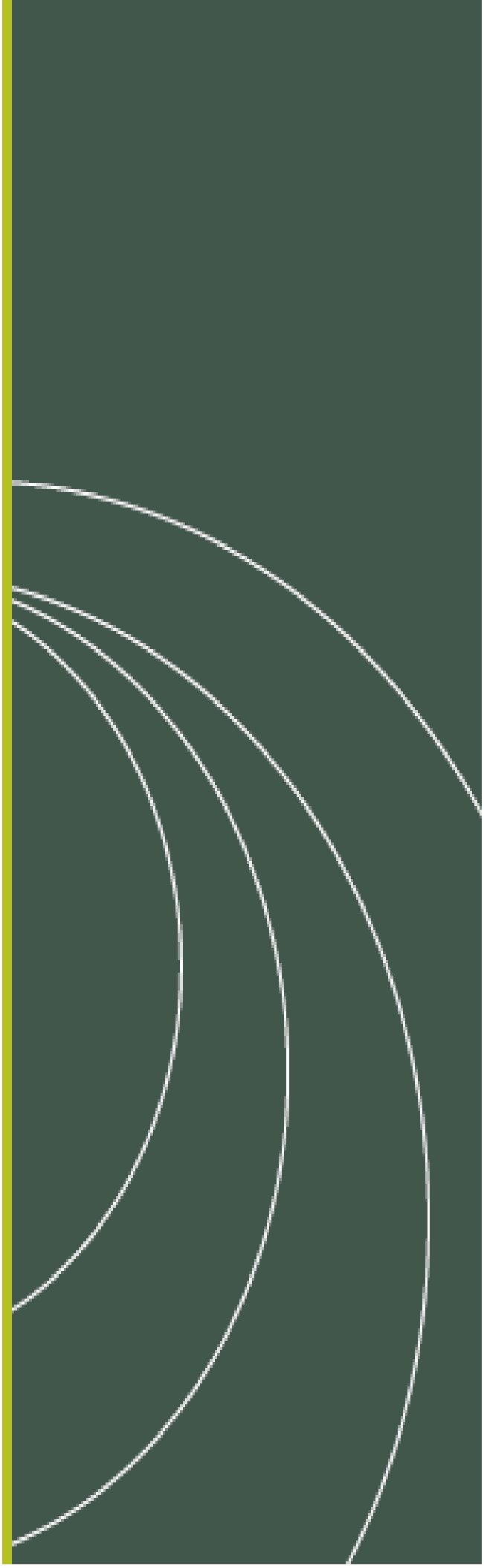
solum environmental

Renew Land Ltd

Ecological Scoping, Water Voles, Badgers, Breeding Birds and Bat Survey Report (excludes Appendices)

Former Forge Colour Works
Congleton Road
Biddulph

27th July 2012
SE411/01/LH



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APPENDICES : BOUND UNDER SEPARATE COVER

This report is based on survey data gathered in July 2012 in relation to the Former Forge Colour Works, Congleton Road, Biddulph and surrounding grounds.

1.0 SUMMARY

1.1 Solum Environmental Ltd was commissioned in June 2012 by Mr Lee Dawkin of Renewland Ltd, to undertake an ecological assessment (including surveys for water voles, badgers, breeding birds and bats) of the land at the former Forge Colour Works, Congleton Road, Biddulph, ST8 7SE; Grid Ref: SJ888598. Survey was commissioned to inform a planning application for the redevelopment of this site to create a residential area.

1.2 A previous planning application had been submitted in April 2012 for permission to erect industrial units and create a new vehicular access but this was turned down by Staffordshire Moorlands District Council in June 2012.

1.3 Desk survey, Extended Phase 1 Habitat, water vole, and badger surveys were undertaken by Dr David Hackett BSc PhD, Director and Laura Holmes BSc, Ecological Assistant at Solum Environmental, during daylight hours on 13th July 2012.

1.4 A breeding-bird survey was undertaken by Richard Castell and Laura Holmes, during dawn hours on 13th July 2012.

1.5 A bat emergence/activity survey was undertaken by Ged Ryan and Laura Holmes, during dusk hours on 11th July 2012.

1.6 The area within the red line boundary is the area which planning permission for a small number of residential properties will be applied for.

1.7 The area within the blue line boundary will be a 'protected area', which, it is understood, will not be disturbed by development.

1.8 No evidence of water voles was found during the water vole survey in the red line boundary or 50m up and down stream and no licensing will be required to disturb this species.

1.9 There is evidence that areas within both the red line and blue line boundaries are currently being used by badgers (*Meles meles*). A license to disturb badgers will be required to allow redevelopment of the area within the red line boundary.

1.10 A total of 12 bird species were recorded during the survey and the behaviour of a number of birds observed indicated the presence of tawny owl. Of these, 5 were confirmed or probable breeding species, with a further 8 species considered to be possibly nesting within the survey area.

1.11 Song thrush (*Turdus philomelos*) was the only recorded red-list species of high conservation concern. Bullfinch (*Pyrrhula pyrrhula*) was the only recorded amber-list species, of medium conservation concern. A nest of buzzard (*Buteo buteo*) containing young was found just beyond the northeast rd line boundary.

1.12 No bats were seen emerging from roosts within the red line boundary but three species of bat, common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*) and noctule (*Nyctalus noctula*), were detected feeding or commuting within the site.

1.13 There is limited floristic interest within the proposed re-development site. However, there is an exceptionally large alder to the eastern boundary and this and other boundary trees make significant contribution to the red-line-boundary site's wildlife value.

1.14 Japanese knotweed (*Fallopia japonica*) was recorded on this site. The spread of Japanese knotweed is prohibited under the Wildlife and Countryside Act (1981), and early treatment should be employed to eradicate the plant at this location.

2.0 INTRODUCTION

2.1 Background and Commission

2.1.1 Solum Environmental Ltd was commissioned in June 2012 by Mr Lee Dawkin of Renewland Ltd, to undertake an ecological assessment (including surveys for water voles, badgers, breeding birds and bats) of the land at the former Forge Colour Works, Congleton Road, Biddulph, ST8 7SE; Grid Ref: SJ888598. Survey was commissioned to inform a planning application for the residential redevelopment of this site.

