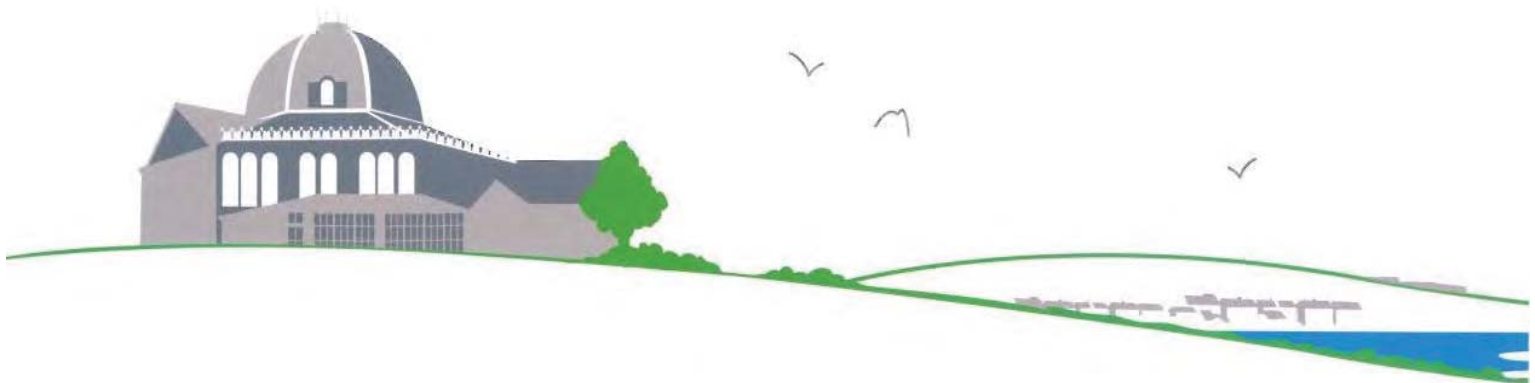




TOUREEN MANGAN
BATLEY MORTAR, BIRSTALL
ECOLOGICAL ASSESSMENT





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ECOLOGICAL ASSESSMENT

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September 2014

This project has been undertaken in accordance with PAA policies and procedures on quality assurance.

Sarah Ross

Signed: _____

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1. INTRODUCTION

Background

- 1.1 Penny Anderson Associates Ltd (PAA) was commissioned by Tureen Mangan in August 2014 to carry out an Extended Phase 1 Habitat and otter surveys of a site off Bridge Street, Birstall, Batley, West Yorkshire (hereafter referred to as 'the site').
- 1.2 A preliminary ecological assessment has been carried out by AECOM Ltd in 2011 (AECOM 2011). This included an Extended Phase 1 Habitat survey following the methodology of the Joint Nature Conservation Committee (JNCC 2010). This is a standard method of mapping British habitat types according to their dominant plant species. The site assessment also considers evidence for the presence, or potential presence, of protected species.
- 1.3 In addition to the site assessment, the Extended Phase 1 Habitat survey approach includes a desk study whereby records of protected and notable species, designated and non-designated sites of wildlife interest are collated. This information is held by environmental records centres, which in this case is West Yorkshire Ecology (WYE).
- 1.4 Following the survey and an examination of ecological records collected as part of the desk study, the AECOM report recommended that a number of species-specific surveys should be completed. This was to enable a more comprehensive assessment of the potential impact of re-development of the site on ecological receptors.

Aims of this Report

- 1.5 This report presents the findings of a repeated Extended Phase 1 Habitat survey in August 2014. It would be anticipated that some changes to habitat would likely occur as a result of human action and the natural process of succession. The repeat survey was carried out to determine if the conditions of the site had changed since the initial ecological assessment, and if so to revise the habitat map, description and assessment of potential impact of re-development on habitats and wildlife.
- 1.6 Furthermore, an otter survey of Smithies Beck was repeated. The otter is protected under European and UK law and considered as a priority species for conservation action because of its earlier decline. The AECOM report concluded the watercourse survey found no evidence of otter and the beck offered suboptimal habit for otter. However, otter numbers have increased rapidly and their territories have expanded considerably over recent years (Crawford 2011) and the survey was considered necessary to establish if the watercourse was being used by otter presently.
- 1.7 In short, the purpose of this report is to:
 - Present the findings of the Extended Phase 1 Habitat and otter surveys;
 - Assess the potential impact of redevelopment of the site on protected species;
 - Make recommendations on the action to be taken during enabling works and construction to guard against adverse impacts on habitats and protected species; and

- Suggest approaches to enhance biodiversity that can be integrated into the redevelopment design.

