Photograph 13. The River Don (TN2), viewed from the north bank.

Photograph 14. The River Don (TN2), viewed from the north bank, looking towards Langsett Road North

3.3.21 The banks of the river are often stone/concrete-walled, and in varying states of dilapidation. Some sections of the north bank are not reinforced, and comprise a rocky substrate with vegetation. The banks rise to a height of c.2m above the water in places. Cracks and crevices in the river banks (see example in Photograph 15) offer potential opportunities to fauna, including otter *Lutra lutra*. In particular, a tall section of intact brick and stone wall underneath and adjacent to the bridge could offer potential opportunities for bats (TN1) (Photograph 16).

3.3.22 A shallow ditch (TN16) follows the northern site boundary with Wharncliffe Wood, north of building B21. The ditch is located approximately 5-8m beyond the edge of hard-standing, under the tree-line, and is culverted at intervals along its length, appearing to go underground in line with the eastern-most extent of hard-standing (see Photograph 17). The ditch was dry at the time of survey, but the presence of wood-rush *Luzula spp.* indicates the ditch may periodically hold water.

Photograph 15. View to the south bank of the River Don, showing banks reinforced with stone.

Photograph 16. River Don wall (TN1) as viewed from the south side of the bridge, facing north. B19 in the background.

Photograph 17. Shallow dry ditch at woodland edge (TN16)

Tall Ruderal

3.3.23 Four areas of tall ruderal vegetation are found on site. Two larger areas are found at the northern and western boundaries of the site (see Phase 1 Habitat map in Appendix 3), with three small patches behind buildings B18, B7 and B4.

3.3.24 Plant species in this habitat type include rosebay willowherb *Chamerion angustifolium*, bracken *Pteridium aquilinum*, thistle *Cirsium* spp., bramble, docks *Rumex* spp., and ribwort plantain *Plantago lanceolata*.

Ephemeral/Short Perennial

3.3.25 A recently created large area of ephemeral / short perennial vegetation is located to the west of the bridge over the River Don, and was recently the location of a reservoir and weir system (Photograph 18). The system has been in-filled with a combination of building rubble and soil, and the made-up ground has only just started to develop any significant vegetation growth. This habitat ends at a patch of Himalayan balsam *Impatiens glandulifera* (TN12).

3.3.26 A small patch of ephemeral short perennial vegetation and scattered young butterfly-bush is located at the edge of poor semi-improved grassland to the north-west of site on and around concrete platforms and crushed brick waste, with frequent moss (Photograph 19).

Photograph 18. Area of ephemeral/short perennial in foreground & background, with TN12 located to the right of this photograph

Photograph 19. Ephemeral short perennial vegetation, with moss.

Introduced Shrub

3.3.27 Two small areas of ornamental shrub species are located around the entrance to buildings B9, B22 and B23, and a third garden in a raised circular bed surrounded with railway sleepers, located in a parking area to the north of B23. Introduced/ornamental shrub species also grow next to B9. Species include bamboo, *Viburnum* spp., fig *Ficus sp.*, birch *Betula sp.*, honeysuckle, broom *Cytisus scoparius*, ivy *Hedera colchica*, *Cotoneaster* spp., and other ornamental/non-native species.

Poor Semi-improved Grassland

3.3.28 A small patch of rutted and disturbed species-poor semi-improved grassland is located at the north-western extent of the site, surrounded on 70% of its edge with plantation mixed woodland, and hard-standing/bramble and ash scrub on the rest. Species present include false oat-grass *Arrhenatherum elatius*, ribwort plantain *Plantago lanceolata*, bush vetch *Vicia sepium* and broad-leaved dock *Rumex obtusifolius*.

3.4 Species

Badger

3.4.1 The data search returned records for badger field signs and badger setts within the 2km search radius. Records date from 1972 to 2014, with eight records since 2006. The most recent records include a sighting of a dead badger, and records of droppings/latrine within 1.2km of the site boundary. An active sett with 6+ entrances was recorded within 2km of the site in 2013.

3.4.2 No signs of badgers were recorded on the Site during the Phase 1 Habitat Survey.

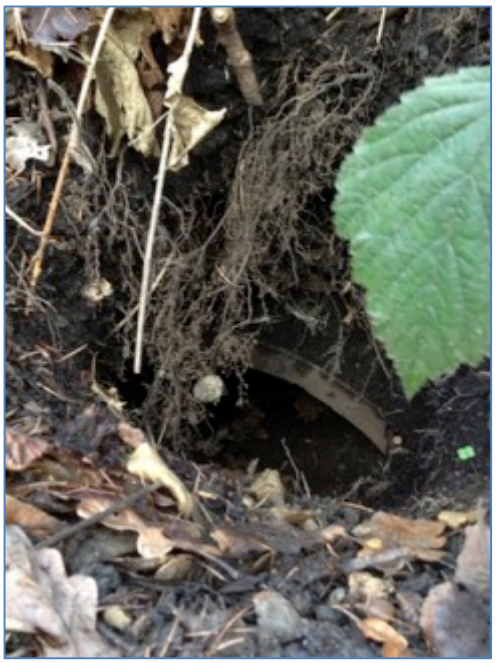
3.4.3 Badger snuffle holes, a dung pit, a footprint and mammal trails were noted during the targeted woodland survey in January (TN20 and TN21), with a single hole (TN19) found in an artificial bank (old roadway). The hole (probably an outlier sett) leads into an underground cast-iron pipe, and is located in woodland to the eastern end of site, approximately 30m from the edge of hard-standing. A well-used track leads to the entrance, but no evidence of bedding or fresh digging, clear prints or hairs was found. Photographs 22 to 25 show these field signs.

Photograph 22. Single dung pit

Photograph 23. Snuffle hole

Photograph 24. Outlier sett entrance with mammal trail to the left, viewed facing north

Photograph 25. Sett entrance - with cast-iron pipe visible



Bats

3.4.4 The data search returned records for several bat species within a 2km search radius of the centre of site, including Leisler's *Nyctalus leisleri*, noctule *Nyctalus noctula*, common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared *Plecotus auritus*, Daubenton's *Myotis daubentonii*, Whiskered/Brandt's *Myotis mystacinus/brandtii* and unidentified Myotis bat species. Records of each species were found within 1km of the site, as well as further afield. The most recent were soprano pipistrelle and common pipistrelle bat records from 2013 and 2014, mostly located at Coumes Culvert at a distance of approximately 0.8km from the centre of site. A single record for a Daubenton's bat, located on the River Don 1km from the centre of site, was also recorded in 2014. A summary of bat records returned by Sheffield Biological Records Centre (SBRC) is provided in Appendix 1.

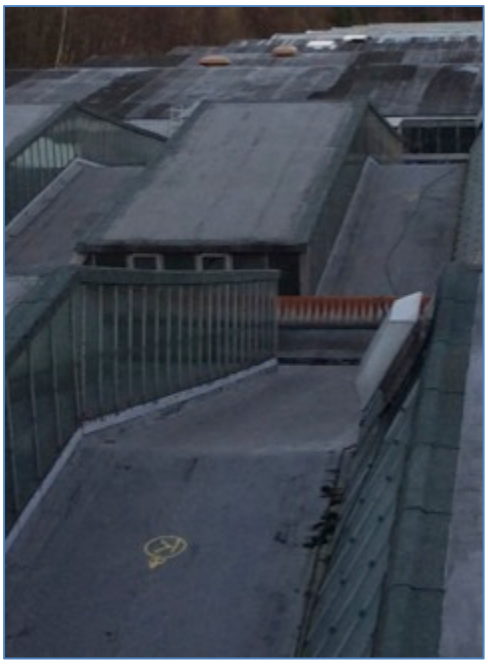
3.4.5 The mixed woodland immediately to the north and east of the site and trees along the River Don both offer potential foraging and commuting habitat for bats, although the trees are generally too young to have developed significant roosting features.

3.4.6 Internal and external inspections of the buildings on site were possible in most cases, but access was not possible for buildings B4, B5, B9, B12 (partial), B18, B24, B25 and B26 at the time of survey.

3.4.7 The larger and more modern buildings on site were considered to generally be of low potential for bats. However, evidence of bat presence or roosting potential was found in a small number of buildings on site, and these are detailed below. Phase 1 Habitat survey target notes are provided where the target note refers to a building's bat potential.

3.4.8 A number of the large industrial buildings on site are of a brick/concrete and pre-fabricated steel construction. Most of the smaller structures are shallow-pitched or flat-roofed with either roof felting or corrugated roofing panels. All buildings were unused (except the site security office) and largely empty at the time of survey. Photographs 26 to 29 below show typical examples.

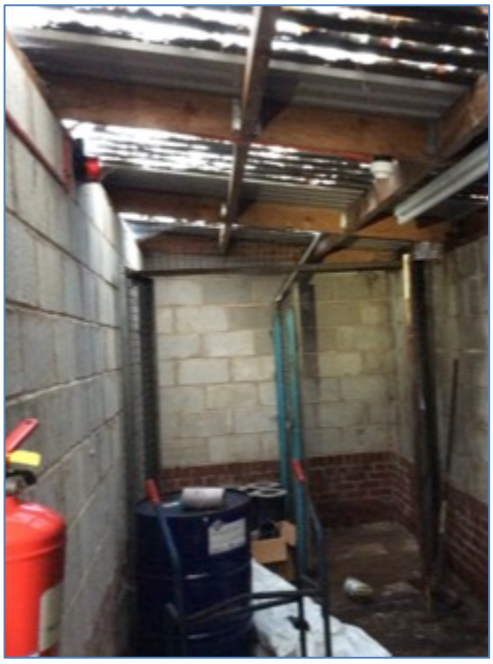
Photograph 26. Pre-fabricated steel roofing showing window system – B21, viewed from 2nd floor B22



Photograph 27. Internal view of ground floor B23 - typical brick, breeze-block and concrete construction

Photograph 28. Typical brick and flat roof construction – B28

Photograph 29. Internal view of B27, showing corrugated roof panels



3.4.9 Three stone buildings on site, located near the entrance to the mill, along Langsett Road North, are of much older construction than the large paper-mill buildings. Several other buildings and bridges connecting with newer mill buildings over the River Don have recently been demolished and some of the external walls of four of them remain standing with crevices and missing bricks (TN17) (see Photographs 30 and 31). The windows and doors of buildings B9 and B18 were sealed closed, and these buildings appeared to have been vacant for some time.