2.1.2 A planning application had been submitted in April 2012 for permission to erect industrial units and create a new vehicular access, but this was turned down by Staffordshire Moorlands District Council in June 2012.

2.1.3 Desk survey, Extended Phase 1 Habitat, water vole, and badger surveys were undertaken by Dr David Hackett BSc PhD, Director and Laura Holmes BSc, Ecological Assistant at Solum Environmental ltd, during daylight hours on 13th July 2012.

2.1.4 A breeding bird survey was undertaken by Richard Castell and Laura Holmes, during dawn hours on 13th July 2012.

2.1.5 A bat emergence/activity survey was undertaken by Ged Ryan and Laura Holmes, during dusk hours on 11th July 2012.

2.2 Aims of the Survey

2.2.1 Specific aims of this survey were to:

- Provide information on the habitat of the site and its ecological value;
- Investigate if bats were roosting on the site;
- Investigate if badgers were present on the site;
- Investigate if birds were breeding on the site;
- Investigate if water voles were present on the site and
- Investigate other potential ecological constraints to planned re-development of this site.

2.3 Site Context

2.3.1 The specific survey area for this survey is shown within the red-line boundary at Plan 1 below. The area within the red line boundary is the area which planning permission for a small number of residential properties will be applied for. The area within the blue line boundary will be a 'protected area', which, it is understood, will not be disturbed by the proposed development. The site's wider location is illustrated at Plan 2 below.

2.3.2 The site within the red line boundary is approximately 1.75 acres. It is bounded by Congleton Road (A527) to the west, fences to the west and south and Biddulph Brook to the north.

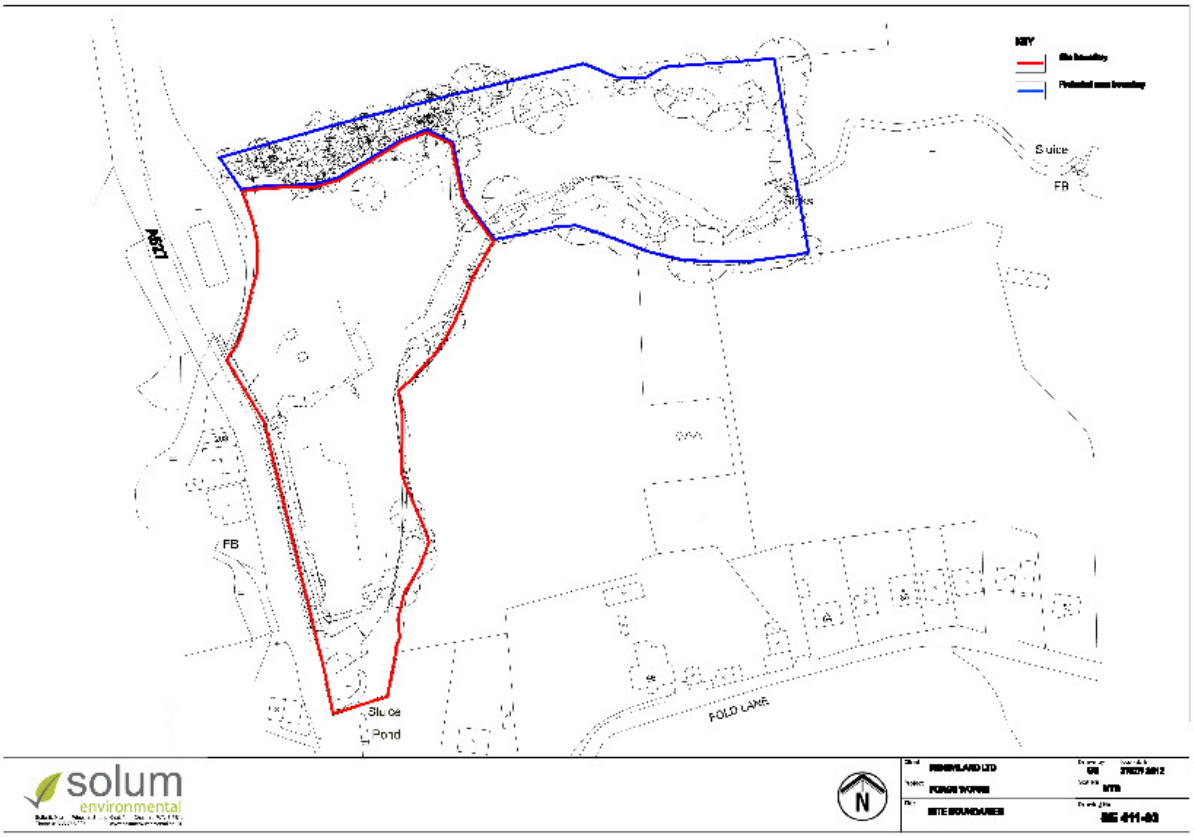
2.3.3 The area within the blue line boundary is approximately 3.7 acres. Biddulph Brook runs through this site. It is bounded by fences all round except along the edge of the site which adjoins the red line boundary area.

2.3.4 The area around the Forge Works site is mainly rural with scattered houses along the road. There are areas of woodland and grazed fields on both sides of the road from the site. Directly opposite the site is the entrance to Bailey's Wood, a Woodland Trust Nature Reserve.