The Site

- 1.8 The site is centred on National Grid Reference SE 224 257 covering approximately 0.504ha and is located approximately 15 miles south-west of Leeds city centre and 15 miles west of Halifax (refer to Figure 1).
- 1.9 It is roughly rectangular with Mill Street and terraced housing forming the south-western border and semi-detached housing on Bridge Street along the south-eastern border. Immediately to the north-west is an area containing a number of small commercial buildings and car parking that fronts on to Huddersfield Road. Adjoining land to the north-east between the site and Smithies Moor Lane is a small area of mixed woodland consisting of non-native conifer that forms an informal roadside hedge backed by immature willow (*Salix* sp.), elder (*Sambucus nigra*), cherry species (*Prunus* sp.) and sycamore (*Acer pseudoplatanus*).
- 1.10 The site was formally an industrial complex and all original buildings have been cleared leaving areas of hardstanding and open ground. Smithies Beck is a partly culverted watercourse that flows in a south-westerly direction in an open concrete and stone channel across part of the site. A central section of the site consists of a block of broadleaved woodland with other areas of the site characterised by scattered scrub.

Legislative Framework

- 1.11 The text below provides a brief summary of the legislation in relation to the species or species group in England and Wales. The original Acts, Regulations and any amendments should be referred to for the precise wording.
- 1.12 A range of international and national legislation has been established in the UK to protect important nature conservation sites and priority species. At the international level, European Union (EU) Directives require individual member states to implement their conservation provisions nationally for the benefit of Europe as a whole. These Directives have been transposed into UK law by the Conservation of Habitats and Species Regulations 2010 (further amended in 2011 and 2012); further details can be obtained from the Joint Nature Conservation Committee (JNCC) web site at www.jncc.defra.gov.uk.
- 1.13 Other international conventions include: the Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979), which requires the maintenance of populations of wild flora and fauna, giving particular protection to endangered and vulnerable species; and the Bonn Convention on the Conservation of Migratory Species of Wild Animals (1979), which requires the protection of migratory species throughout their entire range. The above conventions are implemented in England and Wales via the Wildlife and Countryside Act (WCA) (1981) (as amended) and Countryside and Rights of Way (CRoW) Act 2000. This legislation also protects important habitats and sites such as Sites of Special Scientific Interest (SSSI).
- 1.14 At the national level, the UK Post-2010 Biodiversity Framework published in 2012 is the Government's response to the Convention on Biological Diversity (2010). It describes the UK's biological resources, commits a detailed plan for the protection of these resources within the UK's devolved framework across England, Wales, Scotland and Northern Ireland. The document identifies future priorities for nature conservation and adopts a more strategic approach, including ecosystem services and sustainability alongside biodiversity. Despite administrative changes following devolution, there is still an underlying objective of protecting

and enhancing a range of priority species and habitats, often still based on the objectives and classifications of the original UK Biodiversity Action Plan. *Biodiversity 2020* is England's national biodiversity strategy. Building on the *Natural Environment White Paper* published in 2011, this provides a means of delivering the international and EU commitments to biodiversity. Under *Biodiversity 2020*, Priority Species and Habitats referred to are those of 'Principal Importance' for the conservation of biodiversity in England listed on Section 41 (England) of the Natural Environment and Rural Communities (NERC) Act 2006.