Photograph 30. Subterranean external wall of a demolished building (TN17), adjacent to B18 (seen beyond)

Photograph 31. Road-side frontage of a demolished building (TN17) still standing, adjacent to B10

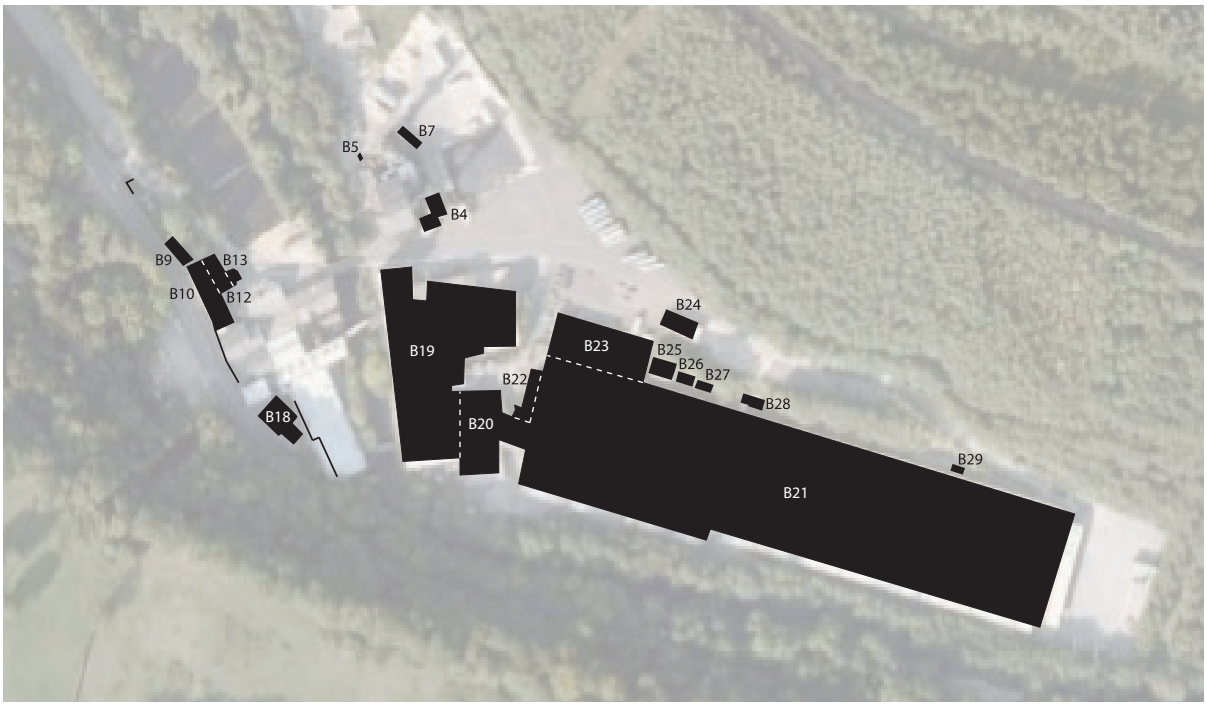
3.4.10 Table 4 below details the buildings (all unoccupied), their access status and survey findings, with Figure 2 showing the location of the buildings. Further detail for some of the buildings is provided in subsequent sections below.

Table 4. Internal and External Building Inspections Summary

Building Number*	Access status: Internal	Access status: External	Bat potential:	Details:
B4 & B5	✗	✓	Low	Flat roof brick buildings with roofing felt. Few gaps under fascia boards.
B7	✓	✓	Low	Flat roof brick office building, with roofing felt and suspended ceiling.
B9	✗	✓	Moderate - High	Stone building with slate roof and several features; crevices in walls and gaps under tiles.
B10	✓	✓	High	Large stone warehouse building with exposed internal roof beams. Large number of cavities and gaps. 2no. live bats observed during survey.
B12	partial	✓	Low	Suspended ceiling with ceiling tiles and solid brick plastered walls. Lower level corrugated (asbestos?) ceiling above B13.
B13	✓	✓	Low	Occupied Security cabin joining with B12 at rear wall. Suspended ceiling with ceiling tiles and solid brick plastered walls.
B18	✗	✓	Moderate - High	Stone building with slate roof and several features; crevices in walls and missing tiles / perlings / mortar sections.
B19 – 23	✓	✓	Low	Office/locker room/storage/workshops structures in good condition with no obvious features. Solid brick walls and internal construction. Possible entry/exit points.
B24 – 26	✗	✓	Low	Concrete construction or pre-fabrication & brick. Flat roofs of corrugated (asbestos?) material. Storage buildings. Few or no entry/exit points.
B27 - 29	✓	✓	Low	Pre-fabrication & brick. Flat roofs of corrugated (asbestos?) material. Storage buildings and toilets. Few/no entry/exit points.

* The building numbering system has been adopted from Waterman Energy Environment and Design Limited's 2013 Ecological Appraisal report. Gaps in numbering indicate a building has since been demolished.

Figure 2. Building Location Plan

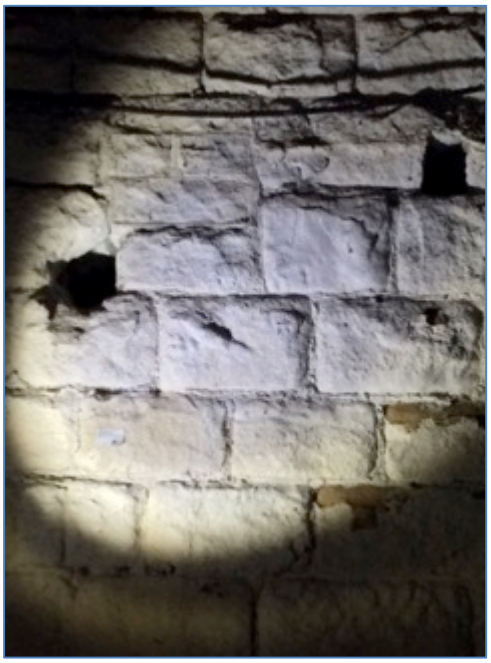


3.4.11 Building B10 (TN11) is an empty three-storey warehouse building accessed from Langsett Road North, with additional access from its northern side, and a large loading door at its northwest end. It is of stone construction with a pitched slate roof and has timber rafters with bitumen roofing felt. Wooden beams support the open void of the roof cavity. A high level of pigeon activity was evident in the building. Hibernating pipistrelle bats (2no.) were identified to be using this building, and a bat dropping was collected for DNA analysis (see Photographs 32 and 33 below). As well as being a confirmed winter roost for these bats, the building also has high potential to support summer bat roosts of several types, including a maternity colony, and may provide habitat for more than one bat species. Features offering potential opportunities to roosting bats include a number of external cavities, gaps where rafters join with walls, gaps in mortar and around lintels and window frames - both internally and externally. Photographs 34 and 35 provide examples of some of the features.

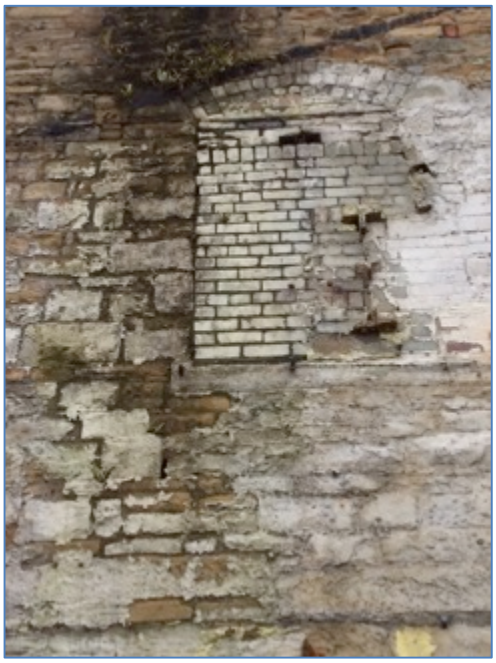
Photograph 32. Northwest gable of B10 (TN11), showing lintel (4 sections deep) above the blue door; location of live bats

Photograph 33. Location of two hibernating pipistrelle bats in central gap, highlighted in torch beam

Photograph 34. Internal view of some of the gaps in stonework of B10 (TN11)



Photograph 35. External view of some of the cavities and gaps in mortar of B10 (TN11)

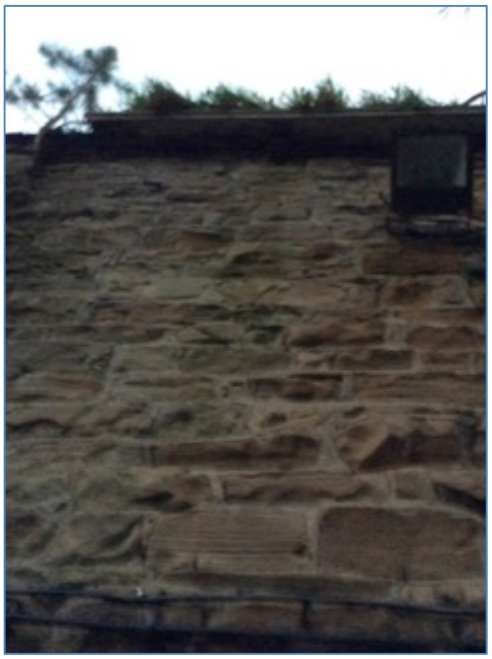


3.4.12 Buildings B9 (TN13) and B18 (TN10) are also of stone construction, and are disused, two-storey, stables and engineer's buildings, respectively. B9 is partially covered in ivy on its northern side, and has features with moderate to high potential for bats, including gaps under lintels, guttering and window frames, and gaps under roof slates and ridge tiles (Photographs 36 and 37).