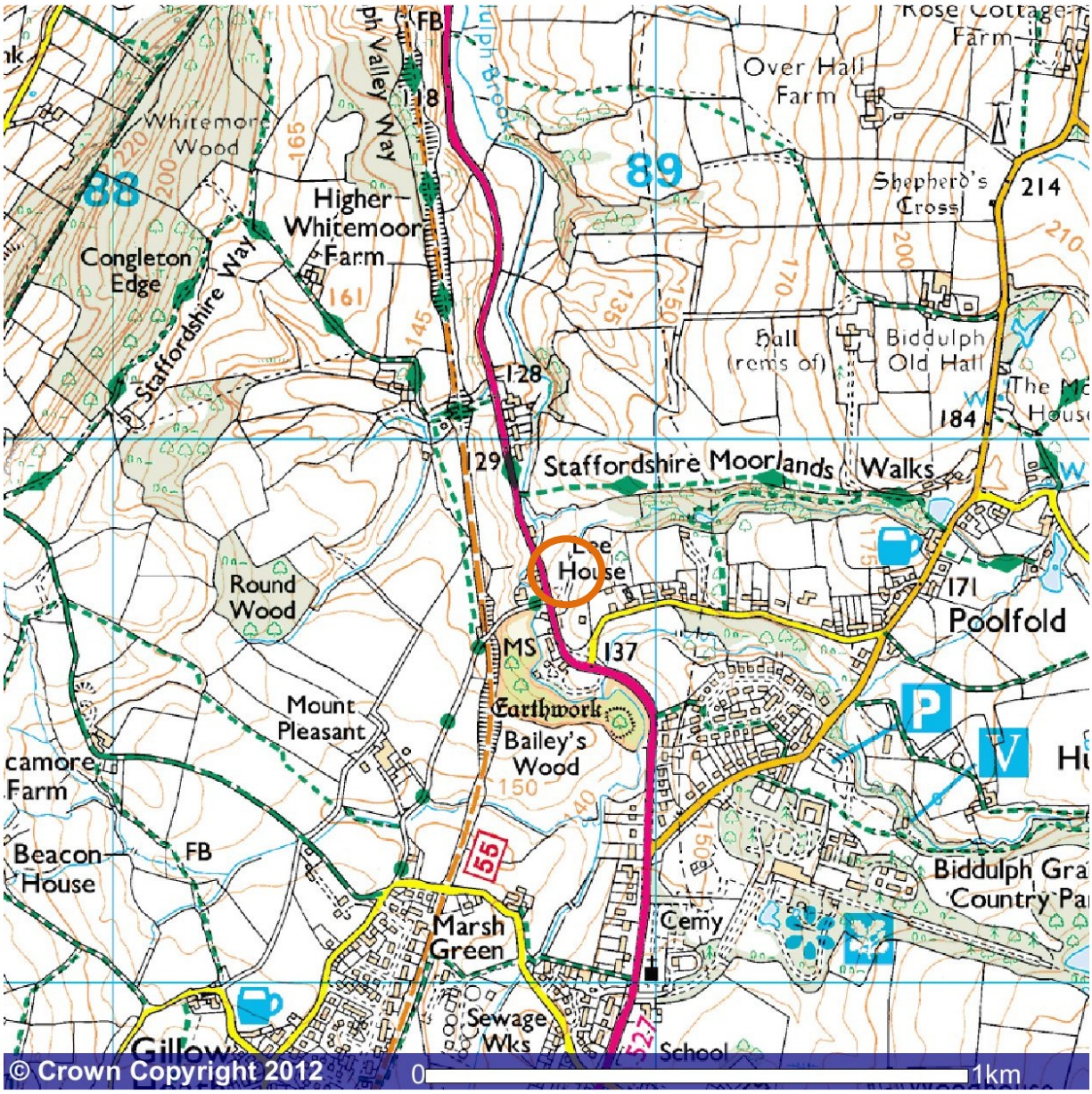
2.3.5 The grid reference for this site is SJ888598.

PLAN 1: SITE BOUNDARY

Red line indicates survey area, blue line, full extent of additional ownership boundary.



PLAN 2: SITE LOCATION



3.0 RELEVANT LEGISLATION & PLANNING GUIDANCE

3.1 **Priority Habitats and Species:** Under the terms of the Natural Environment and Rural Communities Act 2006, all public bodies are required to have regard to the conservation of biodiversity when carrying out their activities. This means that efforts must be made to conserve, in particular, areas of priority habitat and populations of priority species. There would be a presumption in the land-use planning process against any development that would result in loss to an area of priority habitat or harm to the population of any priority species.

3.2 **Vegetation:** The Wildlife and Countryside Act 1981 (as amended) lists plants which are statutorily protected. In relation to development these plants are rare and are not often encountered. The bluebell is scheduled, with commercial bulb-picking from the wild being prohibited. There is also a category of plants which it is an offence to introduce to the wild. This category includes Japanese knotweed, which is often found on brownfield sites. Care is needed to avoid spreading the species around the site during earthworks, and to ensure that any removal of infested soils off-site is to a licensed tip. Giant hogweed and Himalayan balsam are also listed in this category of invasive alien plant species. In addition the Ragwort Control Act came into force on 20 February 2004 and enables the Secretary of State to make a Code of practice to prevent the spread of common ragwort.

3.3 **Hedgerows:** As a priority habitat for conservation concern, hedgerows also receive further protection under the Hedgerow Regulations 1997. This law makes it illegal to remove most countryside hedgerows without permission granted by the Local Planning Authority. If a hedgerow is removed without permission, there may be an unlimited fine and the hedgerow may have to be replaced.

3.4 **Bats:** All species of bats are European Protected Species and their roosts are given a high degree of legal protection under the terms of the Wildlife and Countryside Act 1981 (as amended) and the Conservation (Natural Habitats &c) Regulations 1994. In addition all bats are the subject of a UK-wide Biodiversity Action Plan (BAP). This combined legislation gives bats, their breeding sites and resting places a high level of strict protection. In summary, this makes it illegal to recklessly or deliberately, kill, injure, capture or disturb bats or obstruct access to, damage or destroy bat roosts. It should be noted that, under this legislation, a bat roost is defined as any structure or place which is used by bats to shelter, breed or perch whilst feeding. As bats tend to reuse the same roosts, the roost is legally protected, whether the bats are present at the time or not.

The presence of bats at a development site should be identified as early as possible and, where bat roosts are present, a mitigation scheme needs to be developed prior to the start of works on site, following liaison with the local Natural England team, in order to minimise direct threats to bats and to compensate for their loss of habitat. A licence issued by Natural England in order to re-locate bats in advance of development, following the agreement of satisfactory mitigation measures and provided that the following three tests are met:

- that the licence application must demonstrably relate to one of the purposes specified in Regulation 44(2) – in the case of development, the purpose is defined as:
  "*Preserving public health or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment*";
- that there is no satisfactory alternative; and
- that the development will not be detrimental to maintaining the populations of bat species at a favourable conservation status in their natural range.

3.5 **Water voles:** From 6th April 2008, the water vole gained protection under the Wildlife and Countryside Act (1981) against being killed, injured, or taken from the wild. In addition the possession or selling of the water vole became an offence in addition to the pre-existing protection afforded its place of shelter. It is now necessary to obtain a licence from Natural England in order to re-locate water voles in advance of development, following the agreement of satisfactory mitigation measures.