1.15 Finally, the National Planning Policy Framework (NPPF), published in 2012 provides guidance for local authorities on the content of the Local Plans and is a material consideration in determining planning applications. The NPPF has replaced much existing planning policy guidance, including Planning Policy Statement 9: Biological and Geological Conservation. Briefly, with an overall focus on sustainable development, the NPPF states that developments should aim to engender positive outcomes for biodiversity, with a particular focus on the maintenance and creation of ecological networks. Furthermore, the NPPF also states that any planning proposals for which significant negative impacts on biodiversity cannot be avoided, mitigated or compensated should be refused. *Biodiversity 2020* Priority Species are also referred to as 'species of principal importance' for the conservation of biodiversity in England within Section 74 of the CRow Act 2000, and Sections 41 (England) of the Natural Environment and Rural Communities (NERC) Act 2006. The NPPF states that the planning system should contribute to and enhance the natural environment through a range of actions, including:

- Protecting and enhancing valued landscapes, geological interests and soils;
- Recognising the wider benefits of ecosystem services; and
- Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

1.16 A summary of the legislation specifically related to otter is given in Appendix I.

2. SURVEY METHODOLOGIES

Desk Study

- 2.1 Records of statutory, non-statutory wildlife sites and protected species were requested from West Yorkshire Ecology (WYE) for a 2km radius area from the perimeter of the site. Additionally, a number of other data sources were used, including the Natural England website (<http://www.naturalengland.org.uk/>); the Multi-Agency Geographic Information for the Countryside Interactive Map (MAGIC) (<http://www.magic.gov.uk/website/magic/>) and the National Biodiversity Network (NBN) (<http://www.nbn.org.uk/>).

Extended Phase 1 Habitat Survey

- 2.2 The Extended Phase 1 Habitat survey was carried out by Principal Ecologist Paul Fisher (MCIEEM)¹ supported by Assistant Ecologist Rebecca Ratcliffe (ACIEEM) on 12th August 2014. The survey methodology was based upon guidance set out in the *Handbook for Phase I Habitat Survey* (JNCC 2010) and IEA (1995). This entailed mapping, describing and collating plant species lists for habitats within the survey site boundary.
- 2.3 Target notes were made for any habitat or feature of ecological interest, and of any incidental sightings made or evidence noted during the survey. This included, for example, mature trees, buildings with bat potential, ponds, signs and sightings of protected species.
- 2.4 Details were noted of habitats, for example, grasslands, along with an indication of the relative abundance of each plant species using the 'DAFOR' scale (where D = dominant; A = abundant; F = frequent; O = occasional; R = rare).

Survey Limitations

- 2.5 There were no survey limitations. The site assessment was carried out during the optimum period for carrying out Phase 1 surveys and weather conditions were good.

Otter Survey

- 2.6 The otter survey was carried out on 12th August 2014 by Principal Ecologist Paul Fisher supported by Assistant Ecologist Rebecca Ratcliffe.
- 2.7 Otters can be surveyed at any time of the year but the optimum period is between May - September when water levels tend to be less variable. Guidance (e.g. Highways Agency 2001, Chanin 2003) suggests surveys should not be undertaken when there has been heavy rain immediately preceding or during the survey. Heavy rain and floods can wash away spraints (faeces), footprints and other signs of presence. Ideally, the weather should be dry for at least a week before the survey.

¹ Chartered Institute of Ecology and Environmental Management

- 2.8 Signs looked for included spraints, footprints, feeding signs, tracks and evidence of couching.² Hard surfaces e.g. in-channel and bankside rocks and logs were searched for evidence of sprainting. The survey approach involves counting the number of otter spraints and placing them into three categories: dried fragmented, dried intact and not fully dry.

Survey Limitations

- 2.9 Weather conditions were suitable and access available to the whole of the open channel and riparian corridor. There were no significant limitations to the survey.

² *An otter's den is called a holt or couch*

3. RESULTS

Desk Study

Statutory Designated Sites

Internationally Designated Sites

- 3.1 No sites with international designations for nature conservation (Special Protection Area (SPA), Special Areas of Conservation (SAC), RAMSAR³) are located within 2km of the site boundary.

Nationally Designated Sites

- 3.2 No sites with national designations for nature conservation (Site of Special Scientific Interest (SSSI) or National Nature Reserve (NNR)) occur within 2km of the site boundary.

