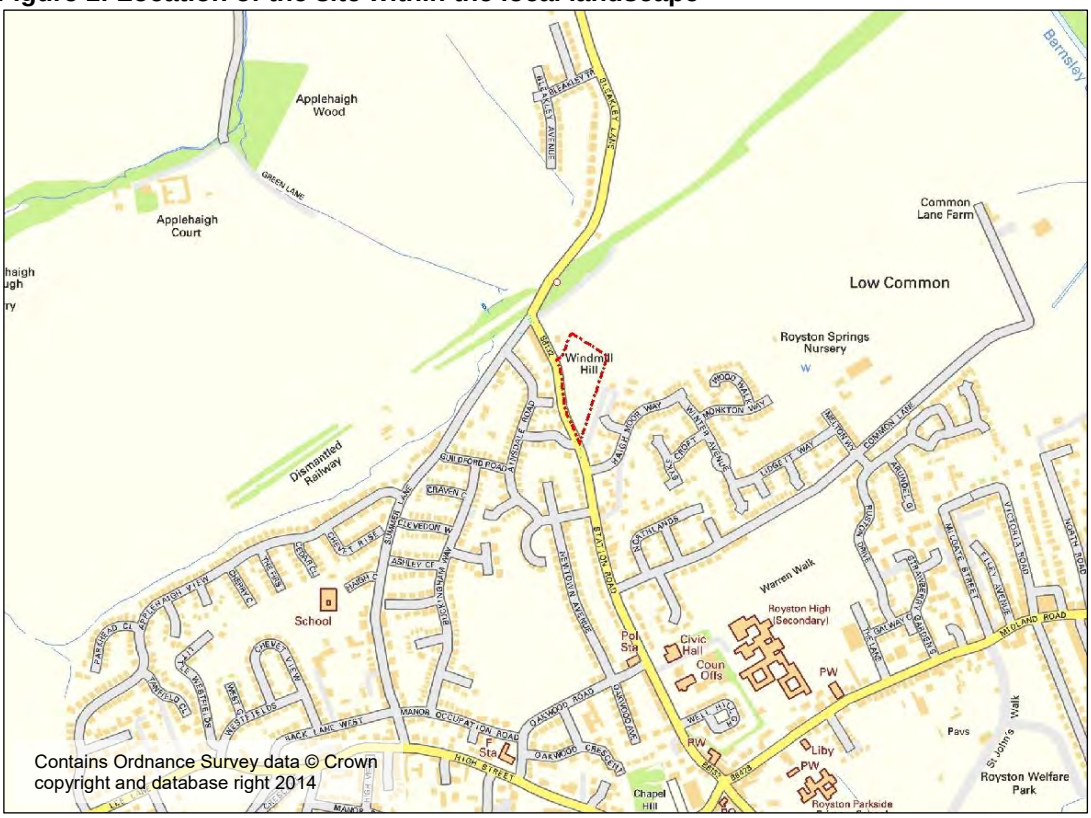
3.0 SITE DESCRIPTION

3.1 The survey area is located off Station Road and Windmill Terrace to the north west of Royston Village. It is centred at OS grid reference SJ 533 877. The site's context in the wider landscape is illustrated in Figure 1 below.

3.2 The survey area is bounded to the west by Station Road and a residential housing estate. To the north and north east lie agricultural land and further residential housing lies south and east. The Trans Pennine Trail and Barnsley Canal are located approximately 950m to the east.

3.3 In brief, the site is dominated by continuous bracken and modified neutral grassland with patches of dense scrub, tall ruderal herbs and acid grassland.

Figure 1: Location of the site within the local landscape



4.0 METHODS

Desktop Study

4.1 Information regarding historic species records and protected sites within a 1km radius of the site was requested/gathered from the sources listed in Table 1.

Table 1: Ecological information and consultations

SOURCE OF INFORMATION	NATURE OF INFORMATION
MAGIC Map	Maps showing legally protected areas/ protected sites
Google Maps & Where's the path 2	Satellite imagery and OS mapping
West Yorkshire Ecology & Barnsley Metropolitan Borough Council	Local records for European/UK protected species and sites

Habitats and Flora

4.2 A walkover assessment of the site was carried out by Val Gateley (FISC Level 5) on 8th October 2013. The survey was carried out in accordance with the Phase 1 assessment methods (JNCC 2010) and gives an overview of key habitats and wildlife corridors and any likely sites for species of conservation concern.

Fauna

4.3 During the walkover assessment, the habitats present were assessed for their potential to support species of conservation concern, particularly statutorily

protected species or S41 species of principal importance, as listed under the Natural Environment and Rural Communities (NERC) Act, 2006.

4.4 All trees on site were assessed from ground level for their potential to support roosting bats.

5.0 RESULTS

Desktop Study

5.1 A summary of the results of the desktop study are set out in Table 2. Results, including maps of designated sites, are found in Appendix A.

Table 2: Desktop Study Results

Source	Protected/important species records, protected sites and priority habitats within 1km of the site	Metres from site/grid reference	Direction from site
Barnsley Metropolitan Borough Council	Natural Heritage Site Barnsley Canal	950	E
West Yorkshire Ecology & Barnsley Biological Record Centre	Pipistrelle species [1, 2, 3]	580 & 590	SW & WSW
	Common pipistrelle [1, 2, 3]	760	S
	Vesper bat species [1, 2, 3]	820	WSW
	House sparrow [3, 4]	760	S
	Wall butterfly [3]	950	WNW

[1] **European Protected Species (Conservation of Habitats and Species Regulations 2010)**
[2] **Wildlife and Countryside Act 1981 (as amended) - Schedule 1 or Schedule 5 or Schedule 8**
[3] **Section 41 or 42 Species of Principle Importance (NERC Act 2006)**
[4] **Birds of Conservation Concern (BoCC) Amber & Red listed species**

Protected sites

5.2 No statutorily or non-statutorily protected sites were identified within or adjacent to the proposed development site. The nearest site designated for nature conservation is Barnsley Canal Local Wildlife Site (LWS), which lies approximately 950m to the east of the site. Notton Wood and Chevet Branch Line Local Nature Reserves (LNR) lie over 1km to the west and north, respectively.

Protected species records

5.3 All bats are European Protected Species (EPS), Schedule 5 of the Wildlife and Countryside Act 1981, as amended (Sch5 WCA) and species of principle importance under Section 41 of the Natural Environment and Communities Act 2006 (S41 NERC). A number of bats are recorded within 1km of the site. The closest record for pipistrelle bat species is 580m southwest of the site associated with existing residential development. Records from West Yorkshire Ecology also show a pipistrelle bat species roost located over 760m to the south west of the site and a vesper bat species roost was recorded over 820m south west of the site.

5.4 Section 41 and red list Bird of Conservation Concern house sparrow is recorded within 1km south of the site and Section 41 invertebrate species wall butterfly are recorded within 1km north of the proposed development site.

Phase 1 Habitat Survey

5.5 The following paragraphs provide a summary of the findings of the habitat survey. The habitats within the site are illustrated in Drawing G4186.001 and detailed floral species lists are provided the Target Note Report presented in Appendix B.

5.6 Habitats present within the site include:

- Modified neutral grassland
- Dense scrub
- Tall ruderal herbs
- Continuous bracken
- Scattered broad-leaved trees and scrub
- Species-poor hedgerow
- Unimproved acid grassland

Modified neutral grassland

5.7 This is the most dominant habitat covering much of the central area of the site. It includes a range of rank grassland species of neutral origin not derived from agricultural swards. Species occurring in these areas include Yorkshire fog *Holcus lanatus*, annual meadow-grass *Poa annua*, false oat-grass *Arrhenatherum elatius* and common bent. Full species list is detailed in Target Note (TN) 2.

5.8 At the time of survey it was evident that much of this area had undergone some scrub clearance works with areas of bare ground, machinery tracks and occasional brash piles noted, it is likely that the bare areas will regenerate into modified neutral grassland and tall ruderal herb mix.

Dense and scattered scrub

5.9 Dense scrub borders the western and northern boundaries of the site. Species present include raspberry *Rubus idaeus*, bramble *rubus fruticosus*, damson *Prunus domestica* and hawthorn *Crataegus monogyna*.

5.10 Suckering damson plants form an area of scattered scrub spreading into centre of the site from the area of dense scrub on the western boundary. There is also some scattered birch *Betula pendula* scrub parallel with the eastern boundary.