3.6 **Badgers:** are protected from harm under the Protection of Badgers Act (1992). Under this act it is an offence:

- to kill, injure or take a badger, or to attempt to do so
- to use badger tongs in the course of killing or taking, or attempting to kill or take, any badger
- to kill or take a badger with a firearm which does not fall within the specifications laid down in the Act
- to dig for a badger
- to cruelly ill-treat a badger
- to possess or control a live badger
- to sell or offer for sale a live badger
- to mark, or attach any ring, tag or marking device to a badger
- to possess or control any dead badger, any part of one, or anything derived from one
- to interfere with a badger sett by (a) damaging a sett or any part of one; (b) destroying a sett; (c) obstructing access to or any entrance of a sett; (d) causing a dog to enter a sett; or (e) disturbing a badger when it is occupying a sett.

It is necessary to obtain a licence from Natural England in order to re-locate badgers in advance of development, following the agreement of satisfactory mitigation measures.

3.7 **Great Crested Newts:** Great crested newts are a European Protected Species (EPS) and given a high degree of legal protection under the terms of the Wildlife and Countryside Act 1981 (as amended) and the Conservation (Natural Habitats &c) Regulations 1994. It is important to identify the presence of GCNs prior to development and to identify any suitable habitats at the site in order to satisfy legal obligations regarding this species. Where a survey identifies the presence of GCNs at a development site, a mitigation scheme needs to be developed prior to the start of works on site, following liaison with the local Natural England team, in order to minimise direct threats to GCNs and to compensate for their loss of habitat. It is necessary to obtain a licence from Natural England in order to re-locate great crested newts in advance of development, following the agreement of satisfactory mitigation measures.

3.8 **Reptiles:** The four widespread species of reptile in the UK (ie common lizard, slow-worm, grass snake and adder) are all protected under the terms of the Wildlife and Countryside Act 1981 (as amended), however they are not fully protected under European law. This level of protection prohibits the intentional killing and injuring and trade of these reptiles. Where a survey identifies potential habitat for reptiles at a development site, a reptile survey may be needed prior to submission of a planning application and mitigation may be required by Natural England for any loss of reptile habitat as a result of a site's re-development.

3.9 **Breeding Birds:** Under the terms of the Wildlife and Countryside Act 1981 (as amended) it is an offence to disturb nesting birds, their nests or birds in the process of nesting. For certain species, eg feral pigeon, general licenses are available from Defra for an authorised person to lawfully carry out the actions outlined above providing that it is in the overriding interest of public health or air safety and that all other attempts to prevent the problem caused by the species have failed. In addition the RSPB and the UK's leading bird conservation organisations work together to regularly review the status of birds within the UK. A total of 246 species are assessed against a set of objective criteria to place each on one of three lists - green, amber and red – indicating an increasing level of conservation concern. These lists provide a tool for guiding conservation actions for birds in the UK and for setting priorities for action on individual species. The last review of these lists was completed in May 2009.

3.10 **Barn owls:** In addition to the protection awarded to all breeding birds, barn owls are listed on Schedule 1 of the Wildlife & Countryside Act 1981 (as amended), which gives them special protection under European law. Although it is not an offence to disturb a barn owl (at or near the nest) when genuinely unaware of the bird's presence, an offence can be deemed to have been committed should the defendant's action be classed as reckless. Disturbance can be deemed reckless when committed by someone who could be expected to know that the bird might be present but who failed to check - and in practice this category includes all developers. It is necessary to obtain a licence from Natural England in order to disturb barn owls.

3.11 **Brown hares**: priority species for conservation within the UK, with its own Biodiversity Action Plan, and an aim of doubling population size by 2010 (although numbers continue to decline). The brown hare is afforded

limited legal protection under the Ground Game Act (1880) and the Hares Protection Act (1911) with sale prohibited between March and July inclusive.

3.12 **PPS9: Biodiversity and Geological Conservation** requires local authorities not only to protect biodiversity and geodiversity within the planning process but, wherever possible, to enhance it. This means that planners are required to take into account protected species and habitat creation in considering all planning applications. In practice planners and Natural England take the approach that development offers an opportunity to enhance habitats for protected species. Prosecutions do take place where the habitats of protected species are damaged and where the necessary licences have not been sought, or where the terms of such licences have not been adequately followed.

3.13 **UK Biodiversity Action Plans:** The **UK Biodiversity Action Plan (UKBAP)** was established in response to the **Convention on Biological Diversity 1992**, signed by 150 members at the Rio Earth Summit, which aimed to promote sustainable development amongst all signatories. Specific action plans have been prepared for highly protected species. As well as a national Biodiversity Action Plan, local Biodiversity Action Plans identify species of note at local level throughout the UK. The site of this survey is covered by Staffordshire Biodiversity Action Plan.

4.0 METHODOLOGIES

4.1 Desk Survey Methodology

4.1.1 Desk study was carried out to identify any nearby national and local nature conservation designations, and any protected species records which already exist for this area.

4.1.2 The Natural England website was interrogated to determine whether any statutory or non-statutory conservation sites lay within 1km of the survey area, and the data supplied was subsequently assimilated and reviewed.

4.1.3 Ordnance survey and Google aerial maps of the site were used to identify any waterbodies lying within 500m of this survey site.

4.1.4 Ecological records were requested from the local ecological records centre (Staffordshire Ecological Record), for records of any protected species observed over recent years within a 1km radius of the site.

4.1.5 The National (UK) and local (Staffordshire) Biodiversity Action Plans (BAPs) were interrogated for protected habitats and species relevant to the site

4.2 Field Survey Methodology – Habitats

4.2.1 Extended Phase 1 Habitat (EP1H) survey was undertaken by Dr David Hackett BSc PhD MIEEM, CEnv, Director and Laura Holmes BSc, Ecologist at Solum Environmental, during daylight hours on 13th July 2012.

4.2.2 Survey was conducted following best practice methodology (JNCC, 1993, as amended by IEA 1995 and revised in 2010) and included visual inspection of the site and adjacent habitat. Habitat compartments around the site were noted, along with plant species observed. Target notes were recorded detailing any points of ecological value and corresponding photographs were taken throughout the survey.