3.4.13 B18 has a hipped slate roof with damaged and missing roof tiles. Additional features of moderate to high potential for bats include gaps and cavities around window frames and lintels, and cavities where some purlins and mortar are missing (see Photographs 38 and 39). It was not possible to inspect either building internally.

Photograph 36. Rear of B9 (TN13), viewed facing south,

Photograph 37. Gaps under guttering at B9 (TN13), rear side.



Photograph 38. B18 (TN10) viewed facing east, with Langsett Road North and woodland beyond.

Photograph 39. Crevices between stonework and under lintels, B18 (TN10)

3.4.14 Building B21 (TN8) is the largest industrial building on site, and offers low potential to support a bat roost. There are no cavities, crevices or voids apparent within this building with the potential to provide the warm conditions for summer maternity roosts especially, and the construction materials comprising the upper aspects of the building are also typically unsuitable.

3.4.15 However, given the adjacent favourable woodland, riparian habitat and known bat roosts within the Site, building B21 may provide suitable small features for individual or low numbers of bats, which are difficult to detect from a daytime walkover survey of such a large building. This may include suitable habitat for transient roosts, night roosts, feeding perches as well as hibernacula. Photographs 40 and 41 show internal and external views of B21.

Photograph 40. Internal view of a section of B21 (TN8)

Photograph 41. External view of B21 (TN8), viewed facing west

3.4.16 Buildings B19 and B20 (TN5) are both of new pre-fabrication build with open entry areas and large vacant spaces. Evidence of pigeon activity was found in the form of birds seen, droppings and feathers throughout much of the space. Raptor pellets were found in three separate locations within the buildings, and were determined to be several weeks old. There appears to be **low potential** for bats, as suitable features are largely absent, and the building construction is of largely unsuitable material.

Otter

3.4.17 The data search provided five records for otter *Lutra lutra* on the River Don within the search area, with dates ranging from 2004 to 2012.

3.4.18 Suitable riparian features such as exposed rocks and old bridge pilings were noted to offer potential opportunities for spraint deposition/feeding and/or resting places during the Phase I habitat survey.

3.4.19 The targeted survey for otter was undertaken by Courtenay Holden and Jake Robinson on the 28th January 2016. The survey was undertaken during favourable weather conditions, with good visibility, and at a time when the water level was high, but not at its highest.

3.4.20 A visual assessment of the majority of both river banks was made by surveyors. The sparsely-vegetated river banks provided an abundance of soft sediment at the water's edge, exposed rocks, structures and good

accessibility/visibility into tree roots and potential bank-side habitat. No otter field signs were found.

Other Mammals

3.4.21 Faecal remains of rabbit and deer were found within the woodland just outside the site boundary, and there is evidence of rabbits using the site itself. Two deer were seen in Wharncliffe Woods at a distance of 70-80m from the edge of the eastern corner of site.

Water Vole

3.4.22 No records for water vole *Arvicola amphibius* were returned by the SBRC data search.

3.4.23 No field signs for water vole were noted during the Phase 1 survey, and the subsequent targeted survey, likewise, did not reveal any field signs. Although the peak activity for this species is between April and October, it is considered that the survey conditions were appropriate to detect signs of the species if they were present, and that individuals would be active at the time of year the survey was undertaken.

Amphibians

3.4.24 The data search returned records for common toad *Bufo bufo*, common frog *Rana temporaria* and palmate newt *Lissotriton helveticus*. Common toad records were older than 1987, common frog records range from 1969 – 1991, and palmate newt records all come from a pond in Wharncliffe Wood, but no records were younger than 1989. No records for great crested newt *Triturus cristatus*, a European Protected Species, were returned by the data search.

3.4.25 No amphibians were observed during the survey, and no ponds or areas of non-ephemeral standing water were found within the site boundary, or within 500m from the site and not separated by a significant barrier such as Langsett Road North and the River Don.

Reptiles

3.4.26 Seven records for grass snake *Natrix natrix* and one record for common lizard *Zootoca vivipara* were returned by the data search. Grass snake has been found in 2015 at Morehall Derelict Site (1,300m from the Site boundary), and the lizard record from Wharncliffe Wood is an old record from 1978. In terms of reptile habitat, several disused quarries and crags exist in the wider Oughtibridge area, and within close proximity to the Site. The Site is connected to the wider landscape by woodland, the River Don and smaller streams.

3.4.27 No evidence of reptiles was found during the surveys, but potentially suitable basking habitat was noted at several rubble pile locations on site. These areas are target noted– see Appendix 2.

Birds

3.4.28 The data search returned records for several notable bird species, including red and amber-listed Birds of Conservation Concern (BOCC) species. The summary of these data is listed in Table 5 below. Species with records that date from before 2000 are not included in this table. Conservation status in Table 5 has been updated since receipt of the SBRC data search, to reflect BOCC December 2015 updates (Eaton et al., 2015)

Table 5. Notable bird species records.

Common name	Scientific name	Conservation status	Latest record
Lesser Redpoll	*Acanthis cabaret*	S41, Red	2011
Skylark	*Alauda arvensis*	S41, Red	2014
Cuckoo	*Cuculus canorus*	S41, Red	2013
Stock dove	*Columba oenas*	Amber	2013
Yellowhammer	*Emberiza citrinella*	S41, Red	2013
Reed Bunting	*Emberiza schoeniclus*	S41, Amber	2010
Red Grouse	*Lagopus lagopus*	S41, Amber	2008
Linnet	*Linaria cannabina*	S41, Red	2004
Starling	*Sturnus vulgaris*	S41, Red	2003
Lesser Spotted Woodpecker	*Dendrocopos minor*	S41, Red	2007
Dunnock	*Prunella modularis*	S41, Amber	2012
Grey Wagtail	*Motacilla cinerea*	Red	2013
House Martin	*Delichon urbica*	Amber	2014
Bullfinch	*Pyrrhula pyrrhula*	S41, Amber	2012
Redwing	*Turdus iliacus*	WCA1, Red	2011
Song Thrush	*Turdus philomelos*	S41, Red	2013
Mistle Thrush	*Turdus viscivorus*	Red	2013
Fieldfare	*Turdus pilaris*	WCA1, Red	2011
Lapwing	*Vanellus vanellus*	S41, Red	2012
Kestrel	*Falco tinnunculus*	Amber	2013
Red Kite	*Milvus milvus*	BD1, WCA1	2007
Kingfisher	*Alcedo atthis*	WCA1, BD1, Amber	2006
Eurasian curlew	*Numenius arquata*	S41, Red	2013
Tree Pipit	*Anthus canorus*	S41, Red	2011
Meadow Pipit	*Anthus pratensis*	Amber	2009
Wood Warbler	*Phylloscopus sibilatrix*	S41, Red	2000
Willow Warbler	*Phylloscopus trochilus*	Amber	2013
Eurasian Woodcock	*Scolopax rusticola*	Red	2009

Key:
BD1 = European Protected Species of bird, listed under Annex 1 of the Birds Directive 2009/147/EC).
WCA1 = Listed as a protected bird under Wildlife and Countryside Act 1981 (as amended), Schedule 1.
Red = Listed as 'red' (highest conservation concern) under criteria in Birds of Conservation Concern.
Amber = Listed as 'amber' (high conservation concern) under criteria in Birds of Conservation Concern.

3.4.29 A small number of birds were heard/seen during the site survey. These were: kestrel *Falco tinnunculus*, moorhen *Gallinula chloropus*, two pair of goosander *Mergus merganser*, feral pigeon *Columba livia*, jay *Garrulus glandarius*, magpie *Pica pica,* wren *Troglodytes troglodytes* and long-tailed tit *Aegithalos caudatus*. Signs of feral pigeon roosting and nesting activity was noted in most of the large buildings on site, with birds seen and significant numbers of droppings and feathers found in buildings B10, B19, B20, B21 and B23.

3.4.30 A wren was seen entering a patch of tall ruderal vegetation growing in a derelict open brick structure adjoining building B4 (TN4). This area appears to offer a small amount of potential nesting habitat for birds.

3.4.31 There was no clear evidence of barn owl presence within any of the buildings. A high concentration of feathers was observed in building B19, but these were all of feral pigeon. Some feathers close to the exit points of the building were of kestrel.

3.4.32 A search for pellets found none originating from barn owl. There were some scattered small fragments that were at first though to be pellets of a different species, possibly kestrel. However, upon closer examination, despite containing the typical fur and small mammal bones of a pellet, they were also thicker, twisted and slightly tapered, indicating fox scat. The lack of the usual smell and dry texture suggests that this scat, and others like it, was in excess of one month old. Photographs 42 and 43 document the scat and location.

Photograph 42. Scat found in B19

Photograph 43. Location of scat found in B19

Invertebrates

3.4.33 A small number of invertebrate species were highlighted by the data search. Records for one spider species, three butterfly species and two moth species were returned, between the years 1991 and 2014. These species of invertebrate are all included as Species of Importance under Section 41 of the NERC Act 2006.

