

**Extended Phase 1 Habitat Survey & Protected
Species Survey: Thirstin Mills, Honley**

Client	Mr Russell Earnhsaw, A&DP	
Job title	Extended Phase 1 Thirstin Mills	
File ref	11-032	
	Name	Date checked
Ecologist	N Gibson AIEEM	29/04/2011
Senior ecologist	G Manners MIEEM CEnv	31/04/2011
Revision 1	NG	4/05/2011
Revision 2	GM	27/06/2011



MAB Environment & Ecology Ltd

The Old Chapel, Knayton, Thirsk, North Yorkshire YO7 4AZ

Tel. 01845 537845

Email: giles@mab.uk.com

www.mab.uk.com

Registered in the U.K. no.6504129

Extended Phase 1 Habitat Survey: Thirstin Mills

Site:

Thirstin Mills

Thirstin Road

Honley

Dates:

Scoping survey and Phase 1: 14th April 2011

Bat activity survey #1: 16/6/2011

Bat activity survey #2: 21/6/2011

Reptile surveys: started 16th June 2011, on-going

Client:

North Park Homes (Greetland) Ltd

Agent:

Mr Russell Earnshaw,

Architecture + Design Partnership LLP

82 Huddersfield Road

Holmfirth

HD9 3AZ

Local Authority:

Kirklees Council

Our reference:

11-032

Table of Contents

1. Summary	3
2. Introduction	4
3. Methodology.....	5
4. Constraints	7
5. Site description	8
6. Pre-existing information	12
7. Results	13
8. Discussion and analysis	27
9. Impact assessment.....	30
10. Summary of mitigation & enhancement	31
11. Method Statement.....	33
12. Legislation relating to bats.....	Error! Bookmark not defined.
13. References	36
Figure 1. Aerial image of site	9
Figure 2. Location of site	10
Figure 3. Site boundary	11
Figure 4 Phase 1 survey map	14
Figure 5 bat survey locations	21
Figure 6 Reptile mat locations	25

Appendix 1: Bat group records

Appendix 2: WYE records

Appendix 3: Photographs

1. Summary

The surveys found no evidence of protected species within the development site.

Bat activity surveying has been carried out on all buildings and Anabat surveying has been carried out in order to assess use of woodland by bats and thus to inform enhancement. No significant impact on bats will result from the development. Enhancement is recommended through installation of bat boxes in the woodland area.

Woodland within the site is unaffected by the development, and provides opportunities for ecological enhancement.

Flora and fauna on site is typical of very disturbed conditions. No amphibians or reptiles have been found in the surveys.

Recommendations for wildlife habitat creation on site include a vegetated retaining wall, with swift and other bird nesting boxes built in, as well as bat and bird boxes within the woodland.

2. Introduction

MAB Environment & Ecology Ltd was commissioned to conduct a Phase 1 Habitat Survey of the former site of Thirstin Mills, Honley. The clients are applying for planning permission to develop the site for housing. Site clearance has been carried out by previous developers under previous planning permissions. The housing site lies within the Kirklees Urban Area Biodiversity Opportunity Zone, and the fringe of woodland on the site will be part of the Kirklees Valley Slopes Biodiversity Opportunity Zone.

The report's objectives are to identify any protected species and habitats within the site; assess the potential of the site to support protected species and species of conservation concern; provide an impact assessment on protected species and species of conservation concern and any necessary mitigation proposals. The report is also designed to assist with the implementation of Planning Policy Statement 9 (PPS9), in regards to maintenance and enhancement of biodiversity.

Ecologists from MAB Environment and Ecology are members of the Institute of Ecology and Environmental Management (IEEM) and follow the Institute's Code of Professional Conduct when undertaking ecological work.

3. Methodology

Desk top study

West Yorkshire Bat Group (WYBG) was commissioned to provide bat records within a 2km radius of the centre of the site.

West Yorkshire Ecology was commissioned to provide records of protected species and notable habitats within 1km radius of the site.

The government website www.magic.gov.uk for nature conservation and environmental information was used to gain information relating to designated conservation sites within a 2km radius of the site and ancient woodland habitats within a 4km radius of the site.

Field Surveys

The site was surveyed on the 5th April 2011 by Giles Manners MIEEM and Nicola Gibson AIEEM both of MAB Environment & Ecology Ltd.

An Extended Phase 1 habitat survey was conducted following published guidelines (JNCC 2007). Areas within the site were defined within the standard habitat types. Incidental records of fauna were also made during the survey and the habitats identified were evaluated for their potential to support protected species and other species of conservation concern. Any signs of European Protected Species (bats, great crested newts, otters, water -voles), badgers, reptiles and breeding birds were looked for and target noted.

Extended Phase 1 Habitat Survey: Thirstin Mills

A reptile survey was carried out, following guidance provided by Froglife (Froglife 1999). Mats were placed at a density of 19 reptile mats across 840 m² of the development area of the site, which is more than twice the minimum density. Mats were not placed in the woodland due to heavy shading. The locations are shown on the results maps. Mats have been checked for presence /absence of reptiles at weekly intervals during a reptile 'walk': these take place at around 18.30 GMT, and when the air temperature is above 12°C, and involve direct observation, listening for rustles in the vegetation, as well as carefully lifting each numbered mat and recording any findings.

The bat activity surveys were carried out by Giles Manners (MIEEM, CEnv) licensed bat worker, and Mat Cooke a trainee field surveyor employed by MAB Environment & Ecology Ltd. The surveyors used one Pettersson D240x Time Expansion ultrasound detector and one Pettersson D230 frequency division detector, both with Edirol R09 recorders. Results were analysed with BatSound.

The Anabat survey involved placing the unit as close to the woodland edge as possible, and allowing it to run throughout the emergence survey. The Anabat was set for a division ratio of 8, and sensitivity setting of 7; the microphone was attached directly to the unit. Results were downloaded and analysed with Analook.

4. Constraints

The species data collated during the desk study is mainly derived from records submitted by volunteers. It should not, therefore, be taken as a definitive list of the species that occur in the local area.

All surveys have been carried out in correct survey seasons and were free of any significant constraint. Reptile surveying period was not optimal (optimal months are April, May and September), but mid-summer is perfectly acceptable especially northern regions.