4.2.3 Note was made of any invasive plant species observed around the site.

4.3 Field Survey Methodology – Water Voles

4.3.1 Water vole survey was undertaken by Dr David Hackett and Laura Holmes at Solum Environmental, during daylight hours on 13th July 2012.

4.3.2 Survey was conducted following best practice methodology given in the Water Vole Conservation Handbook (English Nature et al 2006 2nd Ed.) Survey was carried out from within the water and included a two metre width of bank from the water's edge.

4.3.3 Signs of water vole or other fauna were recorded along the length of stream running along the northern boundary and for 50 metres beyond the end of the boundary. Vegetation types and other major physical features were also noted.

4.4 Field Survey Methodology – Badgers

4.4.1 The badger surveys were undertaken by Dr David Hackett and Laura Holmes during daylight hours on 13th July 2012.

4.4.2 The entire site was searched for badgers using the standard methodology as outlined by Harris, Cresswell and Jeffries (1991).

4.4.3 Evidence of badgers searched for included:

- Setts;
- Latrines;
- Prints;
- Paths through vegetation;
- Hairs caught on fencing, sett entrance etc;

- Feeding remains and/or snuffle holes;
- Scratching posts.

4.4.4 Where signs of badgers were observed or potential habitat discovered, photographs were taken and target notes recorded on the site plan.

4.5 Field Survey Methodology – Breeding Birds

4.5.1 The site was surveyed on 13th July (06:15 – 07.20 hrs) following the Common Bird Census (CBC) methodology. To effectively survey Biddulph Brook at the northern end of the site 15 minutes was spent at the eastern and western ends in an attempt to record species typical to this habitat, e.g. Dipper, Grey Wagtail and Kingfisher.

4.5.2 A route was followed that approached within 50 metres of all points within the survey area. During the breeding season many birds, especially passerines (small songbirds), mark their territory by singing, displaying and periodically clashing with rival neighbours of the same species. By marking onto a map the location of these activities on each visit distinct clusters should begin to appear, each cluster representing an individual territory.

4.5.3 Observation of breeding behaviour was compared against the BTO Atlas breeding codes in an attempt to determine the breeding status (confirmed, possible or probable) of each species recorded. Where breeding activity of any species listed under Schedule 1 of the W&C Act was suspected observations were made from a suitable distance to prevent disturbance to the nesting birds.

4.6 Field Survey Methodology – Bats

4.6.1 The bat surveys were undertaken by Ged Ryan (licensed bat surveyor) assisted by Laura Holmes (ecological assistant). Both are experienced bat surveyors and members of Cheshire Bat Group.

4.6.2 The dusk emergence/activity survey was carried out on 10th July 2012.

4.6.3 The survey followed best practice guidelines as set out by the Bat Conservation Trust, Natural England and JNCC.

4.6.4 During the emergence/activity surveys, surveyors used dual-mode, tuneable heterodyne and frequency bat detectors (BatBox Duets).

4.6.5 In line with BCT recommendations the dusk survey began half an hour before dusk and continued for two hours after dusk. Any bats seen or heard were recorded along with their location and direction of flight.

4.7 Field Survey Methodology - Other Protected Species

4.7.1 Incidental records of any other protected species observed were noted. This included birds, mammals and plants. The site was actively surveyed for signs of these species.

4.8 Timing of Field Surveys in Relation to Optimal Seasons

4.8.1 The breeding-bird survey was conducted in mid-July, at a time when many species have completed their breeding cycle for the year, and/or have reduced song output and may be in moult – a time when they are vulnerable to predators and typically remain hidden and quiet making them difficult to record under normal survey conditions.

4.8.1 All other surveys were carried out in optimal season.

4.9 Survey Team Members

4.9.1 Dr David Hackett PhD MIEEM CEnv is a Director of Solum Environmental. He is a highly experienced ecologist with over 15 years of professional ecological survey experience. David is a full member of the Institute of Ecology and Environmental Management and a Chartered Environmentalist, a member of

Cheshire Bat Group, Cheshire Wildlife Trust and the RSPB.

4.9.2 Laura Holmes is ecological assistant at Solum Environmental Ltd. She has a first class honours degree in Biological Sciences and has worked in the ecological sector for 6 years for Cheshire Wildlife Trust, The NBN and rECOrd, the Cheshire local biodiversity records centre. As a professional ecologist, she is experienced in the identification of mammals, amphibians, reptiles and plants.

4.9.3 Ged Ryan is a highly experienced bat specialist. He has held his licence (No. 20110216) and been a member of Cheshire Bat Group since 1994. He is a voluntary bat warden for Natural England and is a member of The Bat Conservation Trust and The Mammal Society.

4.9.4 Richard Castell BSc has over 30 year's field experience studying the breeding ecology of European birds. He has surveyed with Solum Environmental for over four years and is also a highly-experienced general-species ecologist.

4.10 Survey Constraints

4.10.1 For accurate territory mapping the Common Bird Census methodology typically requires 4-10 visits to be made during the breeding season. Only 1 (late season) visit was made to the survey area so territory mapping was not possible and limited the effectiveness of determining breeding status.

4.10.2 With the exception of the site boundaries, the vegetation on site had recently been stripped back to the original hard standing – this activity may have displaced species. To compensate for this any species heard or seen within 50 m of the survey area were also recorded if it was considered they may have been present before the clearance work.

4.10.3 No night survey was conducted to record nocturnal or crepuscular species.

4.10.4 Between the bat survey on 10th July and the other surveys on 13th July an area of low scrub was cleared within the footprint of the former factory site to facilitate access. This may have obscured signs of species such as badgers and ground nesting birds.

4.10.5 No other constraints to survey were identified.

5.0 SURVEY RESULTS

5.1 Desk Survey Results

5.1.1 The site check returned the following sites of local, national or international protected status within 2km of the survey site:

- Gannister Quarry Site of Special Scientific Interest (SSSI)
- Biddulph Grange Country Park
- Biddulph Valley Way Local Nature Reserve

The results are given in Appendices 1 and 2.