3.4.34 No butterflies were expected to be observed during the survey, given the time of year and weather conditions, but one small tortoiseshell butterfly *Aglais urticae*, several herald *Scoliopteryx libatrix* moths and a peacock *Aglais io* butterfly were observed hibernating in some of the large industrial buildings.

Plants

3.4.35 No records for notable or protected plant species were returned by the data search.

Invasive Species

3.4.36 No records for invasive species were uncovered by the data search.

3.4.37 Three patches (TN12) of Himalayan balsam *Impatiens glandulifera* were found in close proximity to each other near recently disturbed ground along the south bank of the River Don, to the west of the weighbridge and main site

access driveway (see Appendix 3). The adjacent ground is new infill over a reservoir pool and weir system, and the balsam was located under trees along the riverside of the new bare ground.

3.4.38 Japanese knotweed *Fallopia japonica* was identified in a >20m stand (TN18: SK 307 938) at the eastern-most extent of the site boundary, on the River Don north bank near the site of an old weir. A small stand (3m) was subsequently identified at a position close to the water's edge on the south side of the river at grid reference SK 305 939.

3.4.39 Wall cotoneaster *Cotoneaster horizontalis* was identified within one of the ornamental shrub gardens on site.

3.4.40 All three species are non-native plants listed on Schedule 9 of the Wildlife and Countryside Act (1981), and appropriate action will need to be taken to ensure these are dealt with appropriately in regard to the regulations.

4 Assessment

4.1 Legislation and Policy

4.1.1 The National Planning Policy Framework (NPPF) is intended to help deliver sustainable development, with environmental issues being one of the three dimensions within this. It includes a range of statements and policies relating to biodiversity and nature conservation, with the aim of 'moving from a net loss of biodiversity to achieving net gains for nature' (Paragraph 9). Key sections of the NPPF are highlighted below:

Paragraph 109	'The planning system should contribute to and enhance the natural and local environment by --- minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government' commitment to halt the overall decline in biodiversity'
Paragraph 118	Local planning authorities should aim to conserve and enhance biodiversity when determining planning applications by ensuring that: significant harm is avoided, mitigated or compensated (especially for irreplaceable habitats); impacts on designated sites are prevented and; biodiversity is incorporated in and around developments.
Paragraph 165	To allow the appropriate consideration of ecological issues within applications, planning decisions, 'should be based on up-to-date information about the natural environment – this should include an assessment of existing and potential components of ecological networks'.

4.1.2 Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006 places a duty on every public authority to have regard to conserving biodiversity. Section 41 of the same Act requires that the Secretary of State must publish a list of the living organisms and types of habitats that are of 'Principal Importance' for the purpose of conserving biodiversity. The Secretary of State must take steps, as appear reasonably practicable, to further the conservation of those living organisms and habitats in any list published under this section. The list of species and habitats of principal importance currently includes 943 species and 56 habitats.

4.2 Impacts on Designated Sites

4.2.1 There are a number of areas designated as 'ancient semi-natural woodland' and 'plantation on ancient woodland sites' within 2km of the Site. Wharncliffe Woods is immediately adjacent to the site, and Wheata Woods Local Nature Reserve (LNR) is within 1km.

4.2.2 Increased public use has the potential to impact upon the ancient woodland, especially those areas closest to the development. Wharncliffe Woods, immediately adjacent to the site, could also be impacted by issues such as potential colonisation by garden plant species and litter/pollution, as well as any need for removal or modification of trees as a result of public health and safety requirements.

4.2.3 Appropriate mitigation will be required to protect the woodland, and in the case of Wharncliffe Woods a suitable buffer zone will be required (see 'Recommendations' for more details). Access to the woodland will also need to be managed. If these recommendations are followed, it is concluded that ecological impacts as a result of the development on the ancient woodland are unlikely to be significant.

4.3 Impacts on Habitats

Habitats Overview

4.3.1 The sections below provide an evaluation, description of potential impacts and assessment of ecological effects for each habitat type relevant to the study area.

Plantation Mixed Woodland

4.3.2 Wharncliffe Woods sit largely outside the development area, but the development footprint abuts the woodland edge in places.

4.3.3 It is understood that the proposed development plan will not require the removal of woodland to the southern site boundary with Langsett Road North, or Wharncliffe Wood to the north of the site, and therefore direct impacts at the initial ground clearance and construction phases are not anticipated. Some impacts to woodland edge trees are possible due to the proximity of the built footprint, but avoidable with appropriate tree protection. An increase in the number of residential dwellings in the area could indirectly impact the woodland habitats with increased public use, and the building of two new bridges could impact the immediate woodland habitat at these locations.

Broadleaved Woodland & Scrub

4.3.4 Small areas of scrub within the site boundaries will be removed as part of the development. A strip of broadleaved woodland on a steep slope in the northwest of the Site and another to the north of the main papermill building may also be removed. These woodland areas contain relatively young trees, a sparse understorey, and occupy a small part of the overall footprint.

4.3.5 The level of impacts on broadleaved woodland anticipated from the development is low as the main areas of broadleaved woodland around the edges of the site will not be affected.

Running Water

4.3.6 The development proposes to include bridge construction work across the River Don. One will replace the existing bridge on Site and will require significant structural work, with a second bridge to the eastern end of site anticipated to require bank stabilisation and structural work, both at levels likely to cause impact to the immediate riparian habitat on site.

4.3.7 The ditch located at the northern site boundary is not anticipated to be impacted by the proposed development, as it sits within the edge of Wharncliffe Wood and is understood to be outside the development footprint.

4.3.8 Direct impacts are anticipated to include the removal of some trees from the banks of the River Don, and ground vegetation clearance works, with indirect impacts potentially resulting from an increase in public use of the river banks.

4.3.9 Overall, the likely impact will not be significant, if appropriate mitigation measures are implemented. These should include following standard pollution prevention and control guidelines during construction, and designing access for bridge construction so that structural impacts to the riverbank are minimised.

Open Mosaic and Tall Ruderal

4.3.10 Areas of previously developed open mosaic habitat and tall ruderal vegetation are anticipated to be lost from site with the proposed development. The open mosaic habitat is likely to be lost to development, but tall ruderal vegetation will remain as a component of woodland edge areas.

Introduced Shrubs

4.3.11 The proposed development of the site will require the demolition of all existing site buildings, and the associated shrub areas will be included in this.

4.3.12 The impact of this on the receptor site is anticipated to be insignificant, as the habitat area is very small and similar suitable habitat exists in the woodland immediately adjacent to the site. In addition, the introduced shrubs are, by definition, of low nature conservation value.

4.4 Impacts on Species

Species Overview

4.4.1 The sections below provide an evaluation, description of potential impacts and assessment of ecological effects for each species or species group relevant to the study area.

Badger

4.4.2 Badgers are protected under the Badgers Act 1992. This makes it an offence to willfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so; or to intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it. Removal of significant areas of badger foraging habitat may also contravene the Act, as it could be regarded as cruelty.

4.4.3 A sett is defined as 'any structure or place that displays signs indicating current use by a badger'. Badger setts can be classified into four types: main, annexe, subsidiary and outlying, based upon the number of entrance holes and level of use shown. These are defined below:

Main sett	These are large, well-established setts, normally in continuous use. Each group will use only one main sett and it will form the most likely location for the raising of cubs
Annexe sett	These setts are usually found in close association with the main sett, and will often be linked to it by a well-worn path. Where a second litter of cubs is born they will be raised in the annexe sett;
Subsidiary sett	Subsidiary setts will usually have five or less holes, although not all of these will be in continuous use.
Outlying sett	These setts are used on an occasional basis and will usually consist of only one to three holes. Spoil heaps will generally be smaller than those found associated with the other sett types, indicating a smaller underground structure.

4.4.4 Badger records exist within 2km of the site, and evidence of badger was noted on site, with badger field signs and one probable badger hole found in woodland beyond the eastern perimeter fence.

4.4.5 Woodland habitat, as surrounds the site on the northern and eastern edges, and across Langsett Road North to the south of the site, is good foraging habitat and could potentially provide suitable conditions for a badger sett. However, the Site itself does not provide potential areas for foraging badger, and due to the extensive fencing around the Site to the north of the River Don, access for badger is limited.

4.4.6 It is understood the proposed development will not encroach into the adjacent Wharncliffe Woods. The nearest evidence of a potential sett entrance was approximately 40m from the Site boundary, and there was no clear indication of regular badger activity at this location. It is therefore considered unlikely that badger will be impacted upon by the development.

Bats

4.4.7 Bats and their habitats are protected under the Wildlife and Countryside Act 1981 (as amended by the CRoW Act 2000), and by the Conservation of Habitats and Species Regulations 2010. In addition, seven bat species are listed as Species of Principal Importance under the provisions of the NERC Act 2006.

4.4.8 As the built areas of the Site are not good foraging habitat for bats, the potential impacts from the development are anticipated to be generally low. It is understood that the more valuable riparian habitat and most of the woodland areas are not to be reduced as a result of development.

4.4.9 In general terms, the development is likely to increase the value of the site for foraging bats. Gardens and planted areas will increase the opportunities available for bats, and will enhance connectivity between the woodland and riparian habitats. The addition of features such as bat bricks and boxes within the new development or adjacent woodland is simple to achieve and will enhance the site for bats in contrast with the current expanse of hard standing and large open buildings.

4.4.10 The surveys established that building B10 is a roost for hibernating bats, and also has a high potential to hold summer roosts. As such, demolition or modification to this building will require a European Protected Species (EPS) licence, including suitable measures to ensure that no harm comes to any bats and to provide alternative roosting opportunities.