5. Site description

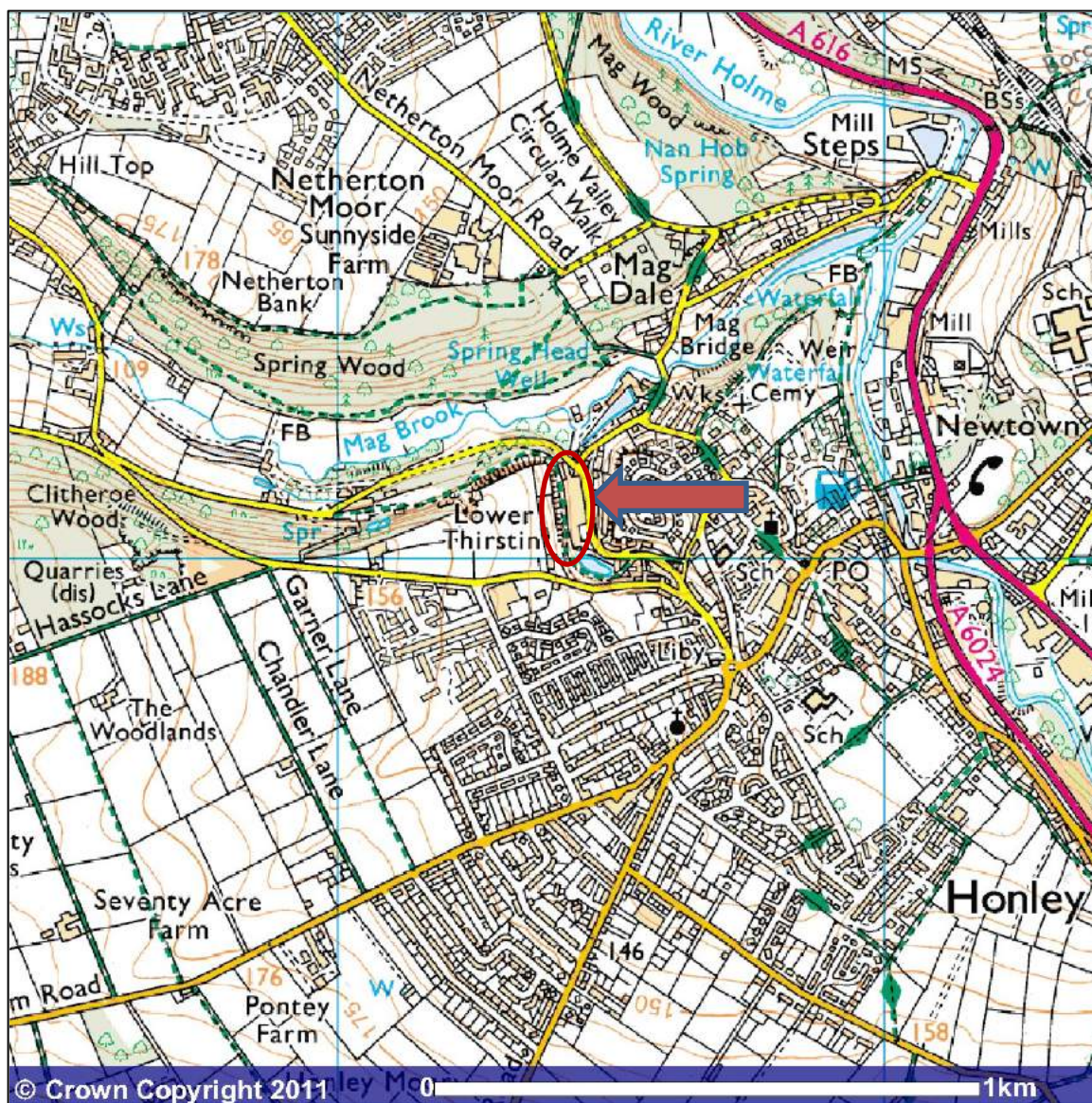
The site is located in the village of Honley (central grid reference: SE 134 120). Formerly the location of Thirstin Mill, the site has been cleared in the past in preparation for residential development. The site is surrounded by a mixture of woodland and residential properties. To the west of the site is a steeply sloping bank with a ledge half way up; this has been recently cut out of the hillside with spoil exposed. Most of rest of the land is flat, with a gentle rise to the south. The proposed development affects all of the flatter ground of the site, as well as the spoil banks, which will be affected by engineering works, dependent on the results of further geotechnical surveys. Within the site boundary is an area of woodland on a steep bank, and a small stream to the south which penetrates only a small distance into the site before entering a deep culvert. There is a small ruined building on site, as well as a disused substation.