Locally Designated Sites

Sites of Scientific Interest

- 3.3 No Sites of Scientific Interest (SSI) occur within 2km of the site boundary.

Local Nature Reserves

- 3.4 Local Nature Reserves (LNRs) are sites of local or district-wide importance for enjoyment, study or conservation of wildlife, geological features and landforms.
- 3.5 One LNR 'Oakwell Park' is located approximately 1km north of the site boundary (centred on National Grid Reference SE 215 273). It was designated by Kirklees Metropolitan Council in 2005. It is also a Country Park and the Natural England description reports features of interest to include trees, plants, fungi, insects, butterflies and small mammals.

Non-statutory Designated Sites

Local Wildlife Sites

- 3.6 West Yorkshire is currently going through a process of merging 2nd and 3rd tier local sites into a single Local Wildlife Site designation. There is a presumption against development and sites will be given the same protection as SSI in Unitary Development Plans and Local Development Frameworks.
- 3.7 No Local Wildlife Sites (LWSs) occur within 2km of the site boundary.

³ Ramsar sites are wetlands of international importance, designated under the Ramsar Convention

Sites of Wildlife Significance

- 3.8 Kirklees Council designates 'Sites of Wildlife Significance' (SWS). These are sites identified by local conservation groups and while not having a county-wide value, their significance for nature conservation is based on their contribution to the range and diversity of wildlife in Kirklees (Kirklees Council 2007). Development proposals that would affect a site of wildlife significance would not normally be permitted unless provision is made to maintain the site's role for nature conservation.
- 3.9 There are no SWS sites within 2km of the site boundary.

Regionally Important Geological Sites

- 3.10 Regionally Important Geological Sites (RIGS), also known as Local Geological Sites and Geodiversity Heritage Sites, are selected on the basis of their educational, geological, historical and/or aesthetic value. RIGS are notified to the Local Planning Departments and may be listed on local authorities' development plans where they are protected via the planning process.
- 3.11 There are no RIGS within 2km of the site boundary.

Protected and Notable Species Records

- 3.12 Summaries of the English legislation in relation to the protected species discussed in this report are provided in Appendix I.
- 3.13 Records of protected and notable species returned by West Yorkshire Ecology are provided in Appendix II. The most relevant records have been selected and summarised and are present below. For full details refer to Appendix II.

Birds

- 3.14 Thirty one records of bird species have been returned within 2km of the site boundary. Of these 10 species are Red-listed⁴. These are skylark, yellowhammer, spotted flycatcher, house sparrow, tree sparrow, grey partridge, starling, redwing, song thrush and fieldfare.

Bats

- 3.15 A total of 22 records of bats and bat roosts were returned. Many are for common pipistrelle (*Pipistrellus pipistrellus*) but the majority are not identified to species. Records extend from 1998 to 2010 and the species identified include common pipistrelle, soprano pipistrelle (*Pipistrellus pygmaeus*), two records of noctule (*Nyctalus noctula*) and a single record of Leisler's bat (*Nyctalus leisleri*).

Badger (*Meles meles*)

- 3.16 There are no records of badger within 2km of the site boundary.

⁴ UK birds are put into one of three categories of conservation importance - red, amber and green. Red is the highest conservation priority, with species needing urgent action. Amber is the next most critical group, followed by green.

Otter (*Lutra lutra*)

- 3.17 There are no records of otter within 2km of the site boundary.

Water Vole (*Arvicola amphibious*)

- 3.18 There is one field record of water vole in 1989 approximately 1.9km from the site boundary.

White-clawed Crayfish (*Austropotamobius pallipes*)

- 3.19 There are no recent records of white-clawed crayfish within 2km of the site boundary although there is a record for 1929.

Great Crested Newt (*Triturus cristatus*) (GCN)

- 3.20 There are no records of GCN within 2km of the site boundary.