4.4.11 Most of the buildings on Site were assessed as having low potential for roosting bats. Eight of the structures could not be fully accessed for internal survey. Before demolition of these can take place, an internal inspection of these buildings must be carried out in order to assess whether bats are present and whether any further measures, such as EPS licences, are required. If this is not safe or possible, then nocturnal activity surveys will be required (see Recommendations section below).

4.4.12 The Phase 1 Habitat survey did not identify any trees with significant roost potential within the Site. The relatively young and straight-grown trees within and around the Site, with many conifers present, do not generally provide features such as dead wood and rot holes suitable for bat roosting. However, trees were not systematically surveyed in detail during this survey. This can be addressed through further assessment at detailed planning stage.

4.4.13 The recent records of Daubenton's bats within the desk study mean that it is possible that the riverbank structures may support small roosts of this species of bats, due to its preference for open water habitats. These might be affected by bridge construction or other works as part of the proposed development.

Otter

4.4.14 Otters and their habitats are protected under the Wildlife and Countryside Act 1981 (as amended by the CRoW Act 2000), and under the Conservation of Habitats and Species Regulations 2010. In addition, otter is listed as a Species of Principal Importance under the provisions of the NERC Act 2006.

4.4.15 Records of otter in the local area are recent (2012), and development impacts could cause a temporary disruption to connectivity and commuting routes for any otters using the River Don. However, despite suitable riparian and woodland habitat within the site boundary, no signs of otter were noted during the targeted survey undertaken in January 2016. As such, impacts upon otter are not considered to be likely and no further measures are recommended.

Water Vole

4.4.16 Water voles are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000). This makes it an offence to kill, injure or take any water vole, damage, destroy or obstruct access to any place of shelter or protection that the animals are using, or disturb voles while they are using such a place. In addition, water vole is also listed as a Species of Principal Importance under the provisions of the NERC Act 2006.

4.4.17 The banks of the River Don, as it flows through the site, include large sections of man-made and largely crumbling/defunct walling or dilapidated bridge pilings. Suitable natural bankside habitat for water vole is not in abundance in the section of the Don that bisects the site. No water vole records were returned from the data search from a 2km radius of the centre of site, and no field signs were found during the targeted survey. As such, impacts upon this species are considered unlikely and no further measures are recommended.

Other Mammals

4.4.18 Foxes, while not covered under specific legislation are covered generally under the Wild Mammals (Protection) Act 1996. This makes it an offence to harm any wild mammal with the intent to inflict unnecessary suffering.

4.4.19 To avoid a possible offence, due care and attention should be taken when carrying out works (for example operations near mammal burrows or nests) with the potential to affect any wild mammal in this way, regardless of

whether they are legally protected through other conservation legislation or not.

Amphibians

4.4.20 Great crested newts and their habitats in water and on land are protected under the Wildlife and Countryside Act 1981 (as amended by the CRoW Act 2000) and under the Conservation of Habitats and Species Regulations 2010. In addition, great crested newt and common toad are listed as Species of Principal Importance under the provisions of the NERC Act 2006.

4.4.21 No areas of open water are present on site, and there are no anticipated direct impacts from the proposed development for breeding amphibians. Local records show a small pond to the south-west of the site, across Langsett Road North, located in Usher Wood, within 500m of the site. Despite this proximity, the busy road and River Don are considered significant barriers to movement by great crested newt, and no further measures are recommended.

4.4.22 Overall, impacts upon amphibians are likely to be negligible. The increase in gardens and planted areas (replacing buildings and hard-standing) is likely to have a positive impact on any amphibians using the area, such as toads.

Reptiles

4.4.23 All British reptiles are protected under the Wildlife and Countryside Act 1981 (as amended by the CRoW Act 2000). Grass snake, slow worm, common lizard and adder are protected against intentional killing or injury and against sale. In addition, all British reptiles are listed as Species of Principal Importance under the provisions of the NERC Act 2006.

4.4.24 Clearance of the site will reduce the number of suitable basking areas and potentially suitable reptile habitat on site, but ditch, ruderal and scrub areas close to the edge of the site are anticipated to see a lesser impact, and will maintain some connectivity into the wider landscape.

4.4.25 Recent records show grass snake in the immediate area, and there are areas within the site boundary that could provide suitable conditions for reptile species. A loss of some of this habitat could adversely impact reptiles, but given the proximity of valuable reptile habitat locally the impacts are not anticipated to be significant.

4.4.26 The creation of residential gardens and landscaped areas could see an increase in opportunities for reptiles, with an increase in ponds, vegetation and compost piles, etc.

Birds

4.4.27 All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. In addition to this, for some rarer species (listed on Schedule 1 of the Act), it is an offence to intentionally or recklessly disturb them while they are nest building or at or near a nest with eggs or young, or to disturb the dependent young of such a bird.

4.4.28 The Birds of Conservation Concern initiative (Eaton *et al*, 2015) publishes lists of Red and Amber species. Birds on the Red list are of high conservation concern within the UK, while those on the Amber list are of medium conservation concern. In addition, a number of bird species are also included as Species of Principal Importance under the provisions of the NERC Act 2006. The data search returned records for 19 Red-listed species and 10 Amber-listed species.

4.4.29 Site clearance or construction works, if undertaken during the bird breeding season, could potentially damage active nests and result in an offence under the legislation. Measures to avoid this will need to be implemented.

4.4.30 If the whole site were to be developed and no habitats for birds retained, then a loss of biodiversity would be likely to occur. However, this will not be the case, as riparian and woodland habitats will remain, and the residential areas will include gardens and landscaping that will provide bird habitat.

4.4.31 The detailed design of the proposed development should retain and enhance, as far as possible, those habitats that support biodiversity by the provision of garden areas and greenspace within the development. Features within the landscape such as the River Don and treelines provide links through this site to other habitats in the broader landscape.

4.4.32 The presence of gardens and planted areas is likely to have a positive impact on birds, enhancing potential foraging and nesting opportunities. Habitat enhancement along the river corridor and at the woodland edge is also likely to have a positive impact on the majority of species shown to be present via the desk study.

4.4.33 There is limited suitable habitat within the Site for ground nesting species or large aggregations of wintering birds, with most of the open areas consisting of hard standing. Previous records from the desk study of species such as lapwing, curlew and skylark are limited to open areas of habitat, including moorland, up to 2km away from the site and it is considered unlikely that the open mosaic area on the site would present suitable breeding habitat for these species. However, some ground nesting birds may use this site and a check

during the breeding season is recommended to establish if any mitigation measures will be needed.

Invertebrates

4.4.34 The invertebrates incidentally recorded during the Phase 1 survey are considered likely to benefit from the site's conversion into planted areas, houses and gardens, with foraging and shelter opportunities increasing in kind. No further measures are recommended.

Invasive Species

4.4.35 Japanese knotweed is present within the study area along the southern bank of the River Don, at the eastern extent of the Site boundary, and Himalayan balsam is located in three closely positioned patches along the river bank, to the west of the weighbridge. Wall cotoneaster has also been found on the site.

4.4.36 Under the Wildlife and Countryside Act (Section 14 and Part II of Schedule 9) 1981 (as amended), it is an offence for Japanese knotweed, Himalayan balsam or wall cotoneaster to be planted in the wild or otherwise cause them to grow in the wild.

4.4.37 Although it is not an offence to have these plants on your land, it is an offence to allow the species to spread into neighbouring areas or to grow in the wild. Therefore, development activities (for example movement of spoil, disposal of cut waste or vehicular movements) have the potential to cause the further spread of the species to new areas, and it will be necessary to ensure appropriate measures are in place to prevent this happening prior to the commencement of works.

4.5 Legislation and Policy Summary

4.5.1 The overall result of the proposed development is likely to be a net gain in biodiversity. The increase in beneficial foraging and connective habitat will enhance the site for a range of species.

4.5.2 As long as appropriate mitigation measures are followed, it is anticipated that no protected species will be harmed or disturbed, and that wildlife in general will benefit from a suitable management plan to include proposals for planting and establishing features such as bat and bird boxes.

4.6 Public Access Impacts Assessment

4.6.1 Two surveys were undertaken to assess the potential impacts of increased public access along the river corridor, as the proposal includes a footpath along the river and a pedestrian access bridge, as well as potential impacts on Wharncliffe Woods as a result of the proposed development.

4.6.2 Surveyors identified suitable areas of land where a footpath could be developed without significant ecological impact. This included the full length of the riverbank as it bisects the site.

4.6.3 The provision of a riverside footpath on the edge of the development, in particular, would provide a facility for the residents of the new development and would open up a section of river bank, which is not currently accessible, to local people.

4.6.4 By maintaining the defined access along the site boundary and fire-break, with the continued maintenance of a robust fence, an increase in detrimental activities such as fly-tipping, excessive vehicular access (cycles and motorbikes, etc), dog waste, predation by domestic animals such as cats and dogs, and ground-flora trampling could be kept to a minimum.

4.6.5 With appropriate site design and management, the ecological impacts of public access are assessed as being unlikely to be significant.

5 Recommendations

5.1 Designated Sites

5.1.1 To ensure the ancient woodland habitat is protected during construction and operational phases, a vegetated buffer zone will be retained between the development and Wharncliffe Woods. This buffer will provide a width of 10-30m along the northern site boundary, as indicated in Appendix 4.

5.1.2 The proposed footpath route along the River Don will be carefully planned, constructed and managed to avoid areas of valuable habitat, especially sensitive ground flora, and minimise any potential disturbance to animal species.