Extended Phase 1 Habitat Survey: Thirstin Mills

Figure 1. Aerial image of site

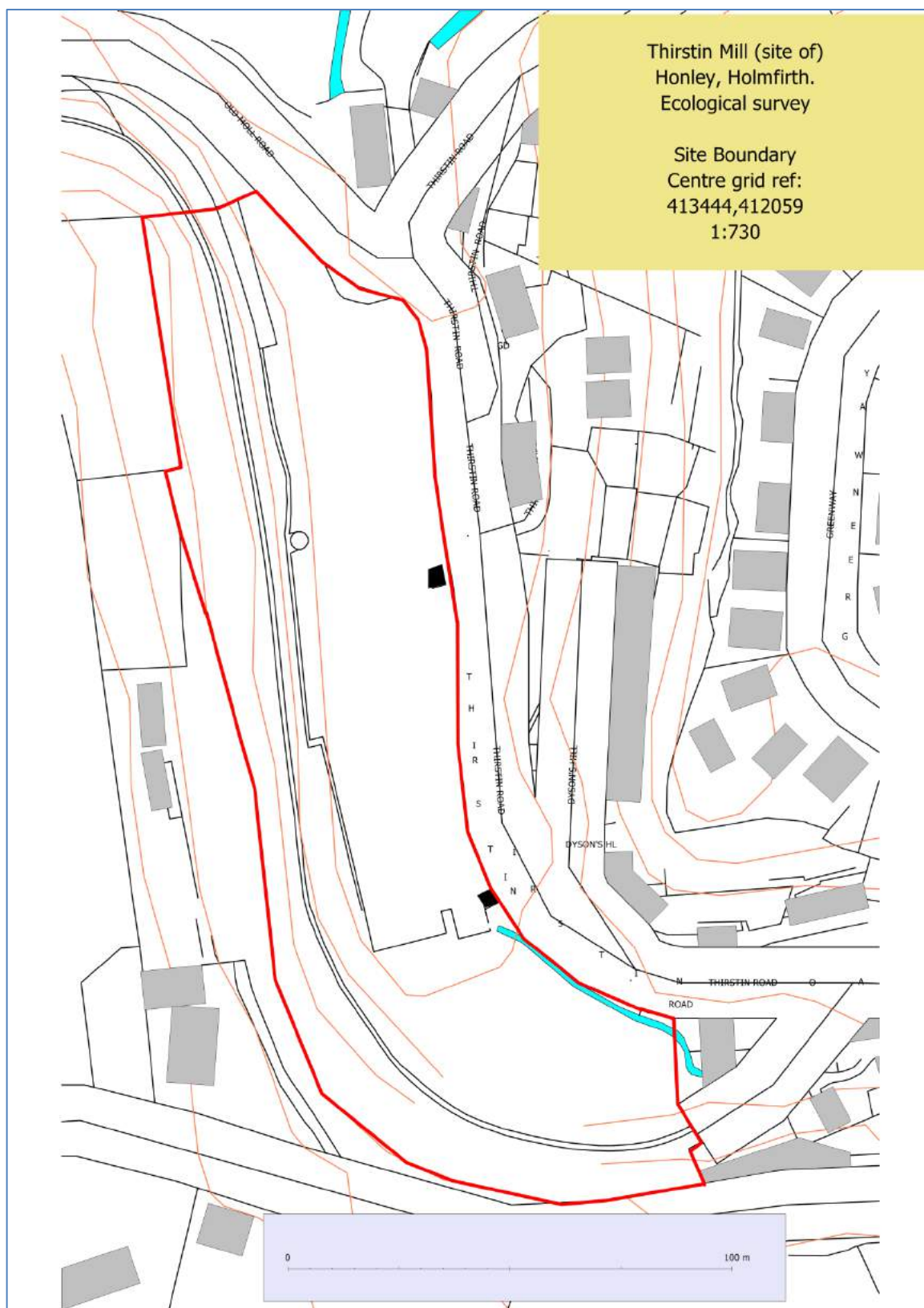


Figure 2. Location of site



Extended Phase 1 Habitat Survey: Thirstin Mills

Figure 3. Site boundary



6. Pre-existing information

West Yorkshire Bat Group

The data search does not include any bat records for the site. There are many records of common pipistrelle roosts from the vicinity (see Appendix 1), including maternity roosts, plus a number of unidentified bats.

West Yorkshire Ecology

The data search found that a SSI (Spring Wood, Honley) is within 200m of the site; this is a local designation not to be confused with a SSSI. No other designations were found within a 500m radius (see Appendix 2).

There is bat activity around the site, but no sign of any roosts. Activity includes most species one would expect in this area and habitat (brown long-eared, pipistrelles, and noctule).

There are no amphibian or reptile records relevant to the site.

There is recorded badger activity in the form of a main sett at 1km from the site. The map of badger setts provided by WYE is confidential and so excluded from this report, but can be seen on request.

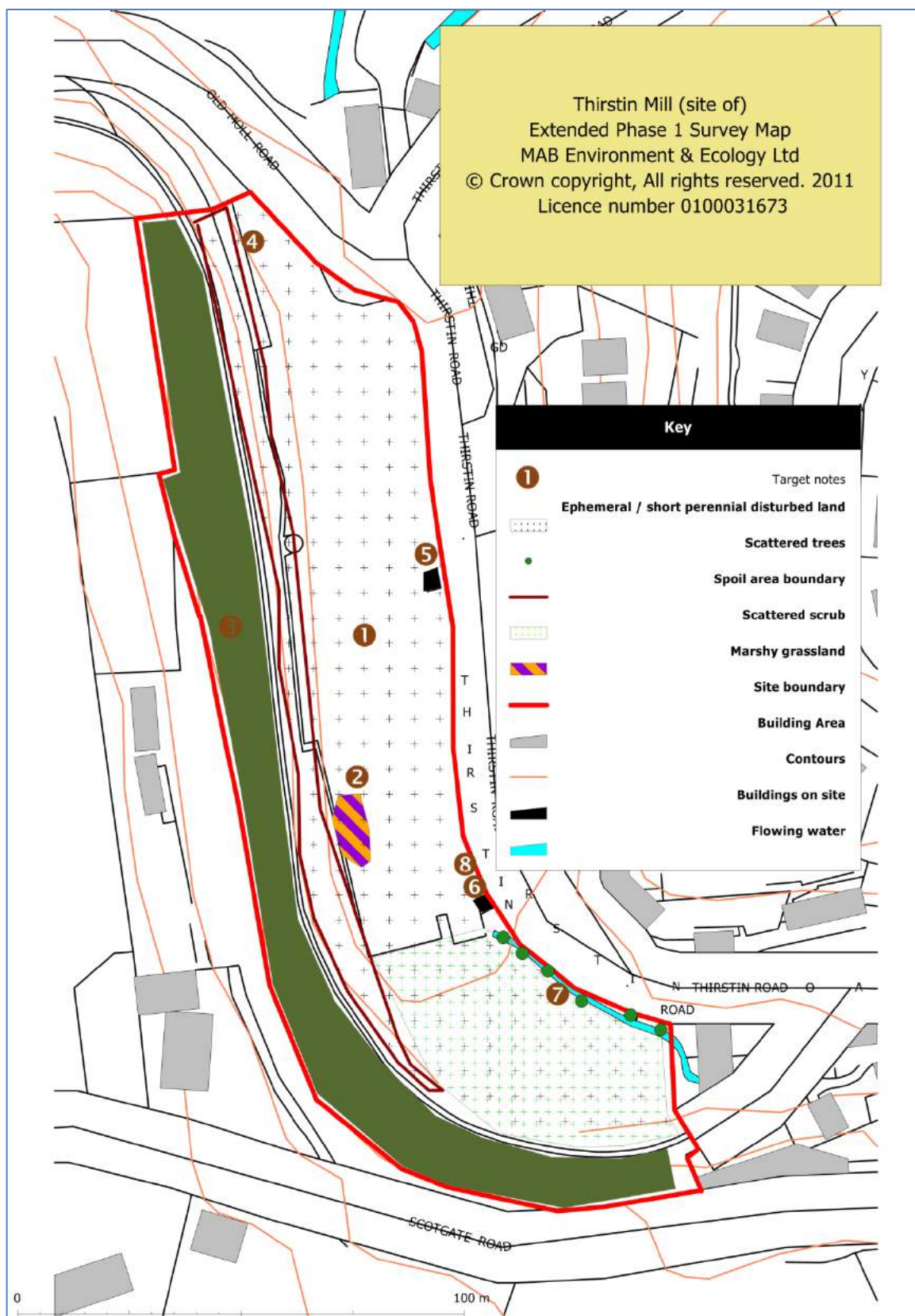
7. Results

7.1 Phase 1 Survey

The development site consists mostly of disturbed ground, with some areas of regenerating scrub and exposed spoil from excavation. There is a small area of 'marshy grassland' dominated by soft rush. Adjacent to the development site is a narrow strip of birch / oak woodland which was included in the survey in order to assess any indirect impacts. Species-lists follow, associated with target notes on the survey map. The small stream is partly in an open concrete drain, and the remainder is culverted.

Extended Phase 1 Habitat Survey: Thirstin Mills

Figure 4 Phase 1 survey map



Extended Phase 1 Habitat Survey: Thirstin Mills

1. Disturbed ground

Typical flora of disturbed ground with perennial / ephemeral herbs dominant, few areas dominated by grasses, large amounts of ground bare. Dry (at time of survey) and free draining sandy substrate. Some garden escapes. Extends into spoil areas from excavations.