Scattered broad-leaved trees

5.11 Scattered trees are mostly present amongst the areas of dense scrub. The biggest concentration of trees is at the northern boundary of the site. Sycamore, *Acer pseudoplatanus* ash *Fraxinus excelsior* are abundant with occasional goat willow and silver birch. There is also a single mature pear tree *Pyrus* species.

5.12 Further details regarding trees can be found in the Arboricultural Impact Assessment (TEP doc ref: 5148.001).

Tall ruderal herbs

5.13 There are three small stands of tall ruderal herb in the north of the site, all of which are dominated by rosebay willowherb *Chamerion angustifolium.* A larger area is present in the southeast of the site, rosebay willowherb is again dominant but there

is a greater mix of other species present including nettle *Urtica dioica*, creeping thistle *Cirsium arvense* and hogweed heracleum sphondylium (TN3).

Continuous bracken

5.14 A band of continuous bracken *Pteridium aquilinum* runs along the majority of the eastern site boundary.

Species-poor hedgerow

5.15 A hawthorn dominated hedge is present amongst the bracken in the east of the site. Elder *Sambucus nigra* and field maple *Acer campestre* also occur within this short section of hedge.

Unimproved acid grassland

5.16 The western boundary of the site forms a relatively steep bank leading down to Station Road. At the southern end of this is a small area of unimproved acid grassland. Typical acid grassland species including moor mat-grass *Nardus stricta*, red fescue *Festuca rubra*, wavy hair-grass *Deschampsia flexuosa* and common bent *Agrostis capillaris* are abundant (TN1). Damson, Himalayan cotoneaster *Cotoneaster simonsii* and prickly heath *Gaultheria mucronata* scrub is encroaching this area.

Invasive and protected plant species

5.17 No protected plant species were observed during the habitat survey. Schedule 9 (WCA) invasive species Himalayan cotoneaster and montbretia *Crocosmia x crocosmiiflora* were noted on site (locations illustrated in Drawing G4186.001). Two cotoneaster plants were pr4186esent amongst the acid grassland in the southwest of the site. The montbretia is located on the northern site boundary and is likely to have spread from the adjacent garden.

Connectivity with the wider landscape

5.18 The site has good connectivity to the wider landscape to the north, east and west, initially through a tree/scrub lined disused railway line (approximately 60m north of the site) which in turn links the site to a number tree lines and woodland belts in the largely agricultural wider landscape. Residential development lies to the south.

Fauna

Amphibians

5.19 There are no desktop records for amphibians and there are no water bodies on site suitable for supporting breeding amphibians, otter or water vole. The closest water bodies are located over 950m east of the site, associated with Common Lane Farm and the Trans Pennine Trail. Therefore there are no issues with regard to these species and no further mention in this report.

Badger

5.20 No records of badger were identified through the desktop study. The habitats located on site may be suitable for foraging and dispersal, however no signs of badger including setts, latrines or hairs were observed within or adjacent to the site during the extended Phase 1 survey. Therefore there are no issues with regard to these species and no further mention in this report.

Bats

5.21 Desktop records identified a number of records for bats species within 1km of the site, including pipistrelle and vesper bat species roost sites. These were all over 500m from the site.

5.22 No trees on site were identified as having suitability to support roosting bats. The dense scrub with scattered trees which borders the western and northern boundaries of the site offer potential foraging and commuting habitat for bats.

Birds

5.23 The trees, scrub and hedgerow within the site provide suitable foraging and nesting habitat for birds. The grassland did not offer suitable habitat for ground nesting birds due to the small scale of this area, meaning trees suitable as perches for predatory birds are in close proximity to all areas of grassland on site. The site is likely to be used by a range of birds common in rural and sub-urban environments. Protected bird species house sparrow was identified within 1km which may use the site for foraging.

Reptiles

5.24 There are no records of reptiles within 1km of the site; however the site contains habitats such as dense scrub and grasslands which offers suitable habitat for reptile basking, foraging and refuge. There are also links to habitat in wider landscape via a disused railway that also provide potential for reptiles.

Water vole and otter

5.25 There are no desktop records for water vole or otter were identified. There are no water bodies/courses on or adjacent to site suitable to support water vole or otter. Therefore there are no issues with regard to these species and no further mention in this report.

6.0 CONCLUSIONS

Site designations

6.1 Barnsley Canal Local Wildlife Site lies 950m east of the proposed development site, connective habitat in the form of a tree and scrub lined disused railway line links these two areas. Due to the distance between the LWS and the proposed development site and the lack of a hydrological connection it is not likely that any pollution can enter the designated land from the development zone. It is therefore considered that development of the site will have no detrimental effect on this Local Wildlife Site.

Habitats

6.2 The abundant habitat on site is modified neutral grassland dominated by coarse grasses with occasional tall ruderal herbs interspersed through the grassland. Ecological interest on site is mainly confined to the perimeters via the acid grassland, hedgerow, dense scrub and scattered trees.

6.3 The native hedge, acid grassland and mosaic dry heath/acid grassland are Section 41 habitat of principal importance and are listed on the Barnsley BAP as habitats of local priority. Local Planning authorities seek to maintain and enhance biodiversity when considering planning applications. As such, S41 habitats may be a material consideration in any planning application.

Invasive species

6.4 Himalayan cotoneaster and montbretia were recorded on site. It is an offence to intentionally or unintentionally cause the spread of these Schedule 9 species in the wild.

6.5 If development of the site will result in the disturbance of the areas where these invasive plants are found on site; control measures should be taken to eradicate these prior to commencement of works. Thus avoiding the spread of these invasive species. A method statement detailing the measures to be implemented will need to be produced and subsequently agreed to by the Local Planning Authority.

Fauna

Birds

6.6 The trees, scrub and hedgerow on site provide potential nesting habitat for breeding birds Under the *Wildlife and Countryside Act, 1981* (as amended) it is an offence to take, damage or destroy the nest of any wild bird whilst it is in use or being built.

Reptiles

6.7 No records for reptiles were identified during the desktop study within 1km of the site; however the habitats present on site do offer potential for reptiles. Confirmation of the presence or absence of reptiles is required to ensure these species do not come to any harm as a result of developing this site.

7.0 RECOMMENDATIONS

Habitats and Flora

7.1 The trees, scrub, hedgerow and acid grassland should be retained where possible as they provide the strongest ecological features on site and add to the biodiversity of the local area. These features areas provide foraging, sheltering and breeding potential for birds, small mammals and invertebrates.

7.2 A small area of heath/acid grassland mosaic was noted during the original survey undertaken in August 2010, no evidence of this mosaic habitat was noted during the 2013 survey. It is recommended that removal of the Schedule 9 invasive species Himalayan cotoneaster from within the area of acid grassland on site is undertaken (in addition invasive species prickly heath should also be removed), the resultant bare area (were the invasive species are removed from) should be plug planted with young heather *Calluna vulagris* to ensure that this mosaic habitat is represented on site.

Bats

7.3 To ensure retained boundary habitat remain suitable for foraging and commuting bats; lighting near the site boundaries and any retained linear features should be minimised to avoid any adverse impact on foraging and commuting routes for bats. Directional lighting should also be used to avoid light spillage on scrub and trees around the site in order to minimise any potential impact on bats.

Birds

7.4 Vegetation clearance, including tree/scrub works or removal and cutting back overhanging trees should be implemented outside the bird nesting season (avoiding

March to August inclusive). If this is not possible, alternative measures will need to be implemented prior to the site clearance. Any works undertaken during this period will require a nesting bird check to be carried out by a suitably qualified ecologist immediately prior to the works commencing, to establish that no active bird nests will be disturbed or destroyed. In the event that active nests are discovered, site clearance within an appropriate buffer zone would need to be delayed until nesting (and fledging of young) is complete. The size of the buffer zone would be dependent upon the species nesting.

7.5 It is strongly recommended that where possible trees, woodland and scrub should be retained during future development and should be protected using fencing to prevent encroachment by machinery or storage of materials within the root protection zone.

7.6 The loss of nesting bird habitat should be mitigated for through replacement planting in future landscape proposals using locally sourced native species.

Reptiles

7.7 Although there are no records of reptiles within the site or within 1km of the site, the habitat on site and in the wider locality offers potential for reptiles. It is recommended that a presence/absence reptile survey be undertaken at the site. Reptile surveys can be undertaken in April, May and September. They require a total of 8 survey visits (including 1 visit to place reptile tins/refugia across suitable locations on site).

Opportunities for enhancement and protection

7.8 Biodiversity within the site could be maintained and enhanced by including a mix of wildlife friendly species into the planting scheme. Native species, ideally of local stock, should be used. Species could include hawthorn, blackthorn *Prunus spinosa*, mountain ash *Sorbus aucuparia* and silver birch. Further input to the detailed design can be provided on request.