5.2 Habitats

5.2.1 As stated above, to avoid impacts on woodland habitats, a vegetated buffer zone will be included as part of the the proposed development. This will help to reduce indirect impacts on the ancient woodland habitat, including light-spill, noise, disturbance, litter, dog-fouling and the spread of garden plants.

5.2.2 It is recommended that, during all clearance and construction works in proximity to the River Don, a comprehensive Pollution Prevention and Control plan be implemented by a suitable representative from the construction team. This will ensure that there are no spillages of fuel or other pollutants into the watercourse.

5.3 Species

Badger

5.3.1 The assessment has demonstrated that badgers will not be significantly impacted as a result of the proposed development, and that no setts will be destroyed or disturbed as a result of the current schedule of works. If this schedule changes, for example any works that may take place closer to the identified potential sett, then this assessment will need to be revisited.

5.3.2 During construction, precautionary measures will need to be implemented to ensure that no mammals such as badgers come to harm. This should include covering any open excavations overnight so that individuals cannot fall in.

Bats

5.3.3 It is already identified that existing bat roosts will be lost as part of the proposed development – and that appropriate compensation for this will need to be implemented under licence. To allow this mitigation to be fully planned, further detailed assessment of bats and their roosts will be required prior to demolition. Given the significant size of building B21, a conventional approach using stationary surveyors will not provide the optimal results and/or will be highly labour intensive. Instead, it is therefore recommended that three seasonal nocturnal transects around this building be the most appropriate method of reasonably assessing the presence and location of any bat roosts within this building during their 'active season'. These surveys should involve four surveyors, two walking a circuit internally and two walking a circuit externally. In addition, it is recommended that an appropriate number of automated remote bat detectors are deployed within the building to ascertain any usage of the internal space by bats.

5.3.4 A European Protected Species licence will be required from Natural England to facilitate demolition of building B10 (and any other buildings where roosts are located). To support this licence application, further surveys of the building will be required, primarily between May and August, to accurately assess the value of this building to bats throughout the year and their lifecycle. It is recommended that surveys of building B10 should comprise three nocturnal surveys to include at least one pre-dawn survey. It is also recommended that up to two automated units be deployed within this building to augment these surveys of a known roost.

5.3.5 Buildings B9 and B18 were not accessible during the bat roost assessment surveys, and of the other inaccessible buildings these two are most likely to offer suitable features of opportunity to bats. It will be necessary to undertake three nocturnal surveys of B18 and at least two nocturnal surveys of B9 to allow bat presence/absence to be ascertained.

5.3.6 It is also recommended that at least two nocturnal surveys be focused on the existing bridge support structures and adjacent areas of the riverbank structures. This is advisable as bats may be using these structures to roost and closer inspection may be impossible due to poor access and safety concerns.

5.3.7 Due to the presence of bats in some of the buildings, it is recommended that all other buildings be demolished under a non-licenced method statement and the supervision of a qualified, bat licenced ecologist, preceded immediately by an inspection of all accessible areas likely to support roosting bats.

5.3.8 Before any tree-felling works take place, a schedule of trees to be removed should be provided to a suitably qualified ecologist so that they can be directly assessed for their bat potential. It is considered unlikely at this stage

that any of the trees understood to be scheduled for removal is suitable for bats, but this will need to be confirmed with an appropriate survey. This will involve ground-based inspection and possibly also tree-climbing to assess any potential roost features at height.

5.3.9 Replacement roost habitat will be needed to compensate for those to be lost within the scheme. In addition to this bat boxes could be placed within the riverside trees and Wharncliffe Woods to provide additional roosting locations in the area around the development.

Otter

5.3.10 As no signs of otter were detected during the survey, no further survey or mitigation measures are required. However, as a precaution, staff on site are advised to remain vigilant during works on or near the riverbank and, if any otters are observed, a qualified ecologist should be contacted for advice.

Water Vole

5.3.11 As no signs of water vole were detected during the survey, no further survey or mitigation measures are required. However, as a precaution, staff on site are advised to remain vigilant during works on or near the riverbank and, if any water voles or their burrows are observed, a qualified ecologist should be contacted for advice

Amphibians

5.3.12 It is recommended that, during construction works, care be taken when operating machinery close to watercourses, amongst leaf litter, and when clearing vegetation or removing rubble. If any amphibians such as toads are observed, they should be allowed to escape unharmed. If any animal is found and does not attempt to move, work should cease and a qualified ecologist contacted for advice or assistance.

5.3.13 Planting on the site should ensure that dense scrub is provided in proximity to woodland edge and riparian habitat, as well as in linkages across the site, so that amphibians have cover from potential predators such as cats, and are able to forage and take shelter throughout the site. Woodpiles may also be considered as a habitat enhancement.

Reptiles

5.3.14 It is recommended that, during construction works, care be taken when operating machinery close to watercourses, amongst leaf litter, and when clearing vegetation or removing rubble. If any reptiles such as grass snakes are observed, they should be allowed to escape unharmed. If any animal is found and does not attempt to move, work should cease and a qualified ecologist contacted for advice or assistance.

5.3.15 Planting on the site should ensure that denser scrub is replaced in proximity to woodland edge and riparian habitat, as well as linkages across the site, so that reptiles have cover from potential predators such as cats, and remain able to forage and take shelter throughout the site. Woodpiles may also be considered as a habitat enhancement.

Birds

5.3.16 All works involving vegetation or ground clearance, or demolition of buildings should be timed to avoid the main breeding season (March – August inclusive). If this is not feasible, then all works must be immediately preceded by a breeding bird survey and thorough search for active nests by a suitably qualified ecologist. If any active nests are found, then all work in the area must cease and a suitable buffer zone be established, until the nest is no longer occupied or visited by either adults or young.

5.3.17 In the design of new gardens and planting regimes, native species of tree should be used, especially fruit bearing species to provide nesting and feeding habitat for birds. In addition, bird boxes should be provided within the Site and in adjacent riparian and woodland habitats. Houses could be fitted with boxes suitable for swift or house martin, and landscaped areas could be furnished with standard boxes as well as those suitable for woodpecker or house sparrow, thus enhancing the nesting habitat potential of the Site.

Invasive Species

5.3.18 Japanese knotweed, Himalayan balsam and wall cotoneaster are all present on site and will need to be addressed before construction or clearance works.

5.3.19 It is recommended that a detailed and thorough targeted survey be conducted with GPS prior to site clearance to ensure that all stands and individual plants of these species are mapped accurately. They should then be removed and destroyed by an appropriate specialised contractor adhering to Environment Agency guidelines.

5.3.20 A management plan to avoid the spread of Japanese knotweed, Himalayan balsam and wall cotoneaster during works should be prepared in accordance with Environment Agency guidelines.

6 References

Bat Conservation Trust (2010) Bat Surveys – Good Practice Guidelines. Second Edition. Bat Conservation Trust, London.

Eaton, M.A. *et al* (2015) Birds of Conservation Concern 4: The population status of birds in the UK, Channel Islands and the Isle of Man. British Birds 108, pp708-746

Harris, S, Cresswell, P & Jeffries, D. (1989) Surveying Badgers. An occasional publication of the mammal society – No 9. Mammal Society, London.

Institute of Environmental Assessment (1995). Guidelines for Baseline Ecological Assessment. Institute of Environmental Assessment, London.

Joint Nature Conservation Committee (2007) Handbook for Phase I Habitat Survey: A Technique for Environmental Audit. JNCC, Peterborough.

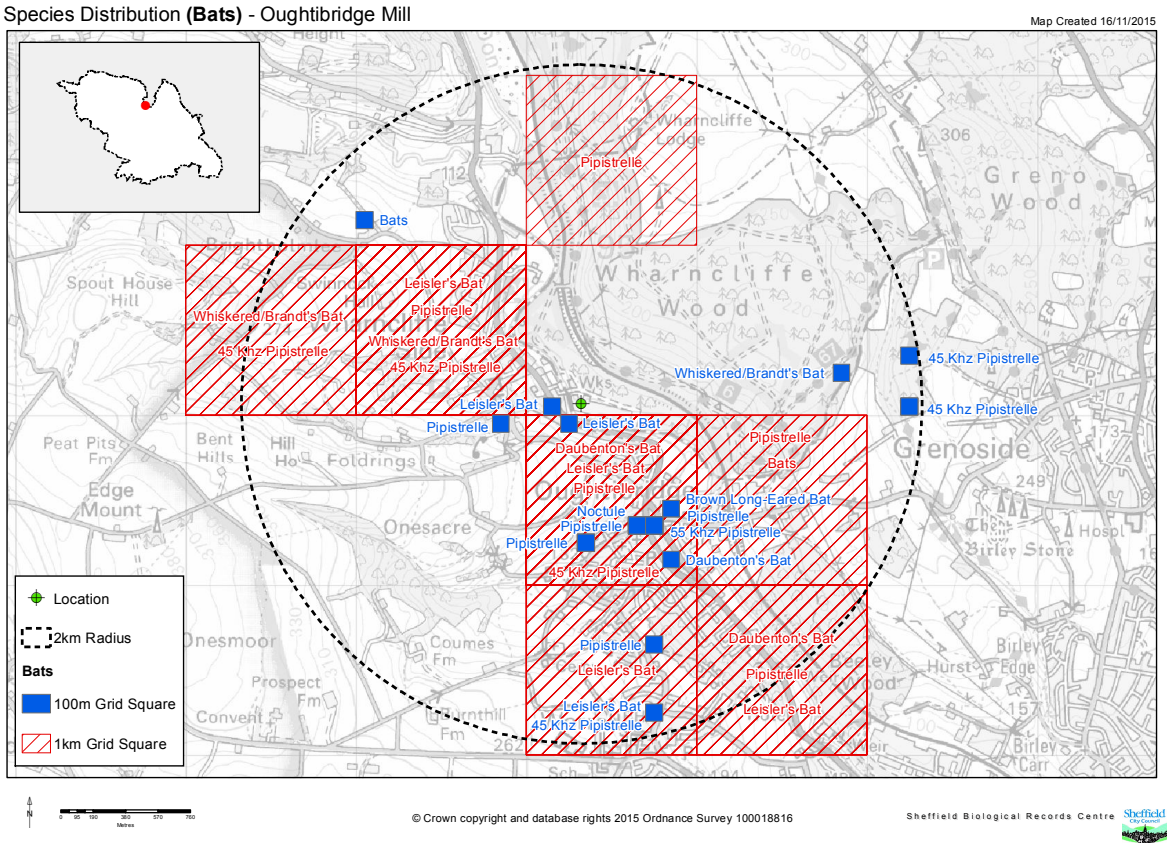
SNH (1997) Otter Survey

Stace, C. (2012) New Flora of the British Isles (3rd edition). Cambridge University Press, Cambridge.