5.1.2 The following sites are locally designated:

- Whitemore Wood Site of Biological Importance (SBI)
- Congleton Edge Site of Biological Importance
- Whitemore Farm (east of) Site of Biological Importance and an area of Ancient and semi-natural woodland on the Ancient Woodland Inventory
- Congleton Edge (south of) Site of Biological Importance and an area of Ancient and semi-natural woodland on the Ancient Woodland Inventory
- Round Wood Site of Biological Importance
- Bailey's Wood Ancient and semi-natural woodland on the Ancient Woodland Inventory
- Spring Wood Biddulph Grange Country Park Ancient and semi-natural woodland on the Ancient Woodland Inventory

5.1.3 Congleton Edge SBI is an area of young birch-rowan wood on the site of formerly rough ground, with scattered trees. There is some oak, including saplings.

5.1.4 Whitemore Farm SBI is a steep sided broadleaved woodland dominated by sycamore and birch, situated on the Cheshire border south of Congleton. Two small streams feed the Biddulph Brook which runs along the western boundary of the woodland.

5.1.5 Congleton Edge (South of) SBI is a small area of wettish woodland dominated by alder.

5.1.6 Relevant local records for this area were obtained from Staffordshire Ecological Record, and are given in Appendix 4.

The following protected species were found within 1km of the site over the past ten years:

Latin name	Common name	Year recorded	Protection
Alcedo atthis	Common Kingfisher	2008	Highest degree of legal protection under the Schedule 1 of the Wildlife and Countryside Act 1981
Falco peregrinus	Peregrine Falcon	2010	Highest degree of legal protection under the Schedule 1 of the Wildlife and Countryside Act 1981
Turdus iliacus	Redwing	2009	Wildlife and Countryside Act 1981
Turdus pilaris	Fieldfare	2011	Wildlife and Countryside Act 1981
Myotis sp.	Myotis bat species	2010	All bat species in the UK are legally protected, both by domestic and international legislation.
Myotis nattereri	Natterer's bat	2010	All bat species in the UK are legally protected, both by domestic and international legislation.
Pipistrellus pygmaeus	Soprano pipistrelle	2010	All bat species in the UK are legally protected, both by domestic and international legislation.

Plecotus auritus	Brown long-eared bat	2010	All bat species in the UK are legally protected, both by domestic and international legislation.
Meles meles	Eurasian badger	2011	Badgers and their setts are protected under the Protection of Badgers Act 1992.

5.2 Field Survey Results – Site Description

5.2.1 The site has been divided into the red line boundary area which is to be developed and the blue line boundary area which is to be left as a 'protected area'. The Extended Phase One Habitat survey was only carried out within the red line boundary area.

5.2.2 A map of the existing habitats within the red line boundary is found at Appendix 5. This site is approximately 1.7 acres and comprises hardstanding in the centre with encroaching scrub vegetation and boundaries of hedgerow and trees. Biddulph Brook runs along the northern end of the site.

5.2.3 There were buildings on this site in the past but these were demolished many years ago. The footprint of the buildings can still be seen by the differing ground levels throughout the site. The site was a colour works and traces of dyes can still be seen in patches on the hardstanding areas.

5.2.4 It was noticed that between 10th and 13th July 2012 there had been works done on the site as the emerging vegetation had been cleared from much of the areas of hardstanding. Leaf litter and wood chippings from this work were clearly visible along the banks on the eastern side of the site and tyre tracks from heavy work vehicles were visible in the mud.

5.3 Field Survey Results – Habitats

5.3.1 The following habitats were recorded within the survey area and immediately adjacent to it. These habitats are mapped at Appendix 5:

- J4 Hardstanding
- A2.2 Scattered scrub
- C3.1 Tall ruderals
- A1.1 Broad-leaved Woodland
- J2.1.2 Intact species-poor Hawthorn hedgerow
- J2.5 Retaining wall
- G2 Stream

5.4 Field Survey Results – Species List and Target Notes

5.4.1 The following plant species were noted within the survey area:

Common Name	Scientific name
Woodland along Congleton Road from the gate to Biddulph Brook	
Lawson's cypress	*Chamaecyparis Lawsoniana*
Alder	*Alnus glutinosa*
Goat willow	*Salix caprea*
Downy birch	*Betula pubescens*
Cleavers	*Galium aparine*
Bramble	*Rubus fruticosus agg.*
Jack by the hedge	*Alliaria petiolata*
Red campion	*Silene dioica*
Ivy	*Hedera helix*
Foxglove	*Digitalis purpurea*
Dogwood	*Cornus sanguinea*
English oak	*Quercus robur*

Ash	*Fraxinus excelsior*
Silver birch	*Betula pendula*
Riverbank	
Sedge species	*Carex sp.*
Ivy	*Hedera helix*
Male fern	*Dryopteris filix-mas*
Herb Robert	*Geranium robertianum*
Hogweed	*Heracleum sphondylium*
Common nettle	*Urtica dioica*
Pendulous sedge	*Carex pendula*
Harts tongue fern	*Phyllitis scolopendrium*
On the bank	
English oak	*Quercus robur*
Alder	*Alnus glutinosa*
Holly	*Ilex aquifoilium*
Ivy	*Hedera helix*
Herb Robert	*Geranium robertianum*
Native bluebell	*Hyacinthoides non-scripta*
Male fern	*Dryopteris filix-mas*
Female fern	*Athyrium filix-femina*
Pendulous sedge	*Carex pendula*
Dog's mercury	*Mercurialis perennis*
Raspberry	*Rubus idaeus*
Bramble	*Rubus fruticosus agg.*
Small leaved elm	*Ulmus minor var. minor*
Common nettle	*Urtica dioica*
Fern species	*Dryopteris sp.*
Harts tongue fern	*Phyllitis scolopendrium*
Hawthorn	*Crataegus monogyna*
Cleavers	*Galium aparine*
Protected area (blue boundary)	
Red campion	*Silene dioica*
Hogweed	*Heracleum sphondylium*
Bramble	*Rubus fruticosus agg.*
Herb Robert	*Geranium robertianum*
Hemlock	*Conium maculatum*
Cleavers	*Galium aparine*
Soft rush	*Juncus effusus*
Broad-leaved dock	*Rumex obtusifolius*
Common nettle	*Urtica dioica*
Opposite-leaved golden leaved saxifrage	*Chrysosplenium oppositifolium*
Elder	*Sambucus nigra*
Native bluebell	*Hyacinthoides non-scripta*
Wavy hair grass	*Deschampsia flexuosa*
Raspberry	*Rubus idaeus*
Common hair moss	*Polytrichum commune*
Field horsetail	*Equisetum arvense*
Dandelion	*Taraxacum officinale*
Area of emerging scrub	
Bramble	*Rubus fruticosus agg.*
Field horsetail	*Equisetum arvense*

Ribwort plantain	*Plantago lanceolata*
Yorkshire fog	*Holcus lanatus*
Common knapweed	*Centaurea nigra*
Rough Hawkbit	*Leontodon hispidus*
Oxeye daisy	*Leucanthemum vulgare*
Broom	*Cytisus scoparius*
Hard rush	*Juncus inflexus*
Bugle	*Ajuga reptans*

5.4.2 The following habitat target notes were recorded for this site:

- 1 – Area of Japanese Knotweed
- 2 – Mature alder tree

5.4.3 These target notes are mapped at Appendix 5 with corresponding photographs provided at Appendix 6.

5.5 Field Survey Results – Water Voles

5.5.1 No evidence of water voles was found during the water vole survey in the red line boundary or 50m up and down stream.