7.9 Within the proposed development, boundary features should ideally include native hedgerow planting using a variety of native woody species. Alternatively, green trellising using ivy, honeysuckle *Lonicera periclymenum* or other scented and berry producing climbers could be installed on buildings, boundary walls or fences within the new build to provide additional foraging and sheltering opportunities for insects, birds and bats.

7.10 Both bird and bat boxes could be incorporated onto any building which is constructed on site and examples of these are provided in Appendix C. This would provide breeding opportunities for both bird and bat species. These should be located an appropriate height and aspect, with suitable lighting levels and close to vegetation.

8.0 REFERENCES & FURTHER READING

Joint Nature Conservation Committee (2010) Phase 1 Habitat Survey. JNCC. Peterborough.

Marchant, J. H., Hudson, R., Carter, S. P., and Whittington, P. (1990) Population trends in British Breeding Birds. British Trust for Ornithology, Tring, Hertfordshire.

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Amphibian and Reptile Groups of the United Kingdom Advice Note 5 (May 2010)

Bat Conservation Trust (2012) 'Bat Survey: Good Practice Guidelines' The Bat Conservation Trust, London.

Chartered Institute of Ecology and Environmental Management (CIEEM 2013): Guidelines for Preliminary Ecological Appraisal. Winchester, Hampshire.

Eaton M. A., Brown A. F, Noble D. G, Musgrove A. J, Hearn R, Aebischer N. J, Gibbons D. W, Evans A & Gregory R. D. (2009) Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man. British Birds 102, pp296–341

APPENDIX A:
Desktop Study Information

Desk Based Ecology Assessment

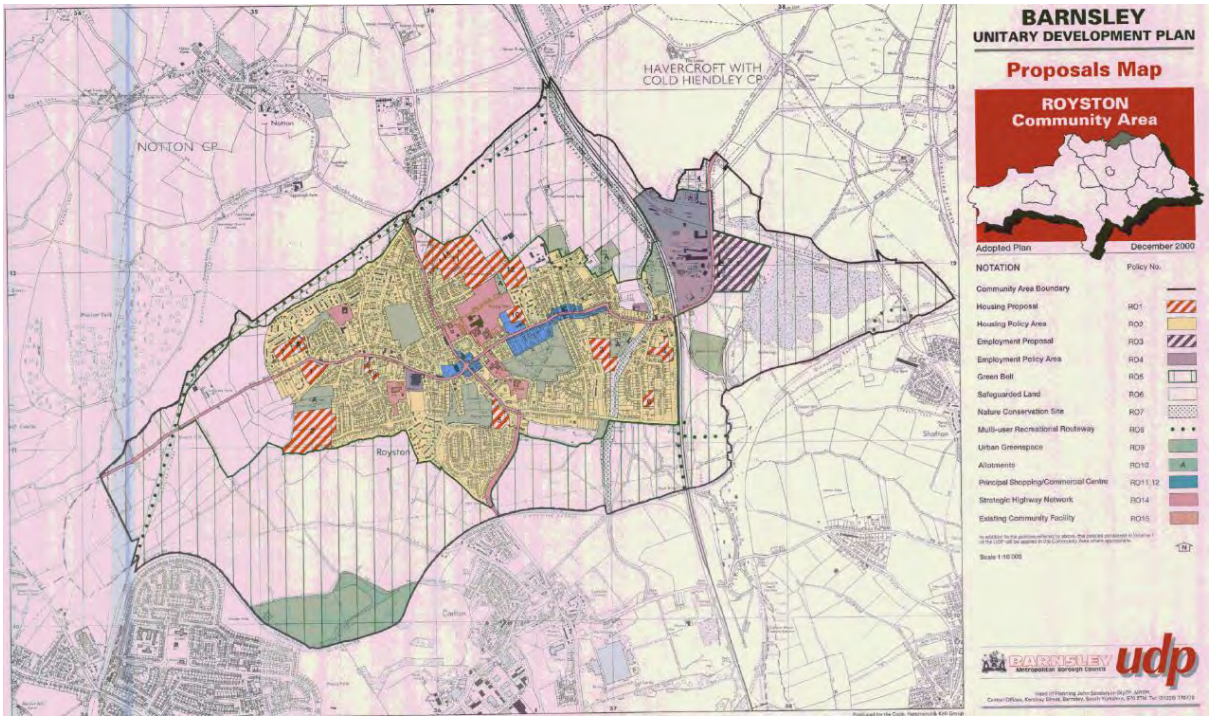
Station Road, Royston,
Barnsley
Approximate Central Grid Reference: SE 359 121

Contents

- **Site location plan**
- **Extract from local plan**
- **Extracts of relevant planning policies**
- **Local site designations**
- **Local species records**
- **National site designations**
- **Habitat inventory records**

Site location plan

Extract of Barnsley Metropolitan Borough Council Unitary Development Plan (adopted Dec 2000) and supporting key



*Proposal map not updated for new Core Strategy yet

Extracts of Barnsley Metropolitan Borough Council Core Strategy (adopted Sept 2011) relevant planning policies

CSP 33 Green Infrastructure

We will protect, maintain, enhance and create an integrated network of connected and multi-functional Green Infrastructure assets that:
provides attractive environments where people want to live, work, learn, play, visit and invest meets the environmental, social and economic needs of communities across the borough and the wider City Regions enhances the quality of life for present and future residents and visitors helps to meet the challenge of climate change enhances biodiversity and landscape character improves opportunities for recreation and tourism respects local distinctiveness and historical and cultural heritage maximises potential economic and social benefits. At a strategic level Barnsley's Green Infrastructure network includes the following corridors which are shown on the Green Infrastructure Diagram:
River Dearne Valley Corridor
River Dove Valley Corridor
River Don Valley Corridor
Dearne Valley Green Heart Corridor
Historic Landscape Corridor
The network of Green Infrastructure will be secured by protecting open space, creating new open spaces as part of new development, and by using developer contributions to create and improve Green Infrastructure. We will produce a Green Infrastructure Strategy for Barnsley which will be informed by the Leeds City Region and South Yorkshire Green Infrastructure Strategies.

CSP 34 Protection of Green Belt

The general extent of the Green Belt is shown on the Core Strategy Key Diagram.
Its detailed boundaries will be shown on the Proposals Maps which will accompany the Development Sites and Places DPD.
In order to protect the countryside and open land around built up areas the extent of the Green Belt will be safeguarded and remain unchanged.
The Green Belt boundaries will be subject to localised review only which may result in changes necessary to deliver the borough's distribution of new employment sites as set out in CSP12.

CSP 36 Biodiversity and Geodiversity

Development will be expected to conserve and enhance the biodiversity and geological features of the borough by:
protecting and improving habitats, species, sites of ecological value and sites of geological value with particular regard to designated wildlife and geological sites of international, national and local significance, ancient woodland and species and habitats of principal importance identified in Section 74 of the Countryside and Rights of Way Act 2000 and in the Barnsley Biodiversity Action Plan maximising biodiversity and geodiversity opportunities in and around new developments conserving and enhancing the form, local character and distinctiveness of the river corridors of the Dearne and Dove as natural floodplains and important strategic wildlife corridors. Development which may harm a biodiversity or geological feature will not be permitted unless effective mitigation and/or compensatory measures can be ensured.