Field Surveys

Extended Phase 1 Habitat Survey

- 3.21 There has been little fundamental habitat change since the AECOM survey in 2011. The habitat types are described below and any changes since 2011 are identified (refer to Figure 1). A species list is presented in Appendix III.
- 3.22 As a general description the site consists of hardstanding and scrub. The block of woodland has sparse ground flora and the boundary consists of mature standards of sycamore (*Acer pseudoplatanus*), lime (*Tilia cordata*), wooden fencing and stone walls. All habitats are of low ecological value with many having developed on hardstanding, cleared areas and bare ground, with the exception of the woodland and perimeter standard trees. Many of the areas described as 'bare ground' in the AECOM report are now rank grassland and tall herbs.

Broadleaved Woodland

- 3.23 The broadleaved woodland occupies a central area of the site and extends along the southern bank of Smithies Beck. It consists primarily of quite mature sycamore and lime with an occasional elm (*Ulmus* sp.) at the edge of the site (see Plate 1). There is sparse ground cover dominated by ground ivy (*Glechoma hederacea*), common couch (*Elytrigia repens*), bramble (*Rubus fruticosus* agg.), cleavers (*Galium aparine*) and common nettle (*Urtica dioica*) (see Plate 2). The woodland appears to be largely unchanged since 2011.

Watercourse and Pooled Area

- 3.24 Smithies Beck flows easterly crossing the centre of the site and is culverted beneath Bridge Street. The open channel is approximately 40m in length, 2m wide and 0.5 to 1.3m in depth. At the time of survey the flow was moderate. The banks are artificial, formed of concrete, gabion baskets and corrugated iron revetments (see Plate 3). The channel substrate consists of pebbles, cobbles and stones as well as artificial materials such as concrete, brick and tile. Most material is angular or sub-angular with a small number of rounded stones.

- 3.25 A new habitat of open water has developed (see Plate 4) that has collected at a low section of the hardstanding adjacent to the channel. The surface of the hardstanding grades towards the channel and water has collected behind a concrete wall. An accumulation of silt has provided a growing platform for a few aquatic plants including bulrush (*Typha latifolia*), small stands of rushes (*Juncus effusus* and *J. bufonius*) and great willowherb (*Epilobium hirsutum*). The pooled area is most likely ephemeral and prone to drying in the summer and re-wetting following wetter periods in the winter.

Hardstanding

- 3.26 The site remains dominated by hardstanding although there has been encroachment of scrub at the edges and along joints between concrete modules with the development of tall herbs and sparse scrub (see Plate 5).

Rank Grassland and Tall herbs

- 3.27 One of the changes has been the development of tall herbs and rank grassland on areas that were previously described as bare ground. This includes occasional species of cock's-foot (*Dactylis glomerata*), dandelion (*Taraxacum officinale* agg.), mugwort (*Artemisia vulgaris*), false oat-grass (*Arrhenatherum elatius*), Yorkshire fog (*Holcus lanatus*) and developing scrub with young butterfly bush (*Buddleja davidii*) and willow (*Salix* sp.) (see Plate 6).

Invasive Species

- 3.28 The 2011 survey found stands of Japanese knotweed (*Fallopia japonica*) that have apparently been successfully treated. There are, however, remaining patches of Himalayan balsam (*Impatiens glandulifera*) (see Plate 7).

Protected Species

Birds

- 3.29 Incidental species recorded during the site visit included common moorhen (*Gallinula chloropus*), common wood pigeon (*Columba palumbus*), common blackbird (*Turdus merula*), blue tit (*Cyanistes caeruleus*), great tit (*Parus major*) and winter wren (*Troglodytes troglodytes*). All of these species are relatively common and categorised as species of least conservation concern (green listed). The broadleaved woodland and developing scrub vegetation has the potential to support nesting birds. However, the urban setting and fragmentation of the habitat suggests the site is unlikely to support a significant population of birds.

Bats

- 3.30 The AECOM survey 2011 identified the two culverts of Smithies Beck and a mature sycamore on the south-eastern boundary as having high potential to support bat roosts. The broadleaved woodland and line of mature trees also present good commuting and foraging habitat. The results of a bat activity survey are presented in a separate report in preparation (AECOM 2014).

Badger

- 3.31 There was no evidence of badger using the site during the site assessment. The site is relatively small providing little foraging opportunities and isolated in an urban area it is consequently a suboptimal habitat for badger.