Strachan, R. (1998). Water vole conservation handbook. English Nature, Environment Agency and the Wildlife Conservation Research Unit, Oxford.

Appendix 1: Data Search

Bat Species Distribution Map, as provided by SBRC, November 2015:



Bat records within approximately 2km of the centre of site, as provided by SBRC, November 2015 (records older than 2000 available but not included here):

Species	Date	#	Site details	Notes	Grid reference	Distance from site (km)	Direction
Brown Long-eared	04/10/2005	1	Middlewood (Sheffield suburb)		SK3192	<2.0	SE
Brown Long-eared	30/08/2000	1	Forge Lane, Oughtibridge	Feeding roost in mill	SK308934	.88	SE
Noctule	03/05/2004	1	29 Langsett	Flying over	SK306933	.80	SE

			Road, Oughtibridge	river			
Soprano pipistrelle	13/08/2013	1	Coumes Culvert	Heard feeding	SK306933	.80	SE
Soprano pipistrelle	24/07/2013	1	Coumes Culvert	Heard but not seen	SK307933	.85	SE
Soprano pipistrelle	14/08/2014	1	Coumes Culvert	Seen and heard over bridge	SK307933	.85	SE
Daubenton's	31/08/2014	1	River Don, Oughtibridge	Over River Don	SK308931	1.07	SE
Leisler's	01/10/2001	4	Glen Howe Park	2 feeding over wood. Two other records	SK2994	<1.2	W
Leisler's	01/10/2002	2	Glen Howe Park	1 in flight	SK2994	<1.2	W
Common pipistrelle	03/09/2013	1	Coumes Culvert west – upstream	Heard feeding – not seen	SK306933	.80	SE
Common pipistrelle	24/07/2013	1	Coumes Culvert east	Heard feeding – not seen	SK307933	.85	SE
Common pipistrelle	14/08/2013	2	Coumes Culvert east	1 heard but not seen, 1 seen flying E to W	SK307933	.85	SE
Pipistrelle	05/08/2008	1	Bertram Rd, Oughtibridge		SK3192	<2.0	SE
Pipistrelle	17/06/2006	1	Langsett Road South, Oughtibridge	Roost	SK3093	<1.2	SE
Pipistrelle	03/07/2006	1	Waterside Gardens, Oughtibridge	Roost	SK3093	<1.2	SE
Common pipistrelle	13/08/2013	1	Coumes Culvert west	Heard but not seen	SK306933	.80	SE
Myotis sp.	29/06/2004	1	Wortley Drive, Oughtibridge	Roost	SK3193	<2.0	SE
Myotis sp. possibly Daubenton's	30/08/2000	1	Forge Lane, Oughtibridge	Seen over river	SK308934	.86	SE
Unidentified	20/10/2003	1	Lee Farm, Wharncliffe Side	6-10 droppings in barn with flight activity	SK290951	1.65	NW
Unidentified	26/08/2003	1	34 Riverview Road, Oughtibridge		SK3193	<2.0	SE
Unidentified	29/08/2004	1	34 Riverview Road, Oughtibridge	Emergence	SK3193	<2.0	SE

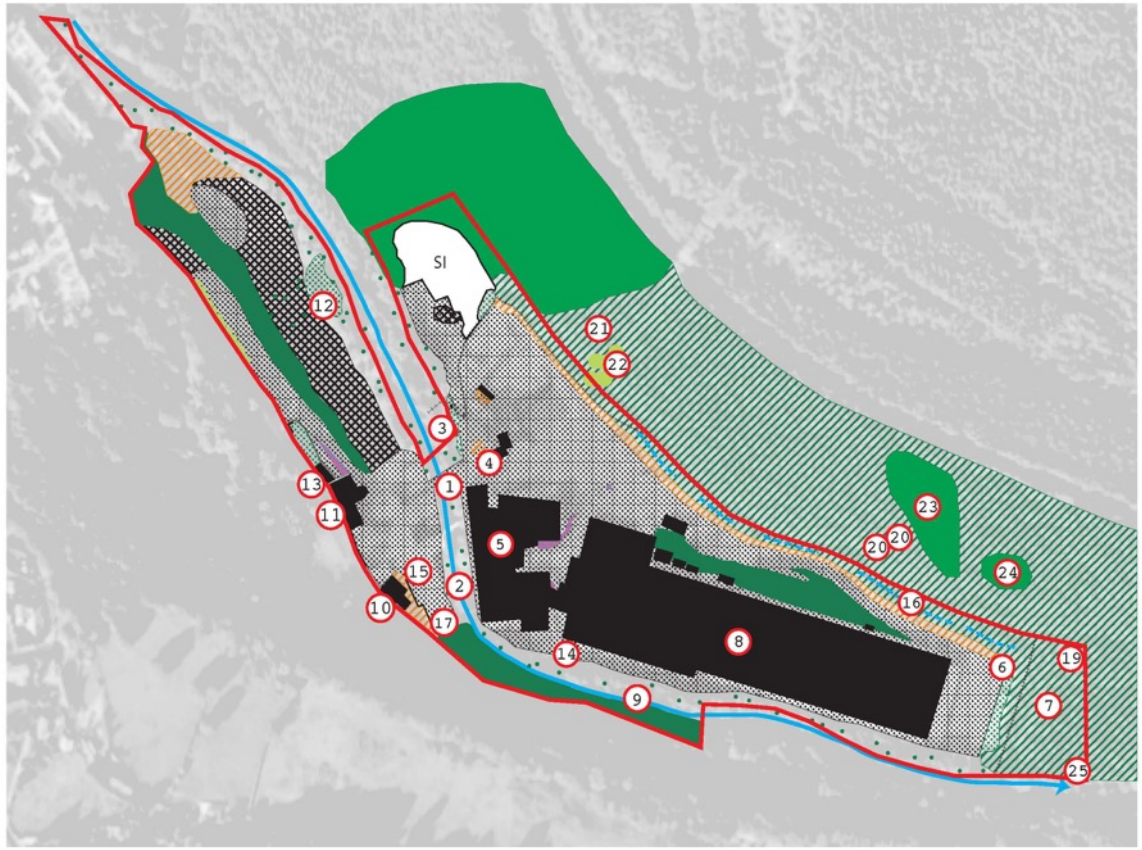
Whiskered / Brandt's	15/10/2008	1	Birkin Royd	1 seen hawking	SK318942	1.57	E
Whiskered / Brandt's	19/05/2009	1	Glen Howe Park	Several detected and mapped	SK2894	<1.6	NW
Whiskered / Brandt's	01/10/2001	5	Glen Howe Park	Good numbers feeding under woodland canopy & in glade	SK2994	<1.2	W
Whiskered / Brandt's	01/10/2002	2	Glen Howe Park	Several feeding	SK2994	<1.2	W
Common pipistrelle	24/09/2008	3	Prior Royd	3 bats feeding	SK322940	2.0	E
Common pipistrelle	19/05/2009	1	Glen Howe Park	Sightings mapped	SK2894	<1.6	NW
Common pipistrelle	01/10/2001	4	Glen Howe Park	Good numbers feeding under woodland canopy & in glade	SK2994	<1.2	W
Common pipistrelle	01/10/2001	2	Glen Howe Park	Several feeding	SK2994	<1.2	W
Common pipistrelle	10/07/2003	1	140 Langsett Road South, Oughtibridge	Roost (71x counted)	SK3093	<1.2	SE
Common pipistrelle	17/10/2005		Mowson Lane, Worrall	1 briefly	SK307922	1.84	SE