Extract of species data provided by Barnsley Biological Records Centre within 1km

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Grid Ref	Location	Location Name	Date	Group	Scientific Name	Common Name	Comments	UK BAP Species	Wildlife and Countryside Act	Red and Amber birds
SE3512	Bretton Park LWS	Bretton Lakes	17/03/2011	bird	Turdus iliacus	Redwing		0	1	1
SE352117	'BARNSLEY MBC'	Firham Close	22/07/2002	terrestrial mammal	Chiroptera	Bats	Behind flashing of canopy over front door. Advice letter re repairs in autumn and provision of replacement roosting	0	1	0
SE354118	Royston	Cedar Close, 6	02/08/2000	terrestrial mammal	Chiroptera	Bats		0	1	0
SE354118	Royston	6 Cedar Close, S71 4JF	01/01/2000	terrestrial mammal	Pipistrellus	Pipistrelle Bat species	Bats roosting in the gable apex/under soffit. Natural England reference 123/00/SE31. Letter dated 09/08/2000.	0	1	0
SE363116	'BARNSLEY MBC'	Midland Road School	18/05/1988	terrestrial mammal	Pipistrellus pipistrellus	Pipistrelle	1	0	1	0
SE358113	'BARNSLEY MBC'	Spring Factory Royston	31/08/2010	terrestrial mammal	Pipistrellus pipistrellus 45kHz	45 Khz Pipistrelle	several feeding along hedgerow	0	1	0
SE3612	Bretton Park LWS	Bretton Lakes	17/03/2011	bird	Emberiza citrinella	Yellowhammer		1	0	1
SE358113	Area between Ryhill & Royston		09/07/2003	bird	Passer domesticus	House Sparrow	from houses in village	1	0	1
SE3611	Royston	Downing	01/05/2009	bird	Passer domesticus	House Sparrow	Between: 12:00-13:00.	1	0	1
SE3611	Royston	Downing	10/11/2009	bird	Passer domesticus	House Sparrow	Between: 11:30-12:20.	1	0	1
SE3611	Royston	Downing	10/11/2009	bird	Passer domesticus	House Sparrow	Between: 12:00-12:00. 5 Females	1	0	1
SE3611	Royston	Downing	29/05/2009	bird	Passer domesticus	House Sparrow	Between: 15:00-15:00. Several Birds, Feeding, and returning to a probable nest site, Can also hear chicks, but too high to see	1	0	1
SE3511	Meadstead Primary School		05/07/2013	insect - moth	Tyria jacobaeae	Cinnabar	larvae	1	0	0
SE3611	Royston	Downing	10/11/2009	bird	Carduelis carduelis	Goldfinch	Between: 12:00-12:00.	0	0	1
SE3611	Royston	Downing	01/05/2009	bird	Falco tinnunculus	Kestrel	Between: 12:00-13:00.	0	0	1
SE3611	Royston	Downing	10/11/2009	bird	Pyrrhula pyrrhula	Bullfinch	Between: 11:30-12:20.	0	0	1
SE3611	Royston	Downing	10/11/2009	bird	Pyrrhula pyrrhula	Bullfinch	Between: 12:00-12:00. 2 Males	0	0	1
SE3611	Royston	Downing	01/05/2009	bird	Turdus merula	Blackbird	Between: 12:00-13:00.	0	0	1
SE3611	Royston	Downing	10/11/2009	bird	Turdus merula	Blackbird	Between: 11:30-12:20.	0	0	1
SE3611	Royston	Downing	10/11/2009	bird	Turdus merula	Blackbird	Between: 12:00-12:00. 2 Males	0	0	1

Extract of species data provided by West Yorkshire Ecology Records Centre within 1km

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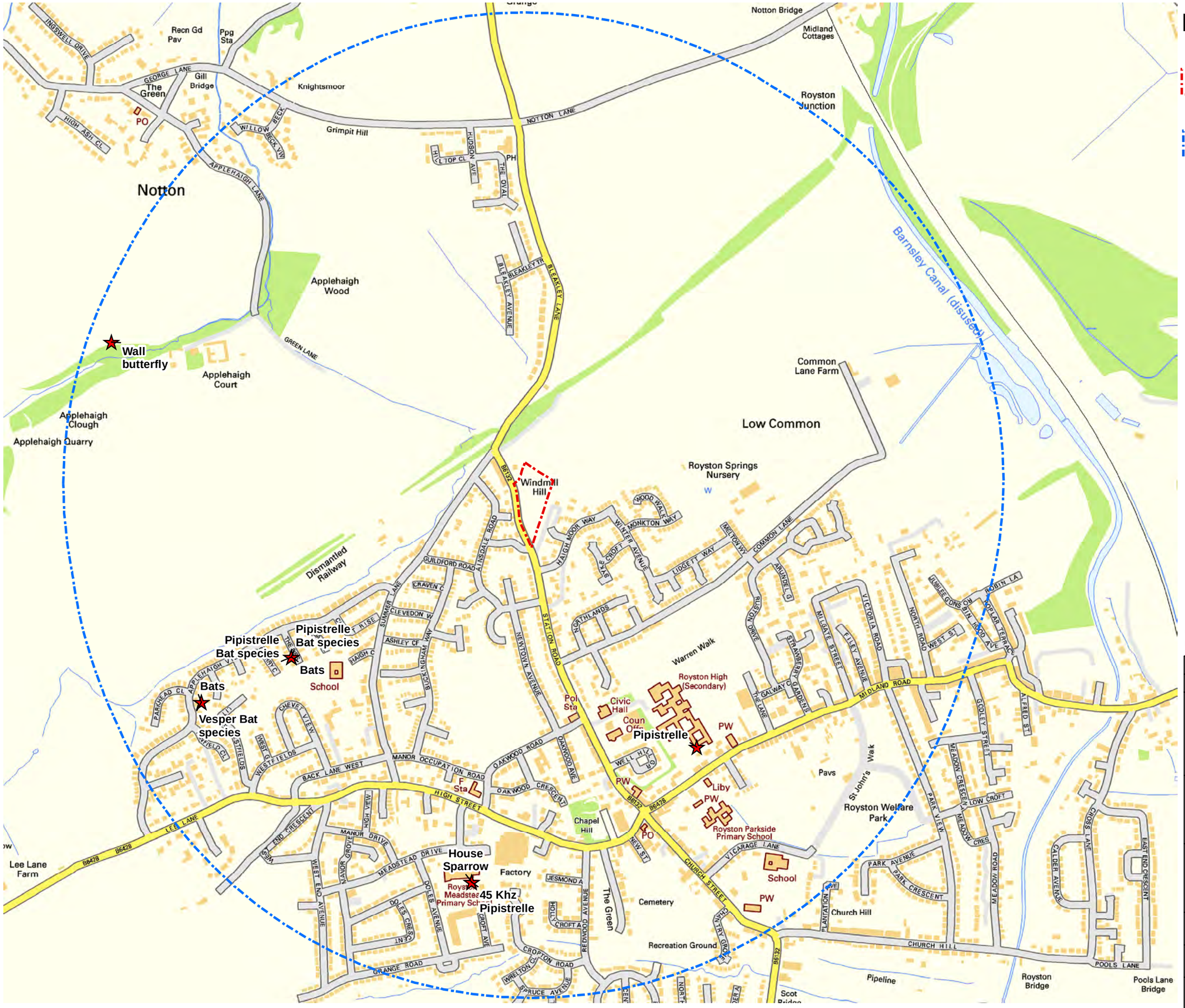
Grid Ref.	Species	Latin Name	Group	Date	Survey notes		Location	Comments	Designation
SE354118	Pipistrelle Bat species	Pipistrellus sp.	terrestrial mammal	2000	Roost		6 Cedar Close, Royston, Barnsley, S71 4JF	Bats roosting in the gable apex/under soffit. Nat	Sch5
SE352117	Vesper Bat species	Vespertilionidae	terrestrial mammal	22/07/2002	Roost		Barnsley, Firham Close	Behind flashing of canopy over front door. Advice	Sch5
SE350125	Wall	Lasiommata megera	Butterfly	1995	Field Record	6 Count of Adult			UKBAP; WYBAP



Key

- Site boundary
- 1km Buffer
- ★ Species records

Rev	Description	Dwn	Appvd	Date

TEP
Genesis Centre
Birchwood Science Park
Warrington WA3 7BH
Tel 01925 844004
Fax 01925 844002
email tep@tep.uk.com

Project:

Station Road, Royston

Title:

Desktop Species Records

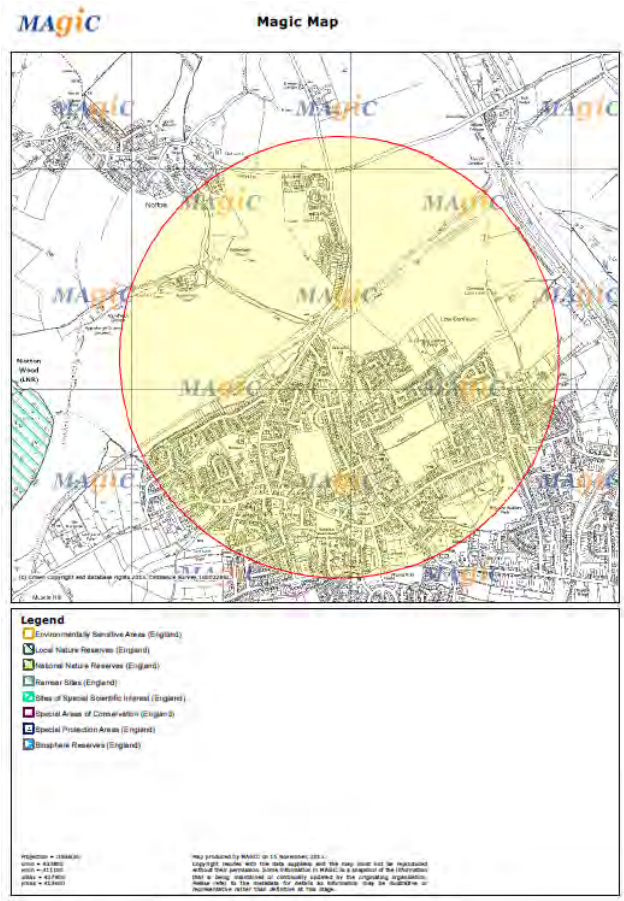
Map No.: G4186.001

Scale: 1:8,000 @ A3

Date: 16/12/13

Drawn:	Checked:	Approved:
SS	VG	VG

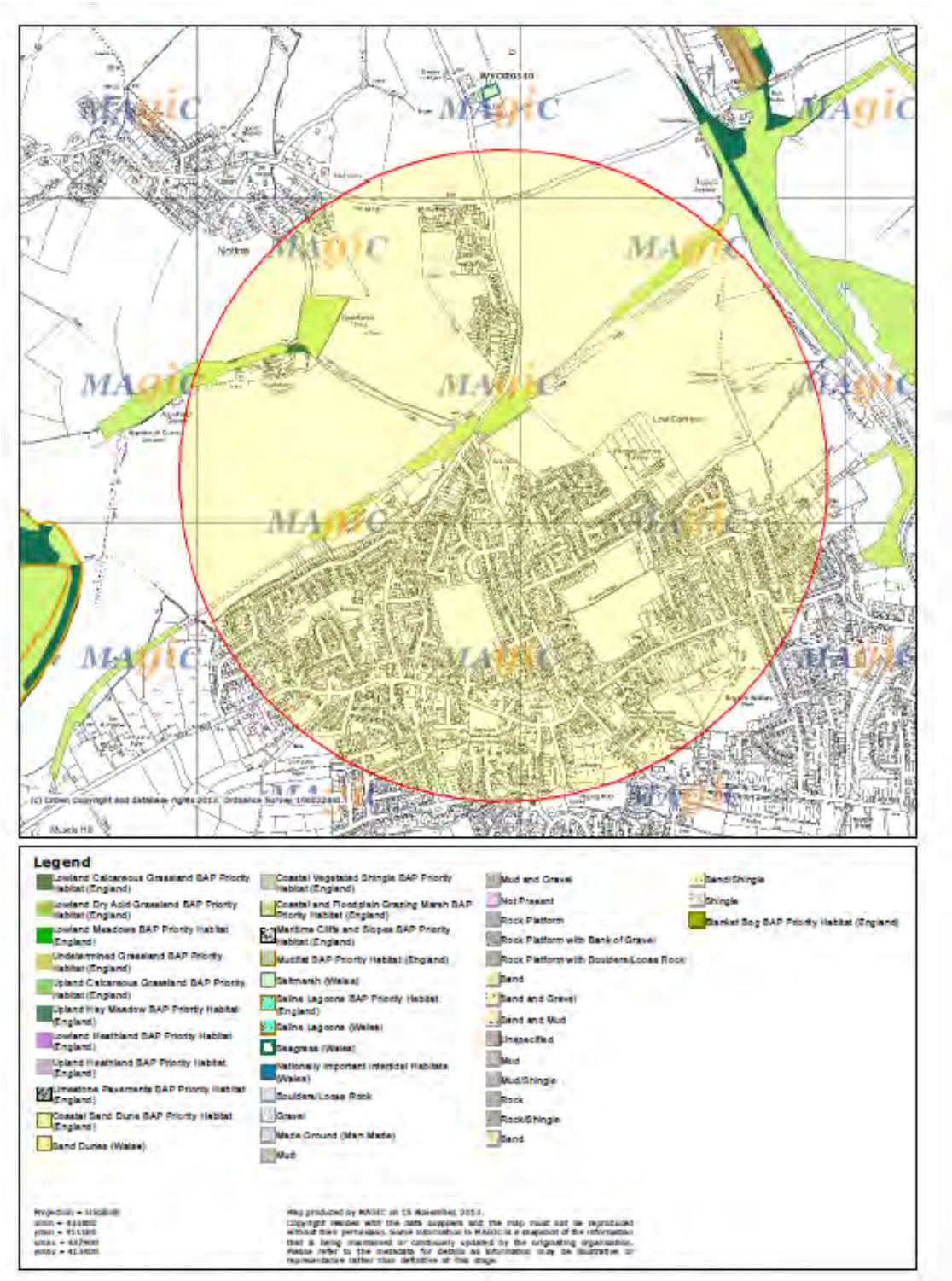
Magic Map 1km search zone for designated wildlife sites - Map



Magic Map 1km search zone for designated wildlife sites - Report

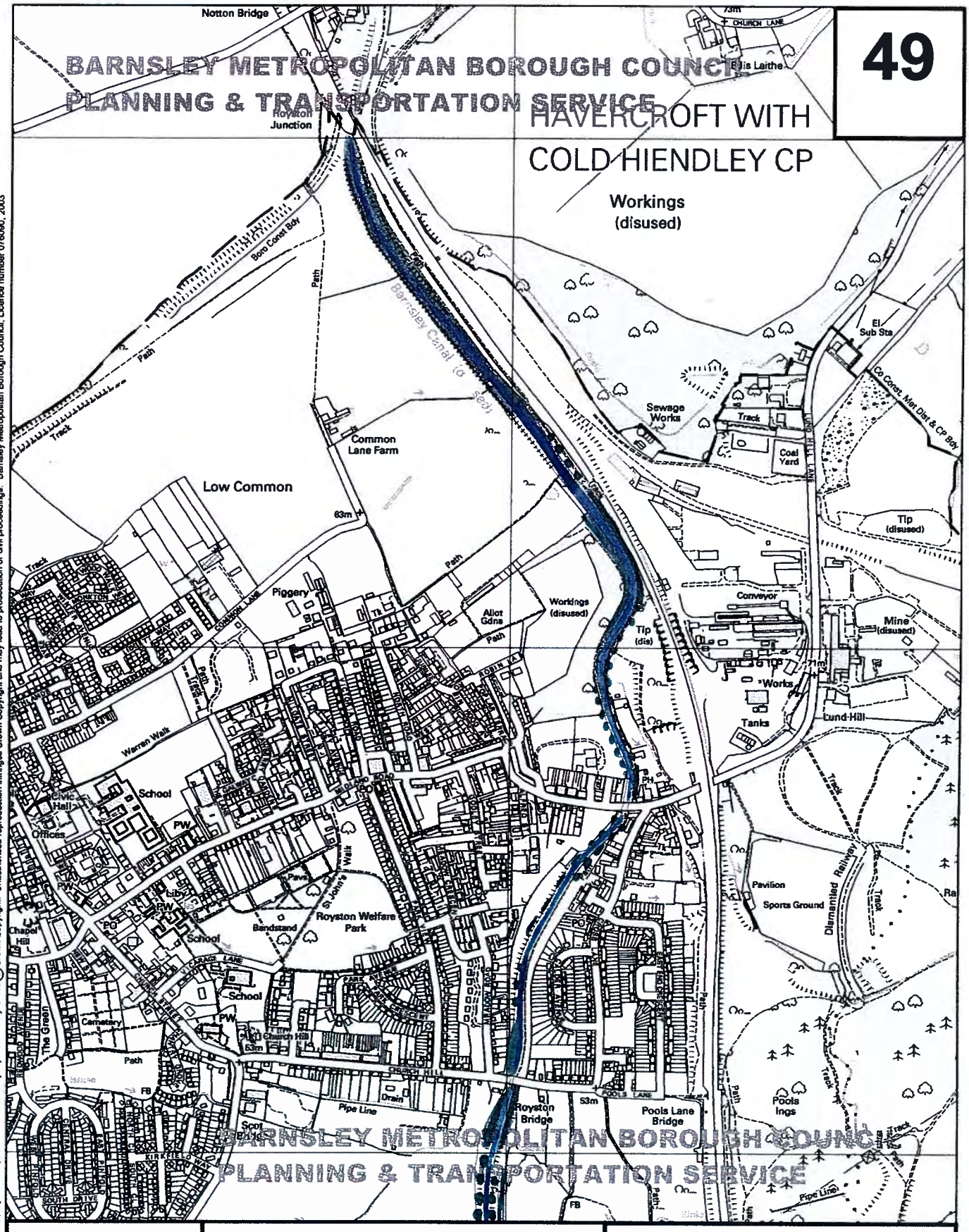
No designated sites within area.