Table 1 Flora of disturbed ground

Latin name	English name
<i>Taraxacum officinale</i> agg.	Dandelion
<i>Chamaenerion angustifolium</i>	Rosebay willowherb
<i>Tussilago farfara</i>	Colt's-foot
<i>Senecio vulgaris</i>	Groundsel
<i>Ranunculus repens</i>	Creeping buttercup
<i>Ranunculus acris</i>	Meadow buttercup
<i>Rumex obtusifolius</i>	Broad-leaved dock
<i>Senecio jacobaea</i>	Common ragwort
<i>Geranium robertianum</i>	Herb robert
<i>Sedum reflexum</i>	Reflexed stonecrop
<i>Plantago major</i>	Greater plantain
<i>Lamium album</i>	White dead-nettle
<i>Arabidopsis thaliana</i>	Thale cress
<i>Cardamine hirsuta</i>	Hairy bittercress
<i>Urtica dioica</i>	Nettle
<i>Holcus lanatus</i>	Yorkshire fog
<i>Poa annua</i>	Annual meadow-grass
<i>Dactylis glomerata</i>	Cock's-foot
<i>Buddleja</i> sp.	Butterfly bush
<i>Impatiens parviflora</i>	Small balsam

The regenerating scrub is comprised entirely of grey willow (or possible hybrid between grey and goat willow); the scrub has much the same ground flora as the disturbed ground. I would assume that at the time of the site clearance, this area had established willow, which is now coming back from rootstock. From an ecological perspective, this does not count as scrub, as there are no bird nesting opportunities – this is the equivalent of newly planted woodland on disturbed ground. There is full light penetration to the ground flora, which shows no major differences to the main site composition.

2. Wet grassland

A small area, probably seepage from the culvert. Dry at time of the site visit, but dominated by *Juncus effusus* (soft rush); with some *Juncus acutiflorus* (sharp-flowered rush). Species-poor.

3. Woodland

The woodland is a typical W16 *Quercus* spp – *Betula* spp – *Deschampsia flexuosa* woodland. This is an oak birch association, on acid soil with a generally species-poor *Deschampsia flexuosa* ground flora. Shrub layer is holly, hawthorn, elder and hazel, with saplings of birch and sycamore. There is some dumping from gardens / stables to the south of the woodland, causing a disturbed area of nettles, brambles, cleavers and Himalayan balsam. One mature horse chestnut is present on higher ground. Some rocky outcrops. One English elm sapling.

High levels of disturbance from human access, trampling etc. No evidence of animal tracks.

Extended Phase 1 Habitat Survey: Thirstin Mills

Table 2 Flora of woodland

Latin name	English name
Canopy	
<i>Quercus petraea</i>	Sessile oak
<i>Betula pendula</i>	Silver birch
<i>Aesculus hippocastanum</i>	Horse chestnut
Shrub layer	
<i>Betula pendula</i>	Silver birch
<i>Acer pseudoplatanus</i>	Sycamore
<i>Ilex aquifolium</i>	Holly
<i>Ulmus procera</i>	English elm
<i>Sambucus nigra</i>	Elder
<i>Crataegus monogyna</i>	Hawthorn
Field layer	
<i>Deschampsia flexuosa</i>	Wavy hairgrass
<i>Ranunculus ficaria</i>	Lesser celandine
<i>Urtica dioica</i>	Nettle
<i>Impatiens glandulifera</i>	Indian balsam
<i>Digitalis purpurea</i>	Foxglove
<i>Galium aparine</i>	Cleavers
<i>Geranium pyrenaicum</i>	Hedgerow cranesbill

4. Scattered trees

The trees just above the culvert are semi-mature sycamore and ash, with every appearance of being self-seeded. There is also one young fir, at pole stage, which is likely to have been planted. None of these trees have any splits cracks or crevices that could offer habitat for bats or birds; there is light covering of ivy on one sycamore.

5. Stream

Vegetation is ruderal with male fern, rosebay willowherb, broad-leaved dock, ragwort, small balsam and some water mint. The culvert is stone lined, so there are opportunities for plant establishment in the wall.

7.2 Bat surveys

7.2.1 Visual bat survey

Three areas of potential bat roost habitat were identified for scoping: the sub-station building (6), the ruined building (5), the stone walls (4), and the woodland (3) (see survey map).

The substation has a flat roof with a cavity between the felt and ceiling. There were no bat droppings on the walls. Access to the interior was not possible. Some potential for bat roosting was present, which required confirmation by emergence survey.

The ruins have a few crevices suitable for bat roosting, but these are mostly low and accessible to predators such as cats. Most of the walls are brick without crevices. No signs of bat roosting were found. Negligible bat roost potential, other than possibly for hibernation by small numbers of bats such as pipistrelles that favour masonry crevices close to the surface for hibernation, or 'day roosting'.

The stone wall is likely to be much the same as the ruins – very low risk of bat occupancy, and no signs of bats. Not all of the wall is visible for assessment.

No potential bat roosting habitat (splits, cracks, hollows, etc) was found in the trees surrounding the site. An in-depth search for bat roosts was not made due to the absence of any impact on the woodland resulting from the proposed development.

7.2.2 Bat activity surveys

Emergence survey #1

Two surveyors were required for each survey, standing 10m from the buildings, one at each corner. See figure 5 for locations.

Conditions for the first survey were with intermittent rain, cool (12°C), light west wind. Sunset was at 21.40; survey started 21.20 and ended at 23.30.