White-clawed Crayfish

- 3.32 At the time of the survey the water was discoloured and an examination of the channel and banks found no evidence for white-clawed crayfish. The open stretch of channel on site is isolated from any wider network by culverts and the potential for colonisation is very low.

Great Crested Newt

- 3.33 The pooled area adjoining Smithies Beck is a recent addition to the site and assessment found no indication of presence of, or potential for GCN. There are no waterbodies within 500m of the site and the intervening urban landscape represents disturbed and poor terrestrial habitat for GCN.

Otter

- 3.34 All in-channel structures were inspected for signs of sprainting and exposed sediments were searched for prints. There were no tracks leading in or out of the river channel, although there were suitable sprainting locations on the banks and on in-channel rocks.
- 3.35 The channel was lacking in aquatic life suggesting that the open stretch is insufficiently biologically productive to support fish, crayfish and consequently provide food for otter, although they could theoretically pass through the site. However, the culverted sections both upstream and downstream of the site are likely deterring otter movement and the lights and noise of the urban setting similarly act as a deterrent.

4. RECOMMENDATIONS

- 4.1 The site is characterised by hardstanding, developing scrub, rank grassland and tall herbs of low botanical diversity, fairly typical of brownfield areas and generally of low ecological value.

Recommendations

- 4.2 No further surveys or action is considered necessary with regards to otter, water vole, white-clawed crayfish and GCN. The proposed development does not present a direct or indirect threat to these species.
- 4.3 Because of the distance, and lack of ecological and hydrological connectivity between designated and non-designated wildlife sites and the site at Batley, there are no direct or indirect impacts predicted as a result of the re-development of the site.
- 4.4 Enabling works and the clearance of vegetation should take place outside the bird breeding season (the active nesting season is March-September inclusive). If this is not possible all features with the potential to support nests should be checked in advance by a qualified ecologist. If an active nest is located it should be cordoned off and remain undisturbed until young have fledged.
- 4.5 Good practice guidelines on erosion and pollution control, for example such as that provided by CIRIA in Environmental Good Practice on Site (Third Edition) (C692) (Audus *et al.* 2010) and Control of Water Pollution From Construction Sites (C532) (Masters-Williams *et al.* 2001) should be followed to prevent sediment release into Smithies Beck.
- 4.6 Himalayan balsam is present on site and is an invasive species listed in Schedule 9 of the Wildlife and Countryside Act 1981. Invasive non-native plants are species introduced to the UK that have the ability to spread causing damage to the environment, the economy and health. It is an offence under section 14(2) of the Act to 'plant or otherwise cause to grow in the wild' any plant listed in Schedule 9, Part II. This places a responsibility on the owner to prevent spreading Himalayan balsam. It is recommended that a Method Statement is developed to manage Himalayan balsam during and after the proposed development based on guidance on its control available in a number of publications e.g. Kelly *et al.* (2008), Environment Agency (2010), Defra (2013).

Enhancement Measures

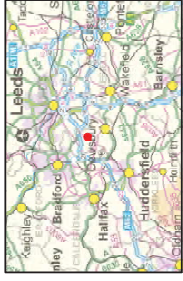
- 4.7 Figure 2 presents the proposed site layout. Enhancement measures are recommended in relation to this design.
- 4.8 Although developed areas in an urban setting are planned and organised spaces, they need not necessarily be ecologically impoverished. Wherever possible and appropriate, planting should be of native species and of local provenance, and accompanied by landscape management with objectives to maintain and enhance ecological value. This is most applicable to the areas of public open space of which there is a provision for 641m².
- 4.9 Development proposals do not involve an extension of culverting. The open channel habitat is part of the public landscaping and provides opportunities for increased aquatic and emergent biodiversity.