Magic Map 1km search zone for habitat inventory data



49

HAVERCROFT WITH COLD HIENDLEY CP



NORTH

metres
0 100 200

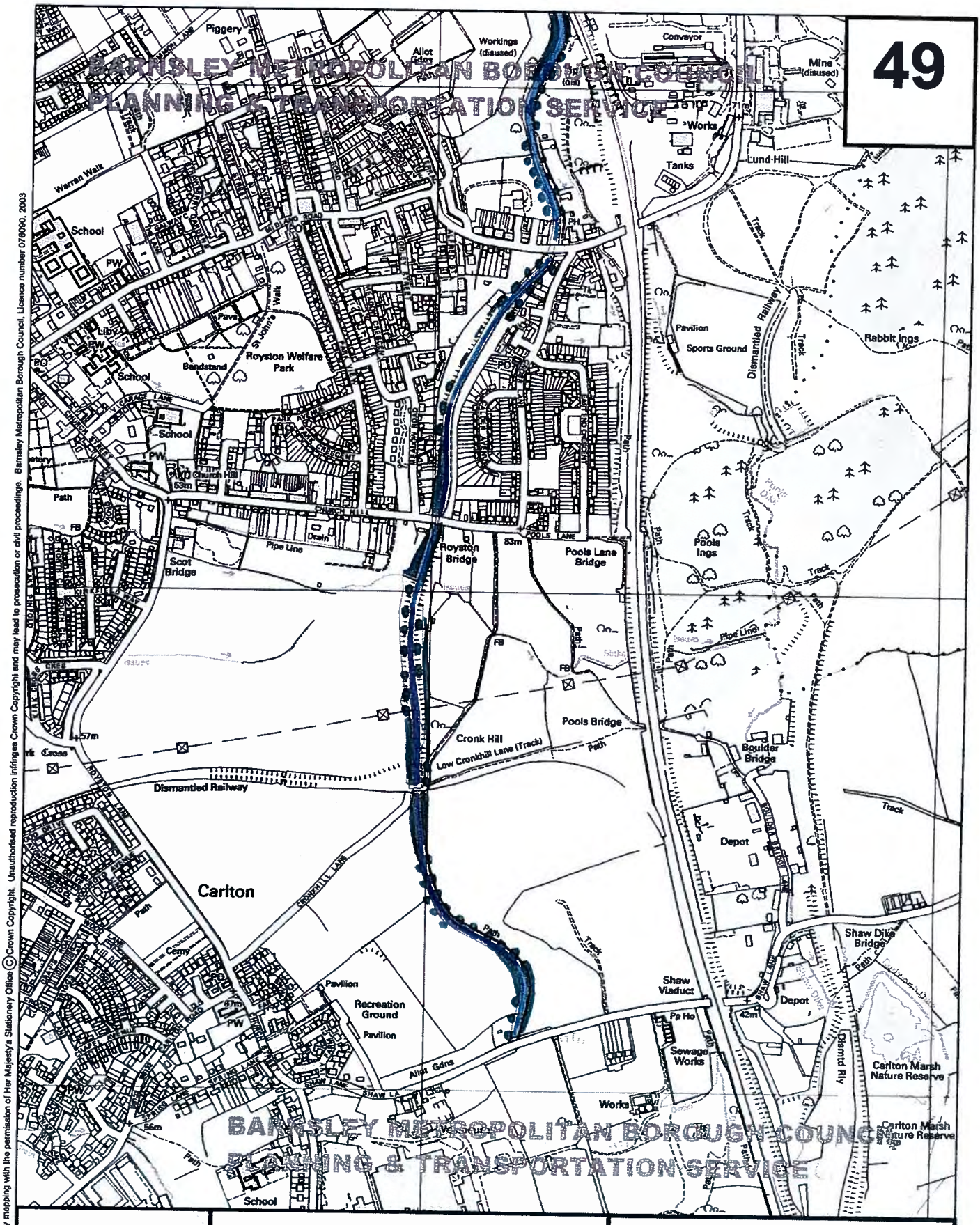
Natural Heritage Sites

49 - Barnsley Canal Map 1 of 2

BARNSLEY
Metropolitan Borough Council

Planning and Transportation Service
Assistant Director: Ruth Middleton, BA(Hons), DipSurv, MRTPI
Central Offices, Kendray Street, Barnsley. S70 2TN
Tel: (01226) 770770 Fax: (01226) 772599

Scale 1 : 10,000	OS Sheet: SE31	Date - May 2003



NORTH

metres
0 100 200

Natural Heritage Sites

49 - Barnsley Canal Map 2 of 2

Scale 1 : 10,000 | **OS Sheet:** SE31 | **Date - May 2003**

BARNSLEY
Metropolitan Borough Council

Planning and Transportation Service
Assistant Director: Ruth Middleton, BA(Hons), DipSurv, MRTPI
Central Offices, Kendray Street, Barnsley. S70 2TN
Tel: (01226) 770770 Fax: (01226) 772599

Site Name: Barnsley Canal Parish:

Grid Reference: SE 370125 Area: 4.2 ha

SITE DESCRIPTION

The disused Barnsley Canal passes through the east of Royston at an altitude of 51 m AOD and forms a contiguous site with the Barnsley Canal in Wakefield. The district boundary follows the canal in the northern part of the site.

At the time of the 1990/1 survey the water in the northern stretch of canal was almost completely covered with common duckweed (Lemna minor) with some ivy-leaved duckweed (L. trisulca). The canal banks are steep and covered with low trees and shrubs with some large white willow (Salix alba) beside the canal. The marginal vegetation at the edge of the canal contains reed (Phragmites australis) and occasional bur-reed (Sparganium species). At the bridge reed and rose-bay willow-herb (Chamerion angustifolium) are dominant. A dense stand of reed sweet-grass (Glyceria maxima) now chokes the canal to the north of the Midland Road bridge (March 2003).

There is a dense, extensive bed of reed south of the bridge. This area may dry out in summer but it was noted as having water in March 2003. South of the reed is open water with common duckweed and a fringing vegetation of reed. There is an area of dense trees of white willow, elder (Sambucus nigra) and hawthorn (Crataegus monogyna) on the canal banks north of the road.

The next stretch of canal is dry with much reed and trees of white poplar (Populus alba), hawthorn, field maple (Acer campestre) and goat willow (Salix caprea) on the banks. Great reedmace (Typha latifolia) occurs as the canal gets wetter to the south. There is much reed again further south. Trees of black poplar (Populus nigra), birch (Betula species) and elder and blackthorn (Prunus spinosa) are found on the canal banks.

A total cover of reed extends some way along the stretch south of Royston Bridge. There are bankside trees of hawthorn, ash and sycamore (Acer pseudoplatanus). Occasional stands of great reedmace are found in the canal. Further south the open water has a total cover of common duckweed with marginal vegetation of great reedmace and reed. Where the disused railway crosses the canal the water is more open with little emergent vegetation and occasional large white willow on the banks.

The southernmost section starts with some cover of common duckweed. The fringing vegetation consist of bur-reeds with bittersweet (Solanum dulcamara) and occasional great reedmace. Horsetail (Equisetum species) is found on the banks with a variety of tree species. Where the canal bends eastwards, abundant ivy-leaved duckweed and false fox sedge (Carex otrubae) were found in 1990/1. The southern end of the site has a total cover of common duckweed and reed with white willow, as the canal becomes dry near the road. The canal also supports whorled water-milfoil (Myriphyllum verticillatum), a nationally scarce plant.

SITE EVALUATION

Criteria

Size: The site extends to approximately 3km of disused canal. The boundary of the site is the towpath or footpath on the eastern side ans the top of the opposite bank of the canal on the other side. The canal north of this site is proposed as a Site of Ecological and Geological Interest (SEGI).

Diversity: The site shows a diversity of wetland habitats including open water and swamp of Phragmites australis.

Naturalness: The canal is man-made, but the vegetation communities within it are semi-natural.

Rarity: Myriphyllum verticillatum is a nationally scarce plant occurring in 106 10 x 10 km squares in Great Britain (***British Atlas of the British Isles***, 2002).

Fragility: The site is vulnerable to natural succession and drying out, pollution from adjacent land uses, such as run-off from agricultural land and dumping of rubbish. The canal is no longer managed as a viable waterway.