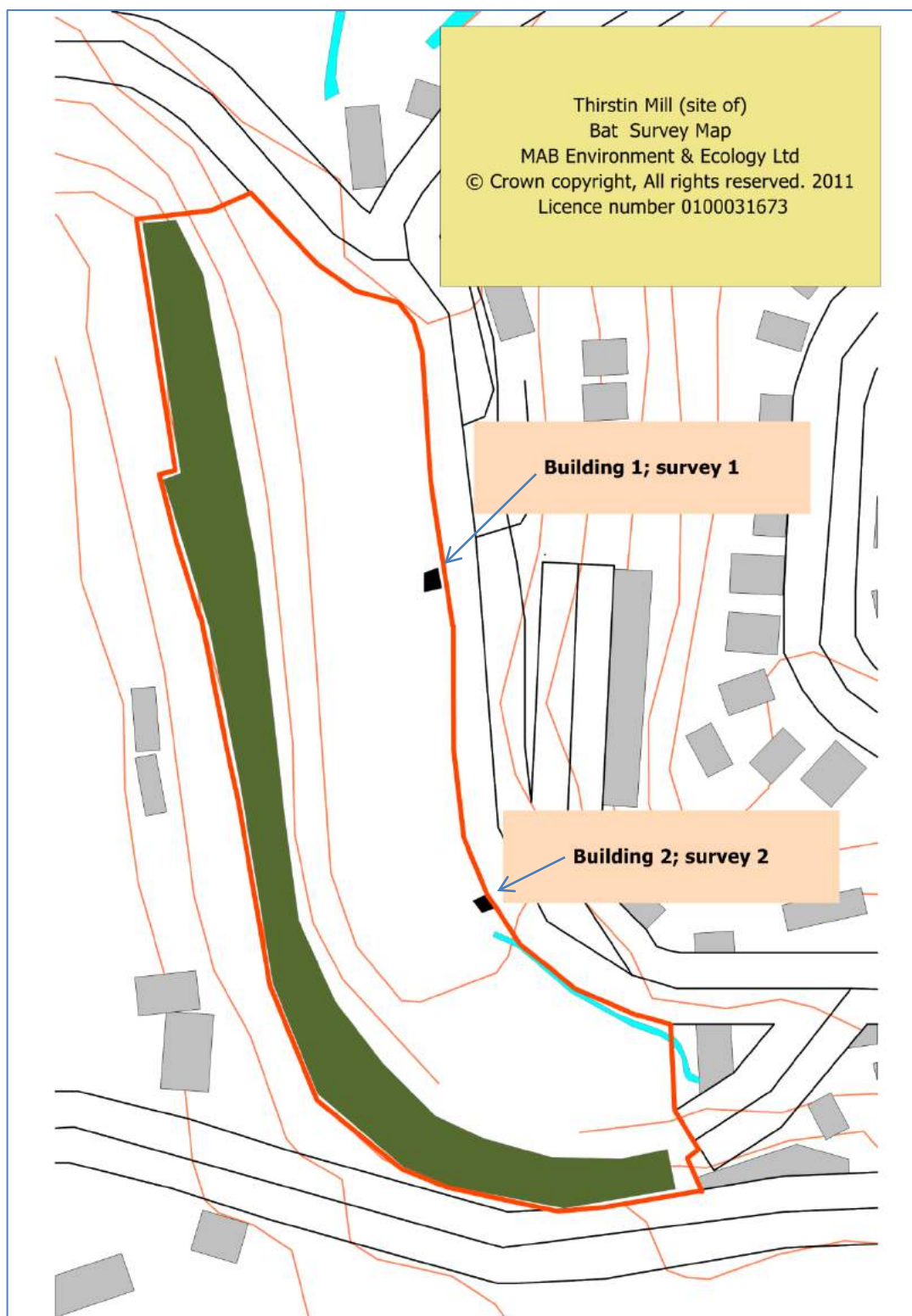
A single common pipistrelle was seen foraging up and down the woodland edge. No bats emerged from or flew close to the building. No other bat activity noted.

Emergence survey #2

Conditions for the second survey were ideal: dry, clear and still, warm at 16°C. Sunset was 21.44; survey started at 21.20, and ended at 23.05.

A single common pipistrelle crossed through the line of trees at 21.50; a foraging common pipistrelle was then seen foraging on the woodland edge until 21.59. No other bat activity noted.

Figure 5 bat survey locations



Anabat survey #1

The Anabat unit was placed just below the footpath in the centre of the site, with the microphone pointing towards the woodland edge. The unit was in place from 21.30 to 23.10, during the emergence survey. See conditions of emergence survey for weather during surveys.

Table 3 First night's Anabat results.

Night	Time	Label	Number
16/06/2011	21:44	P45	1
16/06/2011	21:49	P45	1
16/06/2011	21:51	Noctule	1
16/06/2011	21:52	Noctule	1
16/06/2011	21:53	Noctule	4
16/06/2011	21:54	Noctule	1
16/06/2011	21:55	Noctule	2
16/06/2011	21:57	P45	1
16/06/2011	22:00	P45	1
16/06/2011	22:02	P45	2
16/06/2011	22:03	P45	3
16/06/2011	22:04	P45	3
16/06/2011	22:05	P45	1
16/06/2011	22:06	P45	2
16/06/2011	22:07	P45	2
16/06/2011	22:08	P45	1
16/06/2011	22:10	P45	2
16/06/2011	22:12	P45	1
16/06/2011	22:13	P45	1
16/06/2011	22:16	P45	1
16/06/2011	22:17	P45	2
16/06/2011	22:19	P45	1
16/06/2011	22:22	P45	1
16/06/2011	22:23	P45	1
16/06/2011	22:24	P45	2
16/06/2011	22:25	P45	4
16/06/2011	22:28	P45	1
16/06/2011	22:33	P45	1
16/06/2011	22:41	P45	1
16/06/2011	22:42	P45	1

Extended Phase 1 Habitat Survey: Thirstin Mills

16/06/2011	22:45	P45	1
16/06/2011	22:46	P45	1
16/06/2011	22:47	P45	1
16/06/2011	22:48	P45	1
16/06/2011	22:52	P45	2
16/06/2011	22:53	P45	1
16/06/2011	22:55	P45	1
16/06/2011	22:59	P45	2
16/06/2011	23:00	P45	1
16/06/2011	23:01	P45	1
16/06/2011	23:02	P45	1

Anabat survey #2

Night	Time	Label	Number
21/06/2011	21:58	Noctule	1
21/06/2011	22:01	P45	1
21/06/2011	22:01	Pipsoc	1
21/06/2011	22:02	Pipsoc	4
21/06/2011	22:03	P45	1
21/06/2011	22:05	P45	1
21/06/2011	22:06	P45	1
21/06/2011	22:10	P45	1
21/06/2011	22:12	P45	1
21/06/2011	22:19	P45	2
21/06/2011	22:20	P45	1
21/06/2011	22:29	P45	1
21/06/2011	22:32	P45	1
21/06/2011	22:37	P45	1
21/06/2011	22:38	P45	3
21/06/2011	22:39	P45	3
21/06/2011	22:40	P45	2
21/06/2011	22:47	P45	2
21/06/2011	22:49	P45	2
21/06/2011	22:49	Pipsoc	1
21/06/2011	22:52	P45	2
21/06/2011	22:52	Pipsoc	1
21/06/2011	22:53	P45	2
21/06/2011	22:54	P45	1
21/06/2011	22:55	P45	2
21/06/2011	22:55	Pipsoc	2

Both of the Anabat surveys show foraging common pipistrelle activity, with a commuting noctule.

7.3 Other protected species

There were no signs of badgers in the woodlands, either paths or setts. The woodland is fenced from the site, so any previous foraging routes would have been disrupted.