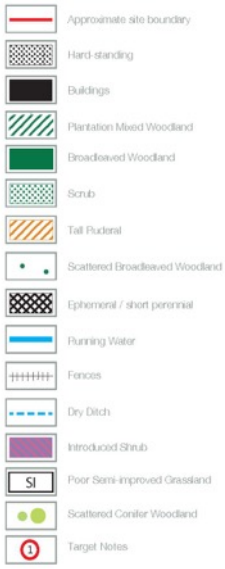
Appendix 2: Target Notes

Target Note	Location	Description
TN1	Bridge across River Don	Brick and stone wall where bridge crosses the river. Full height walls on both banks with cracks and crevices.
TN2	River Don	River bisects site – potential for otter, water vole etc and a commuting/foraging route for bats. Woodland tree species associated with the river banks include sycamore, silver birch, alder, elder, ash.
TN3	North bank, west of bridge	Scrub patch with rubble on top of brick and concrete structure.
TN4	Adj. to building B4	Derelict structures with some gaps under fascia boards and exposed bricks / rubble pile. Potential bird nesting in vegetation.
TN5	Buildings B19 & B20	Open and new warehouse buildings. No features – low bat potential. Roosting pigeons evident. Bird of Prey pellets found in three locations.
TN6	Woodland edge, northern site boundary	Tall ruderal vegetation over exposed rubble areas at woodland edge. Some large boulders. Reptile potential.
TN7	Plantation mixed woodland, north and east of site boundary	Fenced at site boundary with a tall deer-proof fence. Open woodland with little ground cover.
TN8	Building B21	Roof is of low potential for bats, but a few possible points of entry/egress into very large building.
TN9	River Don	Old derelict bridge piling / structures evident in multiple locations along the River Don, on both banks.
TN10	Building B18	Old stone building of masonry construction, slate roof. Many entry/egress points for bats – good potential.
TN11	Building B10	Large stone and brick building with good bat potential. Large numbers of roosting pigeon evident.
TN12	River Don, south bank west of bridge. SK 3009394260 SK 3012294250 SK 3014294210	3 interconnected patches of Himalayan balsam. Several plants and smaller seedlings evident at the edge of newly disturbed ground, within 10m of the river bank. Adjacent to an open stone structure submerged into the ground.
TN13	Building B9	Old stone building of masonry construction, slate roof. Many

		entry/exit points for bats – good potential.
TN14	North bank of river, between B20 and B21	Recently demolished building footprint, now a rubble pile. Reptile potential.
TN15	North of B18	Recently demolished building footprint, now a brick rubble pile. Reptile potential.
TN16	Northern site boundary	Shallow dry ditch follows the woodland edge and tall ruderal vegetation along the northern site boundary.
TN17	Adj. to Building B18	External walls of several recently demolished buildings showing crevices.
TN18	River Don, north bank at SK 307 938 and south bank at SK 305 939	Two stands of Japanese knotweed at water's edge.
TN19	Wharncliffe Woods to the east of hard-standing and perimeter fence	Outlier entrance to a badger sett? Single hole in artificial bank (old roadway). Leads into cast iron pipe. Well-used track leading to entrance. No evidence of bedding or fresh digging No clear prints or hairs found. Size of tunnel in pipe - 40cm wide at base, 15-20cm high.
TN20	Wharncliffe Woods	Snuffle holes on line of mammal tracks.
TN21	Wharncliffe Woods	Badger snuffle holes, single dung pit, badger paw print, and adjacent trail.
TN22	Conifer stand in Wharncliffe Woods	Larch and occasional scots pine stand, split by power line way leave. Low bramble abundant under trees, with bracken in way leave. Trees young, tall and thin occasionally up to 35cm dbh. Honeysuckle, occasional ferns, variety of mosses. Holly occasional. Wind-throw and some standing and fallen deadwood. Some small patches of wavy hair grass and soft creeping grass.
TN23	Silver birch stand in Whancliffe Woods	Tall young silver birch stand, with some conifers and young beech.
TN24	Turkey oak stand in Wharncliffe Woods	Open, straight-grown stand of turkey oak, with some beach, birch and holly. Low bramble on ground, rhododendron patches. Lots of mossy boulders and dead wood on floor. Some oaks to 40cm dbh.
TN25	River Don at eastern end of site	Old weir - no otter signs found. Good holt potential in woodland to north due to frequent wind-thrown trees, banks and gaps under rocks.

Appendix 3: Phase 1 Habitat Plan





Oughtibridge Mill Phase 1 Habitat Survey Plan

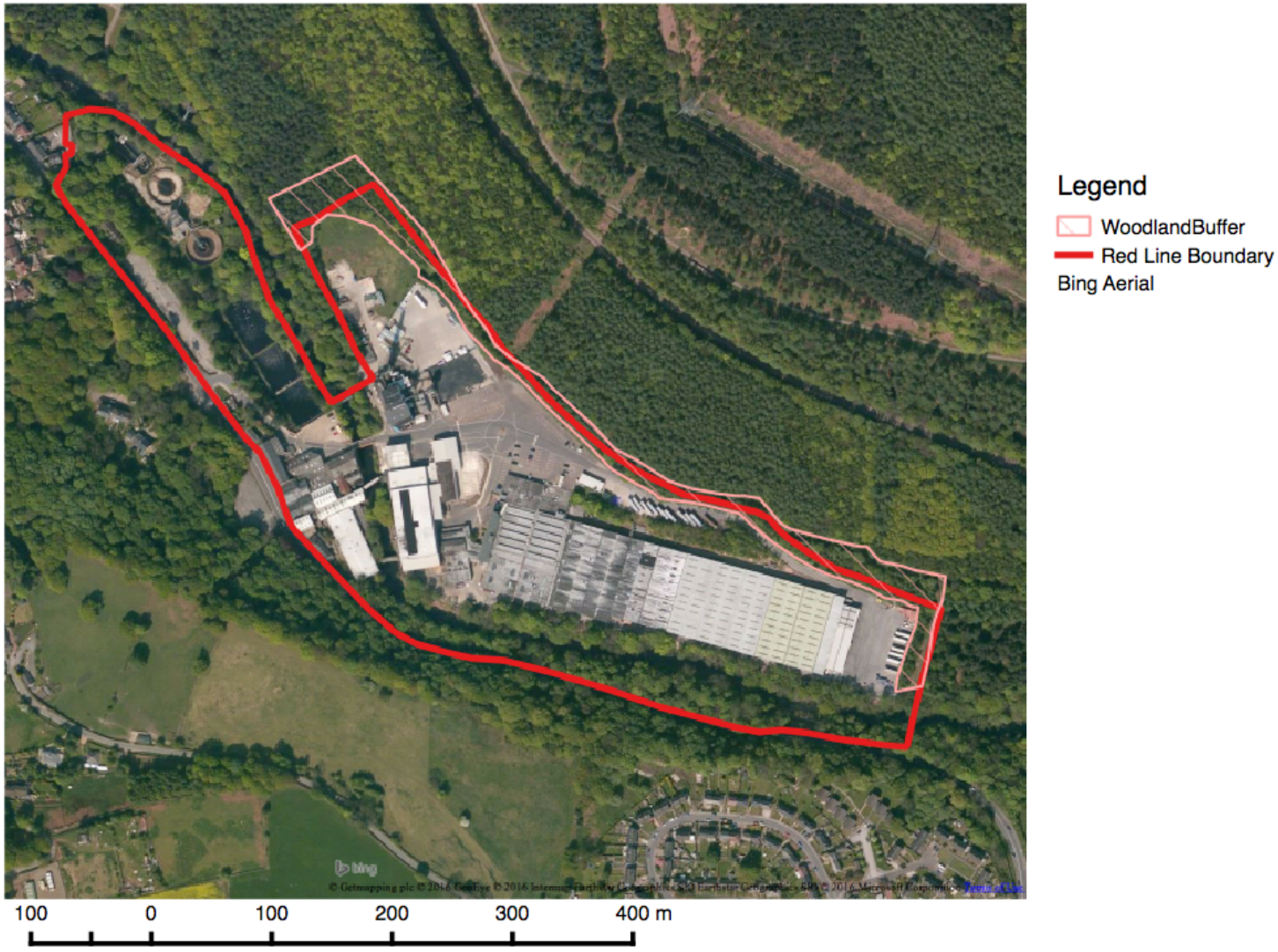
bakerconsultants
ECOLOGY DESIGN INNOVATION

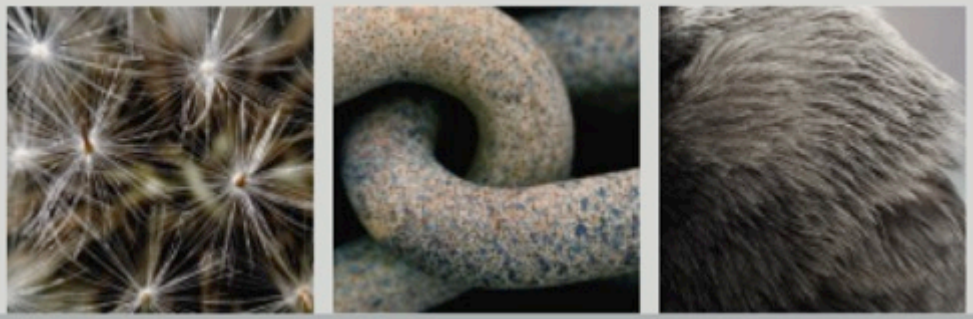
Project Name & No.
689 Oughtibridge Mill
Production Date
10 February 2016
Project Owner
FIH
Figure Creator
CH

Baker Consultants
West Platform, Cromford Station
Cromford Bridge, Matlock
Derbyshire DE4 5JJ

Telephone 01629 60 2969
Email info@bakerconsultants.co.uk

Appendix 4: Woodland Buffer Plan





baker consultants

Leeds Office
Troy Mills
Troy Road
Horsforth
Leeds LS18 5GN

t: 0113 259 1927
f: 01131 258 4500
e: mail@ghdlivigunn.com
i: www.ghdlivigunn.com

GHDLIVIGUNN

REPORT FRONT SHEET

PROJECT NO	LS1611
PROJECT TITLE	OUGHTIBRIDGE MILLS
CLIENT	CEG, HARROGATE

DISCIPLINE	CIVIL / STRUCTURAL
CALCULATION TITLE	EXISTING ACCESS BRIDGE ASSESSMENT
AUTHOR	SAMI TERRO

DATE	JULY 2016
CHECKED BY	DAVID MACKIE
APPROVED BY	BEN AYNSLEY
CALCULATION NUMBER	LS1611_RPT_001
REVISION	A

REVISION	ISSUE DATE	CHANGES MADE
A	July 2016	Initial Issue