Typicalness: The canal contains some typical canal flora such as the fringing vegetation and Myriophyllum verticillatum. The stands of Phragmites australis are a typical single species swamp habitat.

Evaluation of important features

Site Feature		Importance		
1.	Habitat type	District		
	Standing water	High		
	Swamp	High		
2.	Species	National	County	District
	Myriophyllum verticillatum	High*		

* Presence confirmed by survey in 1998.

Existing site designations: Adjoins SEGI.

Site justifications: The Barnsley Canal is split into five discrete sections in this site. The canal contains a typical variety of wetland plants and large areas of Phragmites swamp. The nationally scarce plant Myriophyllum verticillatum grows here in some abundance.

Barnsley Biodiversity Action Plan
HAP 13 Reedbeds
HAP 14 Ponds and Canals

SITE MANAGEMENT

Management objective:
To maintain the open water habitats of the canal.

Initial Management:
Control of reed sweet-grass is required in order to prevent the loss of open water.

Ongoing management:
Consider programme of dredging in some drier areas of the canal presently dominated by reed, to provide more areas of open water to encourage growth of aquatic plants.
Continue to monitor location, abundance and state of health of Myriphyllum verticillatum an carry out appropriate management to ensure its survival and to encourage it to spread to other areas of the canal. If the population is large enough consider transplantation to other stretches of the site where conditions are suitable.

Constraints:
Water pollution has been a problem especially in the northern section of canal. Consider carrying out water quality tests on each section to identify where there may be problems with water pollution. This is particularly important in the Myriophyllum verticillatum area.

Opportunities:
Opportunity for liaison with canal conservation group over future management.

SITE CONSTRAINTS AND OPPORTUNITIES

Constraints:

Opportunities:
Attractive linear habitat in an urban area so good opportunity for publicising NHS and providing interpretation for local people. Access easy for public. Ideal site for school use.

REVIEW OF BARNSLEY NHS SITES - FEBRUARY/MARCH 2003

Barnsley Canal

1. Site Boundaries
The site boundaries, as shown on the 1990 Survey Map, were identified as being correct.

2. Main Habitat Components
The main habitat compartments shown on the 1990 Survey Map were identified as being correct with exception of 3) below.

3. Habitat Change/Loss
Since the 1990 survey Glyceria maxima has taken hold and has filled the whole width of the canal to the north of the Midland Road bridge.

4. Notable/Rare Species
The species for which the site is noted, Myriophyllum verticilatum was not evident at the time of the March 2003 survey. Ice covered the water's surface.

5. Potential Threats
Large amounts of rubbish and litter have been thrown into the canal, especially where it is close to housing.

APPENDIX B:
Target Note Report

Target Notes Report

KEY - D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note TN1

Small area of acid grassland on bank adjacent to Station road.

Nardus stricta	A
Festuca rubra	F
Deschampsia flexuosa	F
Agrostis capillaris	F
Plantago lanceolata	O
Hieracium sp.	O
Holcus mollis	O
Cotoneaster simonsii	O
Hypochaeris radicata	O
Lonicera sp.	O
Arrhenatherum elatius	O
Gaultheria mucronata	O

Target Note TN2

Modified neutral grassland species.

Holcus lanatus	A
Arrhenatherum elatius	A
Agrostis capillaris	F
Plantago lanceolata	F
Trifolium repens	F
Trifolium pratense	O
Chamerion angustifolium	O
Senecio jacobaea	O
Poa annua	O
Hieracium sp.	R
Odontites verna	R
Rumex acetosa	R
Trifolium sp.	R

Target Note TN2

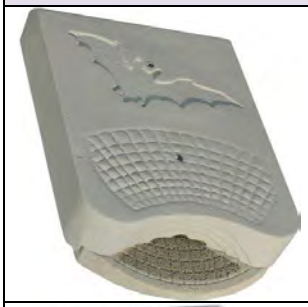
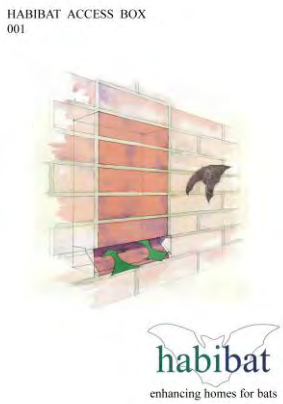
Large patch of tall ruderal herbs in the south east of the site.

Chamerion angustifolium	D
Cirsium arvense	F
Urtica dioica	F
Anthriscus sylvestris	O
Hercleum sphondylium	O
Crataegus monogyna	O
Arrhenatherum elatius	O
Rubus fruticosus agg.	O

APPENDIX C
Examples of Habitat Enhancement Measures for Bats and Birds

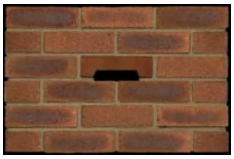
Bat Conservation Trust

Below is a list of bat related products that may be used for bat enhancement. However, please be aware that BCT does not endorse any particular product or brand as very little evidence is available to demonstrate that they are successful.

Bat Boxes	**In situ**	**Description**	**Company**	**Estimated price**
For external surfaces of buildings:				
		**Schwegler 1 WQ Summer & Winter Roost** Dimensions: 580 H x 380 W x 120 D Weight: 22Kgs	Alana Ecology Jacobi Jayne The Code Store	£90 to £139
		**Schwegler 1 FQ Bat Roost** Dimensions: 600H x 350W x 90D mm Weight: 15.8 Kgs	Alana Ecology Jacobi Jayne NHBS The Code Store	£70 to £90
	Internal or external 	**1 Schwegler FE Bat Access Panel** with optional back plate External Dimensions: H 30 x W 30 x D 8 cm Weight: 7.8 kg	Alana Ecology Jacobi Jayne NHBS The Code Store	£38 to £49
To integrate into walls:				
	Can be built with timber, brick or stone facing to match walls. *BCT is using the Habibat as a research and monitoring tool.	**Habibat** Dimensions: 215 x 215 mm Or 215 x 290 mm	Habibat NHBS	£82.50 to £129

		**Schwegler 1FR Bat Tube** Dimensions: H 475 x W 200 x D 125 mm Entrance W 150 x D 20mm Weight: 9.5kg	Alana Ecology Jacobi Jayne NHBS	£72 to £75
		**Schwegler 2FR Bat Tube** The 2FR bat box is based on the same design as the 1FR, but with the addition of holes in the sides. This allows multiple tubes to be placed next to each other to form a much larger bat roost.	Alana Ecology Jacobi Jayne NHBS	£72 to £76
		**Ibstock enclosed bat box**	Ibstock	
For trees:				
	Trees or flat surfaces	**Schwegler 1FF Bat Box** Dimensions: 430H x 270W x 140D mm. Entrance hole: 120 x 240mm	Alana Ecology Jacobi Jayne NHBS	£56 to £60
	Trees	**Schwegler 2F Bat Box** (General Purpose) Woodcrete 33cm H x diameter 16cm Note: location of access hole means that box is not self-cleaning.	Alana Ecology NHBS	£27.95

	Trees	**Schwegler 2FN Bat Box** The 2FN Bat Box has two entrances - one at the front and one at the rear against the tree. It has a domed roof to form clusters and an increased internal height. 36cm H x diameter 16cm 4.3kg	NHBS Nature Counters	£34.95
	Trees	**Schwegler 1FD Bat Box** The 1FD is a large general purpose bat box. Effectively it is a larger version of the Schwegler 2F bat box, with the addition of two roughened wood panels inside the box which simulate crevices. Note: location of access hole means that box is not self-cleaning.	Alana Ecology NHBS	£49 to £55
Wooden bat boxes				
	Fitted to walls, other flat surfaces or trees	**Kent Bat Box** Materials to be made from untreated rough-sawn timbers. Timber should be 20mm thick. The box should be rainproof and draught-free. Crevices can be between 15 & 25mm wide	Self constructed. Instructions from BCT.	

Access tiles or bricks	In situ	Description	Company	Estimated price
		**Tudor Bat access tile set**	**Tudor Clay Roof Tiles**	
		Ventilation tiles that can be adapted for bat access	Aspect Roofing	
		**Bat access brick**	Tamworth Property Services t) 01827 310475 chris@bat-survey.co.uk	
		**Ibstock bat roost entrance arch brick**	**Ibstock**	
		**Bat access slate**	JD Products **Owens Slate Service** Summit Slate	**£40-80**
		**Habibat Roof Access Tile**	Dreadnought Tiles Habibat	

Positioning considerations:

Aspect

Temperature is known to be the major factor influencing successful uptake of artificial roost by bats. In general, bats seek warm spaces to help them with rearing young. For this reason, bat boxes should be located where they will receive the maximum amount of sunlight. In the northern hemisphere this will be the southerly aspects/orientation (south, south-west and south-east). However, it is helpful to install bat boxes in more than one aspect to allow a choice of roosting conditions. Bat boxes located on a shady side will remain cooler and will be more suitable for use during the hibernation period (winter) or by male bats all year round.