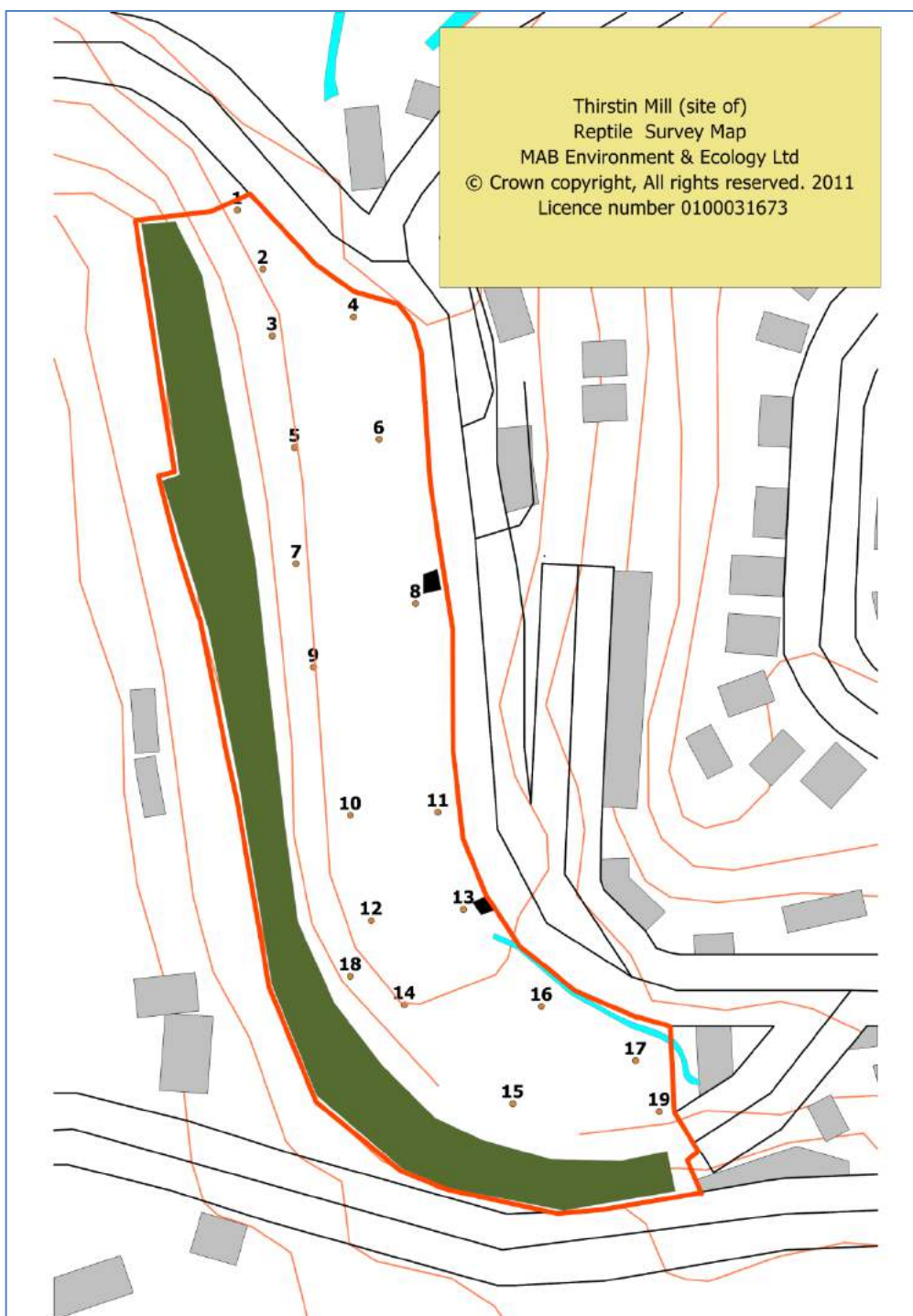
The stream (target note 4) has been culverted with only a very small amount visible to the south of the site; there is no potential for otter or water vole activity.

We found no signs of ponds on or within a 500m boundary of the site – therefore, there is no risk of great crested newts.

7.4 Reptiles

The reptile mats were placed as shown in figure 6. The mats were checked on the 16th, 21st and 27th of June. Further checks will continue until the end of July. No reptiles or amphibians have been recorded under mats or elsewhere across the site.

Figure 6 Reptile mat locations



7.4 Other wildlife

Other than in the woodland fringe, there are bird nesting opportunities only in the stone walls and ivy areas (see target notes). Blue tits and robins were observed on site during the survey.

8. Discussion and analysis

8.1 Flora

The site is not of high floristic value. The flora of disturbed waste ground is diverse in comparison to improved grasslands. The site is well connected to wooded valleys of interest, but has no intrinsic value of its own other than as waste ground. The proposed development will remove the entire flora currently present, which is of a type that favours bare and disturbed ground (ephemerals and annuals).

The small section of stream which has not been culverted has steep banks leading to a road on one side and to the cleared ground above, and is fully therefore, the section is isolated and constrained.

The woodland is species-poor in terms of ground flora, but has a good representation of canopy and shrub layer for this woodland type. The proposed development will not affect the woodland directly, due to the steep ground between the site and the woodland. Overall this woodland is more of value as an amenity resource than for wildlife habitat. The woodland is directly connected to valley woodlands of value, such as Spring Wood SSI, and in that respect is likely to have a higher value than an isolated parcel of woodland of this size; such value may be seen in terms of foraging and nesting birds.

8.2 Protected species

8.2.1 Bats

The small risk of bats roosting in the two buildings on site has been discounted by the results of the emergence surveys. The risk of bats using the remaining areas of retaining wall is low, and should be addressed by adoption of safe working practices. Any significant bat usage of the stone wall areas is likely to have been noticed by the surveyors.

Bats are recorded as using the woodland for foraging habitat; common pipistrelles, which were recorded almost constantly, particularly value woodland edge habitat. The visual aspect to the survey found no evidence that the woodland edge is used as a commuting route between roosts and feeding grounds: a single bat was observed flying back and forth rather than a succession of bats flying in the same direction.

Noctules have a very loud echolocation which can be detected at over 100m; the recording of a noctule is for a brief time only and indicates likely flight over the site rather than roosting or foraging close to the site.

None of the trees surveyed were found to have any significant habitat for bats, such as splits cracks or holes. Noctule or other bat roosting is therefore unlikely.

8.2.2 Great crested newts

There is no risk of any presence of great crested newts.

8.2.3 Badgers

The badger sett that appears in the data study is around 1000m from the site; badgers from this sett may make use of the woodland strip for access and foraging if they are

‘urban’ badgers; however, the location of the sett is in extensive woodlands and it is more likely that these badgers are rural, in which case they will be much less likely to venture into such a narrow and disturbed strip of woods. Use of the wood for setts is very unlikely due to high disturbance levels.

8.3 Other wildlife

Birds

Breeding birds are present in retaining stone wall remnants; these will be subject to protection to ensure compliance under the WCA 1981.

Reptiles

The reptile surveys are ongoing, but we do not expect any presence due to the isolated and highly disturbed nature of the site, as well as the absence of any recorded reptiles in the area within the last 100 years. However, the methodology suggests that visits should continue for 6 weeks, and this will be followed. The mats have been checked 3 times over 3 weeks at the time of writing, with no presence. Any results that show presence will occur during the planning application process, and an update to this report will be submitted together with recommended mitigation.