5.5.2 The habitat is not ideal for water voles as the water is very fast flowing and prone to rises of level. Additionally, most of the stream is retained within stone and brick walls within deep cutting under dense tree cover (see Appendix 6).

5.5.3 It was noted that a section of the retaining wall is crumbling (see Appendix 6) and this will need attention soon before the wall gives way and erosion undermines the banks.

5.6 Field Survey Results – Badgers

5.6.1 There is evidence that areas within both the red line and blue line boundaries are currently being used by badgers.

5.6.2 The following badger target notes were recorded:

1. Active badger sett 1 in red line boundary
2. Paths leaving sett 1
3. Active badger sett 2 in red line boundary
4. Paths leaving sett 2
5. Latrine near badger sett 2
6. Latrine near boundary fence along Congleton Road
7. Badger path going under boundary fence along Congleton Road
8. Path into protected area (blue line boundary)
9. Series of active badger setts including the main sett numbered sett 3 in blue line boundary
10. Paths from sett 3
11. Active sett 4 in blue line boundary
12. Paths from sett 4
13. Paths along riverbank
14. Path under fence to adjoining field on east side
15. Evidence of human disturbance in the protected area (blue line boundary)

5.6.3 These target notes are mapped at Appendix 7 with corresponding photographs provided at Appendix 6.

5.6.4 There is evidence that the badgers are crossing the site from the setts at the rear of the site to the fence along Congleton Road where they are going under the fence and into the road. It is likely they

are crossing Congleton Road at this point and going into Bailey's Wood as there is also evidence of badger activity in this area.

5.6.5 The area of badger setts within the blue line boundary is very significant. The habitat is ideal for badgers and the size of the setts indicate they may have been in residence for several decades.

5.7 Field Survey Results – Breeding Birds

5.7.1 A total of 12 species were recorded during the survey but the behaviour of some of the birds on site indicated the presence of tawny owl in one area of the site. Of these 12 species, 5 were confirmed or probable breeding species; a further 8 species are considered to be potentially nesting within the survey area. The majority of species using the site were recorded in the hedgerows and trees around the site boundary as little nesting habitat remained across the centre of the site. Appendix 8 shows the field recording made during the survey visit.

5.7.2 Song thrush (*Turdus philomelos*) was the only recorded red-list species of high conservation concern, having suffered either a rapid (≥50%) decline in UK breeding population or a rapid (≥50%) contraction of UK breeding range over last 25 years. Bullfinch (*Pyrrhula pyrrhula*) was the only recorded amber-list species, of medium conservation concern, having suffered either a moderate (25-49%) decline in UK breeding population or a moderate (25-49%) contraction of UK breeding range over last 25 years. A nest of buzzard (*Buteo buteo*) containing young was found just beyond the northeast boundary.

5.7.3 Table 1 shows the full list of species recorded during the survey. For each species this table also includes its breeding status and its conservation status in the UK.

TABLE 1: FORMER FORGE COLOUR WORKS BREEDING BIRD SPECIES LIST

Common Name	Scientific Name	Code	13-Jul-12	Br. Status	UK Cons. Status
Buzzard	*Buteo buteo*	BZ	NY	Confirmed	Stable
Wood Pigeon	*Columba palumbus*	WP	F	Possible	Stable
Tawny Owl	*Strix aluco*	TO	?	Possible	Stable
Jackdaw	*Corvus monedula*	JD	F	Possible	Stable
Blue Tit	*Cyanistes caeruleus*	BT	A	Probable	Stable
Chiffchaff	*Phylloscopus collybita*	CC	S	Possible	Stable
Blackcap	*Sylvia atricapilla*	BC	S	Possible	Stable
Wren	*Troglodytes troglodytes*	WR	S/A	Probable	Stable
Blackbird	*Turdus merula*	B.	P/A	Probable	Stable
Song Thrush	*Turdus philomelos*	ST	S	Possible	>50% decline
Robin	*Erithacus rubecula*	R.	H	Possible	Stable
Greenfinch	*Carduelis chloris*	GR	S	Possible	Stable
Bullfinch	*Pyrrhula pyrrhula*	BF	P	Probable	25 - 49% decline

5.8 Field Survey Results – Bats

5.8.1 Surveyors walked transects around the red line boundary site. The survey area did not include the blue line boundary area.

5.8.2 No bats were seen emerging from roosts within the red line boundary. There is no suitable bat roost habitat within the red-line boundary.

5.8.2 In total three separate bat species were detected – common pipistrelle (*Pipistrellus pipistrellus)*, soprano pipistrelle (*Pipistrellus pygmaeus)* and noctule (*Nyctalus noctula),* all of which are Staffordshire Biodiversity Action Plan Species. There was also a possible *Myotis* species but this is unconfirmed as the bat was not seen and the signal was weak and fleeting.

5.8.3 The bats were commuting over the site and on some occasions feeding but there were very few insects

in the area. There is good foraging habitat in the area near the site such as Bailey's Wood, Biddulph Grange Country Park and the woodland within the protected (blue line boundary) area.

5.8.4 A possible Daubenton's bat (*Myotis daubentonii*) roost site was identified under the bridge where Biddulph Brook goes under Congleton Road. The habitat within the site was not suitable for Daubenton's bats to feed along because the brook is too fast flowing between the bridge and along the red line site boundary.