Height

Position the bat boxes a minimum of 2 meters above ground. Avoid placement above windows, doors and wall climbing plants, thereby reducing the likelihood of predation by cats. A position near the eaves or gable apex of the property would be preferable.

Other considerations

To make the bat box a potential roost for a wider range of bat species, it is helpful to consider whether there is nearby linear vegetation features such as hedges. This is because some bat species use these features for navigation between their roosting site and feeding ground and to avoid flying in open and exposed areas.

Resources:

- Williams, C. 2010. *Biodiversity for low and zero carbon buildings: a technical guide for new build*. RIBA Publishing, UK
- Bat Conservation Trust, 2010. *Bats in Buildings*. Bats and the Built Environment Series: Volume 1. http://www.bats.org.uk/publications_download.php/247/Bats_and_Buildings_finalDec2010.pdf
- BCT webpages: http://www.bats.org.uk/pages/bats_and_buildings.html

Version 5: updated June 2012

BIRD BOX SPECIFICATIONS

BOXES TO FIT ON/IN BUILDINGS

Sparrow Terrace, Stone Colour
House sparrows are gregarious and prefer to nest close to each other, so this woodcrete box provides room for three families under one roof. Made from long-lasting, breathable woodcrete. Stone colour.
No maintenance required.
Dimensions 245 x 430 x 200 mm.
Weight 13kg. Designed for fixing to walls (not suitable for fences or sheds due to the weight of the box).
A02085 Sparrow Terrace, Stone Colour (also available in brown)

Schwegler 9A House Martin Double Nest
These woodcrete nests are durable and ready for immediate use when birds return each summer. Easily fixed under the eaves on the outside walls of buildings, at least 2 metres from the ground. The backing board may be painted to match the building. Model 9A is a double unit with two nests mounted side by side on a backing board, as shown. Model 9B is similar to the 9A above but with one single nest
A02018 Schwegler 9A House Martin Double Nest
A02019 Schwegler 9B Single House Martin Nest

Schwegler No 10 Swallow Box
This box should be located inside buildings such as barns, stables, sheds or outhouses, ensuring there is always access for the birds through a window or opening.
A02020 Schwegler No 10 Swallow Box

Droppings Board
To avoid problems with bird droppings from house martin or swallow nests, this board can be installed where necessary, for example over a window or door.
A02021 Droppings Board

Schwegler No 16 IMF Swift Box, Double Chamber
The design of this box mimics bell tower louvres. It has two removable panels for easy inspection of the two nest chambers.
Designed for fixing on or within walls (not suitable for fences or sheds).
Dimensions 460mm h x 430mm w x 225mm d
A02088 Schwegler No 16 IMF Swift Box, Double Chamber

Schwegler No 16 Swift Box, Single Chamber
Similar to the box above but with a single chamber and single front panel.
Dimensions 240mm h x 430mm w x 225mm d.
A02087 Schwegler No 16 Swift Box, Single Chamber

Nest Mould for No 16 Swift Boxes
This nest mould fits inside the nest chamber of the No16 or No16 IMF boxes above, to encourage nesting. Research shows that the birds are more likely to nest if a nest mould is used.
A02089 Nest Mould for No 16 Swift Boxes

Schwegler No 17 Swift Box
This box is constructed from plant-fibre based material. It should be sited 6-7m above the ground, near the roof of a building or on a steep rock face.
Interior dimensions 14 x 14 cm. Outer length 34cm
A02041 Schwegler No 17 Swift Box

Schwegler No 18 Swift Box
This nest box is suitable for fixing high under the eaves or under the guttering of a building.
Woodcrete on board backing.
Interior dimensions 14 x 34 x 15 cm.
Exterior dimensions 19 x 50 x 22 cm
A02041A Schwegler No 18 Swift Box

Schwegler N24 Nest Brick
Designed for installation into the fabric of a building, this box is suitable for tits and redstart etc. Woodcrete.
Weight 7.3kg
Entrance hole 32mm Dimensions 180w x 180d x 240h mm
A02043 Schwegler N24 Nest Brick

Schweger N25 Nest Brick
Designed for installation into the fabric of a building, this box is suitable for swifts.
Woodcrete
Weight 8.8kg
Entrance hole 55x33mm. Dimensions 260w x 220d x 180h mm
A02044 Schwegler N25 Nest Brick

Schwegler N26 Nest Brick
Designed for installation into the fabric of a building, this box is suitable for pied wagtail, spotted flycatcher and black redstart etc. Woodcrete.
Weight 5.4kg
Entrance hole 110mm Dimensions 180w x 180d x 200h mm
A02045 Schwegler N26 Nest Brick

BOXES TO FIT FENCES, WALLS AND TREES

Schwegler 1B Bird Box, natural brown
The 1B appeals to a wide range of species, and is the official nest box of National Nest Box Week. The box can be nailed to the trunk of a tree, or hung from a branch. Schwegler boxes can be expected to last 25 years or more without maintenance.
Woodcrete, 23cm high x 16cm diameter.
With standard 32mm diameter entrance hole

Schwegler 2H Open Fronted Nest Box
This box is attractive to this box is attractive to robins, pied wagtails, spotted flycatcher, wrens and black redstarts. Best sited on the walls of buildings with the entrance on one side. Schwegler boxes have the highest occupation rates of all box types. They are carefully designed to mimic natural nest sites and provide a stable environment for chick rearing and winter roosting. They can be expected to last 25 years or more without maintenance.
A02015 Schwegler 2H Open Fronted Nest Box

Schwegler Roundhouse Wren Box 1ZA - Autumn Red
Well insulated and mimics natural nest sites
This nest box provides the enclosed, round space preferred by wrens for nesting. They will line the nest with moss, feathers and fur. The 1ZA is made from long-lasting, breathable Schwegler Woodcrete and provides excellent protection from nest predators. It not only houses wrens when bringing up their young but also provides a sheltered place where they can roost in the winter. Strong hanging cable included to site the nest amongst shrubbery.
Code: 002096D

Gable Nest Box

A substantial wooden bird box with a gable roof and 28mm entrance hole. Made of 15mm thick softwood, external dimensions 14.5cm x 14.5cm x 26cm high (to top of gable). Suitable for the smaller garden birds.
A03008 Gable Nest Box

Wooden Bird Box

A simple wooden bird box with sloping roof, suitable for the smaller garden birds. Made from substantial 2cm thick softwood. 14cm w x 18cm d x 26cm h (backplate 33.5cm h). The standard model has a 32mm diameter entrance hole attractive to a wide range of smaller garden birds.
A03004 Wooden Bird Box

Roosting Pockets.

These attractive roosting/nest pockets can be used by wild birds in autumn, winter and spring. The birds can save energy during the colder months by roosting in a sheltered place. These pockets also provide a warm nesting place in the spring for smaller birds such as wrens. Made from natural materials. The pockets have a wire at the back to fix onto a branch, or they can be stapled or nailed to a fence or trellis with plant cover. Pack of 3 assorted roost pockets (styles may vary).
A02090 Roosting Pockets

DRAWINGS

Black outline represents area where vegetation clearance works have been undertaken leaving scattered areas of bare ground

STATION ROAD

MB

MG

TN1

TN2

TN3

CT

KEY

- Site boundary
- Target notes
- Scattered scrub
- Scattered broad-leaved trees
- Species-poor intact hedge
- Dense/continuous scrub
- Unimproved acid grassland
- MG — Modified neutral grassland
- Continuous bracken
- Tall ruderal
- Area of clearance works
- CT — Cotoneaster
- MB — Montbretia

SITE CONTEXT

Basemap provided by client and contains Ordnance Survey data © Crown copyright and database right 2014

Rev	Description	Dwn	Appvd	Date

TEP

Genesis Centre
Birchwood Science Park
Warrington WA3 7BH
Tel 01925 844004
Fax 01925 844002
email tep@tep.uk.com

Project:

Station Road, Royston

Title:

Phase 1 Habitat Survey

Map No.		
G4186.001		
Scale: 1:800 @ A3		Date: 28/05/2014
Drawn: VG	Checked: KG	Approved: LG