Amphibians

Amphibian presence is also unlikely given the disturbed nature of the site; there is very little potential for survival of toads near the stream due to the steep sides of the drain.

Invertebrates

The exposed spoil areas, its associated flora, and the retaining stone walls are likely to be of value to invertebrates.

9. Impact assessment

The proposed construction will have impact on the following areas:

- waste-ground flora (permanent destruction)
- invertebrate habitat (stone walls, waste ground flora)
- birds (possible loss of nesting habitat, stone walls; loss of feeding habitat)

The proposed development will not have a foreseeable impact on the flora of the woodland or on the small section of exposed stream.

The above impacts are of a low level, and do not require a Protected Species Licence. The above impacts are able to be mitigated within the scope of the proposed development.

Bats will not be impacted upon due to the fact that the woodland edge is considerably above the height of the development and use by foraging bats will be unaffected.

10. Summary of mitigation & enhancement

Replacement habitat for the loss of exposed stone walls and waste ground flora will be required to mitigate for invertebrate and bird nesting habitat. The loss of flora and habitat should be mitigated by using a vegetated retaining wall to encourage the establishment of flora. A vegetated retaining wall will provide habitat for invertebrates and nesting birds as well as foraging habitat for wildlife in general. Such a retaining wall will also improve water quality by holding back particulates, and reducing storm water. The seed mix used for the vegetated wall should be a locally appropriate mix, avoiding non-native species and using local provenance wherever possible.

Mitigation for bats is not required due to absence of any impact.

In order to enhance the ecology of the site, we would suggest that the exposed bank should be used as a wildlife feature. In addition to using a vegetated retaining wall, wildlife boxes should be installed. The higher ground of the site, where gradient is maximum (preferably vertical), would be ideal for installation of swift nesting boxes. these may be same type that are used for building into the fabric of buildings (see method statement). Kirklees Local Biodiversity Action Plan for urban sites suggests opportunities for dunnoek, house sparrow, bullfinch, thrush and starling. These can be accommodated through provision of a wide range of nesting boxes through the site, using the woodland and retaining walls as target areas for installation. See method statement for details.

For further enhancement, bat boxes would be best placed within the woodland, as they are less likely to be used in the open area. This would be a significant enhancement, due to the absence of suitable roosting crevices within the woodland at present.

Extended Phase 1 Habitat Survey: Thirstin Mills

The woodland flora could be enhanced through control of dumping from gardens / stables above, and by control of Indian balsam, which is an alien species that often becomes problematic.

11. Method Statement

Prior to removal, all stone walling will be thoroughly inspected for bird nests and bat roosts using a flexible illuminated endoscope. Removal will take place outside of the bird nesting season (i.e. 1st Sept to 1st March).

Twelve crevice nesting boxes, including 1 multi-chambered box swift nests (Schwegler No 17 Triple Cavity Swift Box), 4 for tits (Schwegler No 24 Brick Box), 2 sparrow terraces (Schwegler 1SP Sparrow Terrace), and 4 open-fronted boxes (Schwegler No 26 Brick Box) will be built into the fabric of the retaining walls (or attached to the retaining wall where not possible to build in) in locations agreed with the Suitably Qualified Ecologist (SQE).

10 oak bat boxes and 10 bird boxes (Schwegler 1B Bird Box) will be installed by the ecologists within the wooded area; these will be suitable for a range of species. Local oak maternity bat boxes will be placed at the woodland edge, where they receive direct sunlight. The results of the bat activity surveying will feed into this mitigation proposal.

A woodland management plan will be produced, covering both amenity and ecology.

Photo 1 Schwegler No 17 Triple Cavity Swift Box



Extended Phase 1 Habitat Survey: Thirstin Mills

Photo 2 Schwegler No 24 Brick Box (for tits)

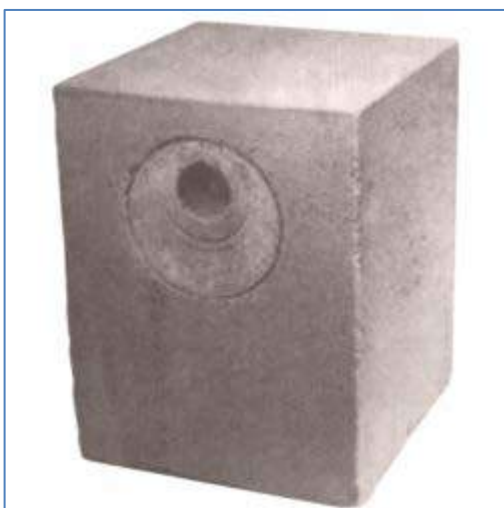


Photo 3 Schwegler No 26 Brick Box (for pied wagtail, spotted flycatcher)

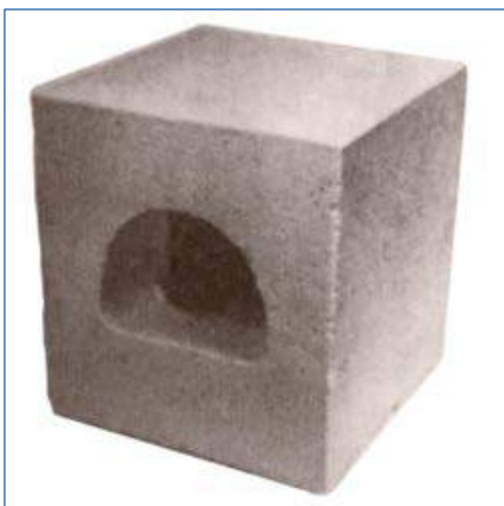


Photo 4 Schwegler 1SP Sparrow Terrace



Photo 5 Oak maternity bat box



12. References

Kirklees Local Biodiversity Action Plan

(<http://www.kirklees.gov.uk/community/environment/green/greenkirklees/documents/biodiversityOpportunityZones-tables.pdf>)

Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact within the Planning System.

<http://www.communities.gov.uk/publications/planningandbuilding/circularbiodiversity>

Froglife (1999). Reptile Survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesworth.

JNCC (2007): Handbook for Phase 1 habitat survey – a technique for environmental audit.

Mitchell-Jones, A.J. & McLeish, A.P. (2004). *Bat Workers Manual*. JNCC

Mitchell-Jones, A.J. (2004). *Bat Mitigation Guidelines*. English Nature.

Parsons K., Crompton R., Graves R., Markham S., Mathews J., Oxford M., Shepherd P., Sowler S. *Bat Surveys Good Practice Guidelines*. Bat Conservation Trust.

Planning Policy Statement 9: Biodiversity and Geological Conservation - Final Regulatory Impact Assessment

<http://www.communities.gov.uk/publications/planningandbuilding/planningpolicystatement9>

Russ, J. (1999). *The bats of Britain and Ireland....* Alana Press.