5.8.5 Survey record sheets for all surveyors are given in Appendix 9. Bat flight path plans are given in Appendix 5.

5.9 Field Survey Results – Other Species

5.6.1 There was no evidence to suggest that any other protected species were present within the survey area.

5.6.2 Rabbit holes were observed around the site.

6.0 EVALUATION AND RECOMMENDATIONS

6.1 Habitat

6.1.1 The centre of the site comprised largely scattered scrub (and ruderals. However, the northern and eastern boundaries contain a number of mature native trees, one of which, a very large alder, is exceptional in its size and age.

6.1.2 The line of hedgerow (which was not species rich) and trees provide travelling routes for bats and feeding and nesting habitat.

R1 The hedgerow and mature trees to the eastern and northern boundary should be retained and protected following methodology set out in BS5837 (2005) Trees in Relation to Construction.

R2 Any gaps in the hedgerow or line of trees on the perimeter of the site should be planted with native trees and shrubs to provide green corridors/commuting and feeding routes for wildlife.

6.1.3 Japanese knotweed (*Fallopia japonica*) was recorded at the southern-most section of the site. It is an offence to allow the spread of Japanese knotweed into the wild under the Wildlife and Countryside Act (1981).

R3 There should be early treatment of Japanese knotweed, following best practice provided by the Environment Agency, to eradicate the plant from the site. Herbicide spray at the end of the growing season, in August/September, is the most effective means, but repeated application throughout the following season(s) may be required.

6.2 Water Voles

6.2.1 The survey found no evidence of water voles along the length of the brook surveyed. The habitat observed was largely deep valley, retained with stone and brick walls, and generally unsuitable for water voles. The brook emerged from a pipe at point at which it traverses the top of the site. Some of this retaining structure was collapsing and the watercourse naturalising (see Appendix 6). While this would improve habitat for wildlife, it currently threatens to undermine the steep banks and the northern edge of the survey area.

R4 No further survey is thought necessary and no licence should be required.

6.3 Badgers

6.3.1 The main badger sett observed, to the north-east of the survey area, was a very significant structure, with several entrances in the steep bankside over a distance of approximately 30 m, and badgers are therefore likely to have been at this location for several decades. Two outlying setts were observed in the banking to the east of the red-line survey area. Any redevelopment of the site will, therefore, require licensing to allow disturbance within 30 m of these active setts. Permission to disturb badgers will not be granted between December and June.

R5 A licence to disturb badgers will have to be obtained from Natural England to allow development of the survey area.

6.3.2 A badger travelling route crosses the most southerly section of the site, as badgers travel to foraging habitat in woodland to the west of the site.

R6 Consideration should be given to accommodating badger paths in the development layout and minimising risks to badgers crossing the road at this point through careful design.

R7 There is relatively easy access to the area of the main and annexe badger setts. Consideration should therefore be given to the long-term conservation of this 'protected area' for badgers. It is the surveyor's experience that such areas can be successfully protected when property owners are actively involved in the conservation of adjacent 'wildlife areas' and help 'police' activity by observation and reporting; this option should therefore be examined in any proposed redevelopment of the former factory site.

6 Breeding Birds

6.4.1 The typical nesting season for birds in Britain runs from mid-March to late-August though several species, e.g. mallard, collared dove, long-tailed tit, mistle thrush and robin, may start nesting in January or February; woodpigeon may be found nesting between mid-February and early December, collared dove from early January.

R8 Any planned vegetation / tree clearance works should be timetabled to occur outside this time-bracket. Similar caution should be employed for any works on masonry or brickwork (including revetment walls) that may also provide nesting sites. If an active nest is discovered at any time work in the immediate vicinity must cease and guidance sought for a suitable stand-off distance from the nest.

6.4.2 The tall conifer hedge along the western boundary of the site provides nesting cover for early- and late-nesting species, e.g. collared dove and woodpigeon. The height and cover provided by this hedge prevents it being checked effectively for active nests.

R9 Any pruning/felling work must be very carefully timetabled.

6.4.3 The retention of existing habitat such as the boundaries of the site would be of enormous ecological value and would provide connectivity between retained habitat to the north and south of the proposed development. Relatively few cavity-nesting species use the site, but the provision of nest boxes would create additional breeding sites for these, most notably the tit species.

R10 Boxes targeting starling and house sparrow (both red-list species) could be attached to trees or to or in the brickwork of any buildings proposed in future developments. The addition of a suitably designed nest box for dipper (also used by grey and pied wagtails) beneath the road bridge at the west of the site would be worthwhile as suitable nest sites is often the limiting factor in the distribution of these species and is therefore recommended.

6.4 Bats

6.4.1 The survey suggests bats are unlikely to be roosting on the site within the red line boundary as there is little suitable habitat. No bats were seen emerging from roosts on site during the dusk survey however the timing of the first bats detected suggest they are roosting close by.

R11 No further survey is thought necessary and no licence should be required.

6.5.2 Four species of bat are feeding in the area and using the site as a commuting route. There is good foraging habitat in the area near the site, such as in Bailey's Wood, opposite the site, and Biddulph Grange Country Park close by. The latter has water and wooded areas (and has had records of bats roosting there in the last ten years). There were very few insects in central area and edges by field but more insects were found near the protected area (blue line boundary) and in the woodland fringe along the boundary with Congleton Road and this is where most bats were detected.

R12 Maintain the woodland in the 'protected area' and the woodland fringe along Congleton Road.

R13 Consider planting bat-friendly native species when landscaping the developed site. A list of bat-friendly plants is given in Appendix 10.

6.5.3 There is possible Daubenton's bats (*Myotis daubentonii*) roosting habitat under the bridge at the north- western end of the site and foraging habitat further along stream on either side of the road (although it is too fast flowing for feeding between the bridge and along the red line site boundary). If any works are planned to this bridge then a bat survey is recommended prior to work commencing to ensure no bats are roosting here and to inform licence application to Natural England if they are.

R14 Survey the bridge for Daubenton's bats should work on or around the bridge be necessary.

6.5 Other Protected Species

6.6.1 As no signs of other protected species were found, the proposed redevelopment should not require any further measures to conserve protected species.

R15 No further survey is thought necessary and no further licences should be required for works to the site. This, however, should be reviewed if proposals are delayed until 2013.

7.0 CONTACTS, REFERENCES AND BIBLIOGRAPHY

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