- 4.10 A significant proportion of the redeveloped area is proposed for gardens (landscaping – private). Although it would be the individual owners who decide how this space is used, it is recognised that the UK's 15 million gardens provide important habitats for wildlife and many declining species, such as the common frog (*Rana temporaria*), song thrush (*Turdus philomelos*) and western hedgehog (*Erinaceus europaeus*), can thrive in domestic gardens provided the right conditions are created (Natural England 2014). For traditional gardens, vegetation structure is more important than species composition in determining bird diversity. The presence of trees or shrubs with edible fruits, regardless of whether they are native species, is likely to be significant for fruit-eating species.
- 4.11 Other measures designed to attract and sustain wildlife includes the provision of bat and bird boxes. These can be added to the outside of buildings and trees and integrated into the design of buildings.
- 4.12 Bats are nocturnal and adapted to low-light conditions. Light falling on a bat roost exit point, regardless of species, will at least delay bats from emerging, which shortens the amount of time available to them for foraging. It is recommended that a lighting plan is reviewed by an Ecologist and follows good practice advice from organisations such as the Bat Conservation Trust (2014) and the Institute of Lighting Professionals (2011).

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FIGURES



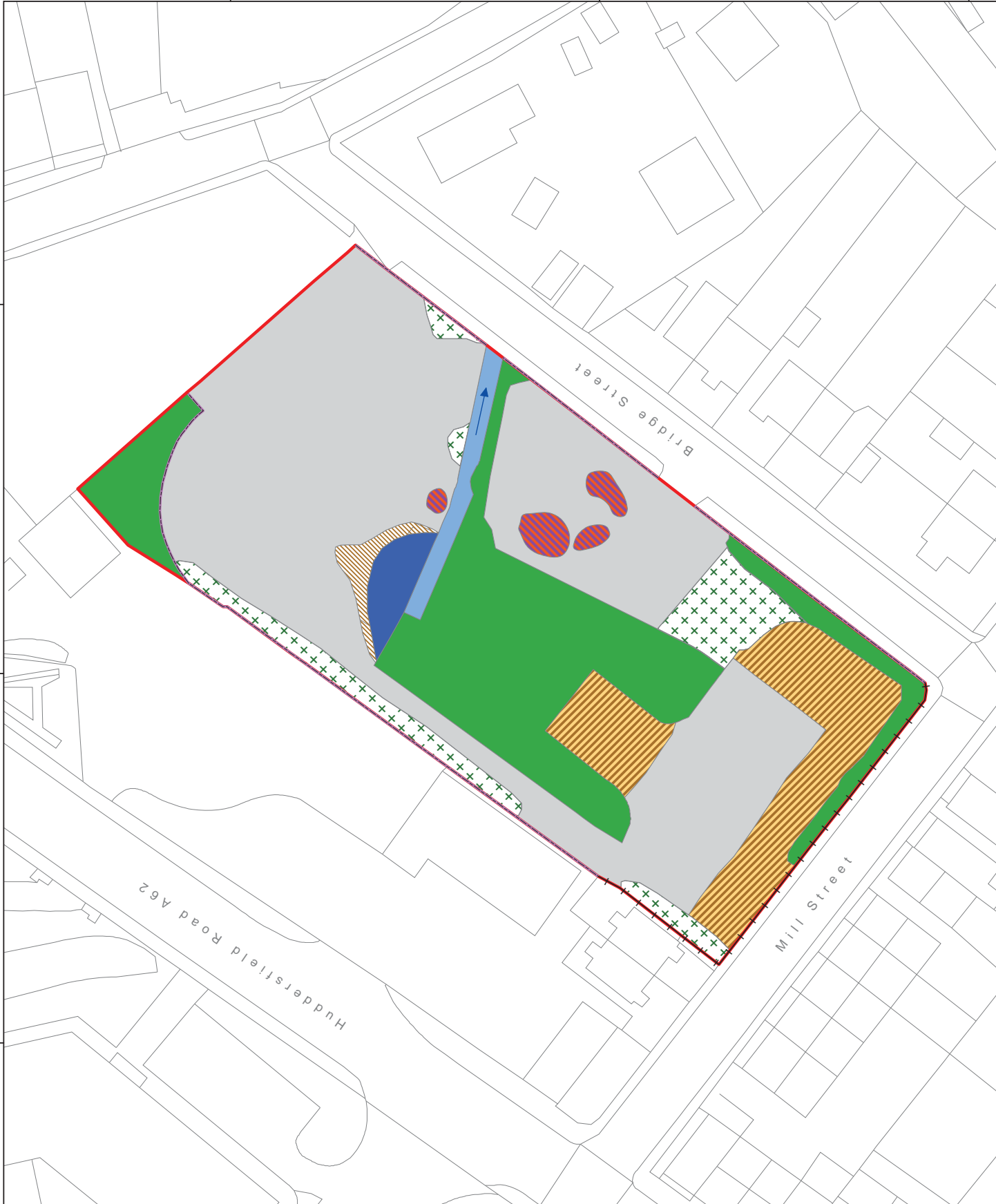
Legend

- Development site
- Habitat**
- Broadleaved woodland
- Scattered scrub
- Rank grassland and tall herbs
- Tall herbs/salix saplings/typha
- Himalayan balsam
- Channelised concrete watercourse
- Standing water
- Hardstanding
- Fence
- Wall

ISO A3

British National Grid
 Project Easting: 480000.0000
 Project Northing: 520000.0000
 Central Meridian: 0.000000
 Latitude of Origin: 53.000000

 Perry Anderson Associates Ltd. Parkes, 60 Park Road, Buxton, Derbyshire, SK17 6SN. Telephone: 01298 270285 Fax: 01298 270286		Drawing No: Figure 1 Date: 19/08/2014 Drawn By: CC Original: GJH Revision: 1.0
Discipline: Batley Mortar, Bistall Ecology		<h2 style="text-align: center;">Phase 1 Habitat Survey Results</h2>



PLATES



Plate 1. Edge of broadleaved woodland that borders Smithies Beck.



Plate 2. Sparse ground cover under woodland canopy.

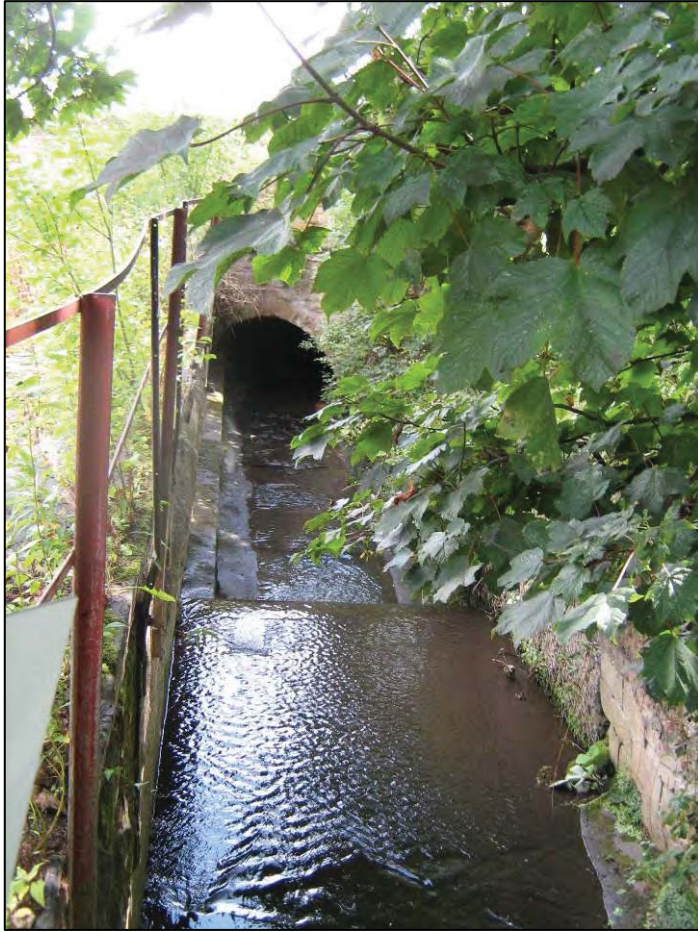


Plate 3. Smithies Beck flowing east into culvert. Concrete channel with vertical stone and concrete banks.



Plate 4. Pooled area on hardstanding adjacent to Smithies Beck with bulrush and great willowherb.



Plate 5. Area of hardstanding.



Plate 6. Rank grassland and tall herbs developing on edges of hardstanding and areas of bare ground.



Plate 7. Patch of Himalayan balsam.