Schofield, H.W. & Mitchell-Jones, A.J. (2004). *The bats of Britain and Ireland*. Vincent Wildlife Trust.

Stebbins, R.E., Yalden, D.W., & Herman, J.S. (2007). *Which bat is it? A guide to bat identification in Great Britain and Ireland*. The Mammal Society

Swift, S.M. (1998). *Long-eared bats*. Poyser Natural History.

The Conservation of Habitats & Species Regulations 2010

<http://www.legislation.gov.uk/uksi/2010/490/contents/made>



Registered Charity No:
1090109

West Yorkshire Bat Group Commercial Enquiries

Bat data search

wymbg_data@fastmail.co.uk

Client: MAB Environment & Ecology Ltd – Nicola Gibson
nicky@mab.uk.com

Your reference: n/a

Site: SE 134120
Thirstin Mills, Honley

Radius of search: 2km

Cost: £50.00

Date of initial request: 05/04/11

Date of search: 17/04/11

Search conducted by: Emma Grubb
Commercial Enquiries Officer

RESULTS

Grid Reference	Location Name	Date	Scientific Name	Abundance	Record type
SE147122	New Gynn Lane, Honley	10/06/2010	<i>Nyctalus noctula</i>		
SE1221113205	Deyne Rd, Netherton	11/07/1995	<i>Pipistrellus</i> sp.		Roost
SE1220913201	Deyne Rd, Netherton	11/07/1995	<i>Pipistrellus</i> sp.		Roost
SE1352613693	Holmeside Close, Armitage Bridge	21/08/1996	<i>Pipistrellus</i> sp.	101-200 Count of Adult	Roost (maternity)
SE1249012925	Pine Court, Netherton	25/07/2005	<i>Pipistrellus</i> sp.	70 Count of Adult	Roost

Species and numbers unknown unless stated. Absence of records in any particular area does not necessarily mean absence of bats/ bat roosts

Grid Reference	Location Name	Date	Scientific Name	Abundance	Record type
SE147123	Gynn Lane, Honley	03/07/1996	<i>Pipistrellus pipistrellus</i>		Roost
SE130133		07/03/2000	<i>Pipistrellus pipistrellus</i>	1 Count of Adult	Roost (possible)
SE130134	Martin Grove, Netherton	08/03/2000	<i>Pipistrellus pipistrellus</i>	1 Count of Adult	Roost (possible)
SE123127		26/06/2001	<i>Pipistrellus pipistrellus</i>	21-50 Count of Adult	Roost
SE132115		24/07/2004	<i>Pipistrellus pipistrellus</i>		Aural bat detector
SE147122	New Gynn Lane, Honley	10/06/2010	<i>Pipistrellus pipistrellus</i>		None
SE1261213772	Butterwood Close, Beaumont Park	07/07/1997	<i>Pipistrellus pygmaeus</i>	101-200 Count of Adult	Roost (maternity)
SE132115		24/07/2004	<i>Pipistrellus pygmaeus</i>		Aural bat detector
SE15041122	Silver Birch, Brockholes, Holmfirth	09/09/2004	<i>Pipistrellus sp.</i>	1 Count of Adult	In building
SE1248912924	Pine Court, Netherton, Huddersfield	12/07/2006	<i>Pipistrellus sp.</i>	170 Count of Adult	Roost
SE1143812368	Factory Lane, Crosland, Netherton	28/02/2007	<i>Pipistrellus sp.</i>		Roost
SE1248912924	Pine Court, Netherton, Huddersfield	09/07/2007	<i>Pipistrellus sp.</i>		Roost (maternity)
SE1393413362	Robin Hood Hill, Berrybrow, Huddersfield	09/07/2007	<i>Pipistrellus sp.</i>		Roost (maternity)
SE151112	BCT Code 1121095 Ridings Fields, Brockholes, Holmfirth, HP9 7BG	06/06/2008	<i>Pipistrellus sp.</i>	55 Count of Adult	Roost (maternity)

Species and numbers unknown unless stated. Absence of records in any particular area does not necessarily mean absence of bats/ bat roosts

Grid Reference	Location Name	Date	Scientific Name	Abundance	Record type
SE151112	BCT Code 1121095 Ridings Fields, Brockholes, Holmfirth, HP9 7BG	17/06/2008	<i>Pipistrellus sp.</i>	27 Count of Adult	Roost (maternity)
SE151112	BCT Code 1121095 Ridings Fields, Brockholes, Holmfirth, HP9 7BG	06/06/2009	<i>Pipistrellus sp.</i>	37 Count of Adult	Roost (maternity)
SE151112	BCT Code 1121095 Ridings Fields, Brockholes, Holmfirth, HP9 7BG	21/06/2009	<i>Pipistrellus sp.</i>	46 Count of Adult	Roost (maternity)
SE152112	Ridings Fields, Brockholes	11/01/1997	Vespertilionidae		Roost
SE1510811296	Ridings Fields, Brockholes	05/05/1998	Vespertilionidae		Roost
SE1516111199	Ridings Fields, Brockholes	15/09/2000	Vespertilionidae		Roost
SE151111	Steep Riding	08/07/2002	Vespertilionidae		Roost (maternity)
SE1347413714	Holmeside Mews	05/08/2002	Vespertilionidae		Roost (maternity)
SE15211124	Ridings Fields, Kirklees	08/07/2003	Vespertilionidae	1 Count of Adult	Injured
SE13681129	Long Lane, Honley, Kirklees	24/09/2003	Vespertilionidae		Field record
SE1456012300	Ludwood Close, Honley, Holmfirth	06/08/2004	Vespertilionidae	1 Count of Adult	Roost
SE11761276	Church Lane, South Crosland	28/06/2005	Vespertilionidae	1 Count of Adult	Field record

Species and numbers unknown unless stated. Absence of records in any particular area does not necessarily mean absence of bats/ bat roosts

Grid Reference	Location Name	Date	Scientific Name	Abundance	Record type
SE13851194	Concord Street, Honley, Kirklees	22/07/2005	Vespertilionidae	3 Count of Adult	Field record

Species and numbers unknown unless stated. Absence of records in any particular area does not necessarily mean absence of bats/ bat roosts

*Appendix 3 Photographs - (TG
refers to target note number)*

Photo 1 TG5



Photo 2 TG4 (retaining wall) at north site boundary



Photo 3 Retaining wall at west of site, under footpath



Photo 4 TG6, from within site



Photo 5 TG 6 from roadside



Photo 6 TG8, ivy and stone wall



Photo 7 Spoil below footpath



Photo 8 Retaining wall detail



Photo 9 TG3, woodland disturbed conditions.



Photo 10 TG2, marshy grassland



Photo 11 TG3, woodland



Photo 12 TG1, typical waste ground flora



Photo 13 Spoil and retaining works



Photo 14 Birds nest in TG5 building

