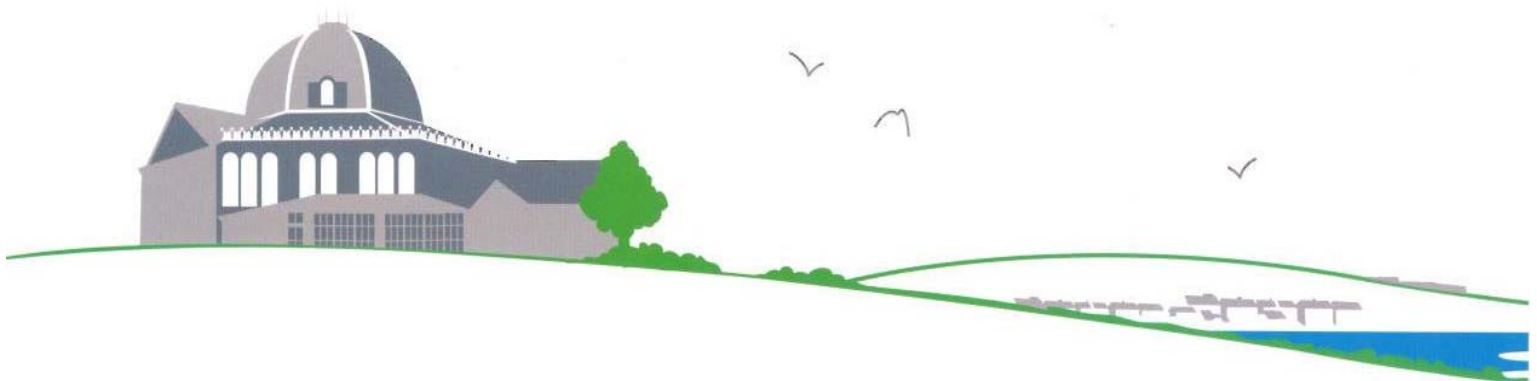




CHATSWORTH SETTLEMENT TRUSTEES
LAND OFF WORKSOP ROAD, MASTIN MOOR
EXTENDED PHASE 1 SURVEY REPORT



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EXTENDED PHASE 1 SURVEY REPORT


Penny Anderson Associates Limited
'Park Lea'
60 Park Road
Buxton
Derbyshire
SK17 6SN

Project Manager
Sarah Ross BSc (Hons), PhD, MCIEEM, CEnv (Associate Director)

Authors
Sarah Ross BSc (Hons), PhD, MCIEEM, CEnv (Associate Director)
Caroline Boffey BSc (Hons), ACIEEM (Ecologist)

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

Signed:  _____

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1. INTRODUCTION

Background

Purpose

- 1.1 The purpose of this Report is to explain and support an outline planning application for residential development of land at Mastin Moor (Chesterfield) as submitted to Chesterfield Borough Council (CBC) as the local planning authority (LPA) concerned. It outlines the context within which the application is made and provides a detailed assessment of the main ecological considerations, together with a reasoned justification in support of the development.

Structure of Report

- 1.2 This Report addresses the following:
- Context;
 - The Site and surrounding area;
 - Development proposal;
 - Planning policy considerations;
 - Key benefits;
 - Assessment of ecology; and
 - Summary and conclusion.
- 1.3 The Report concludes that the following ecological considerations are relevant to the Site and further surveys are recommended in relation to bats, badger (*Meles meles*) and breeding birds to inform Masterplan design:
- Potential impacts upon bat roosting (within several identified trees) and foraging/commuting resources;
 - Impact upon breeding bird assemblage;
 - Impact upon badger foraging resources and their accessibility;
 - Potential impact upon local population of grass snake (*Natrix helvetica*);
 - The presence of and need for the consideration of two non-native, invasive plant species - Japanese knotweed and Himalayan balsam - on Site;
 - Retention or re-creation of hedgerows and semi-improved grassland road verges; and
 - Retention of the stream and adjacent woodland with an undeveloped buffer zone.

Other Reports

- 1.4 The proposal has been informed by a range of technical evidence. As such, the planning application comprises a suite of information which includes:
- Supporting Planning Statement;
 - Design and Access Statement;
 - Landscape and Visual Impact Assessment;

- Transport Assessment;
- Flood Risk Assessment;
- Ecology Surveys (Extended Phase 1 Habitat, Bat, Bird and Badger Surveys);
- Archaeological Assessment;
- Geo-Environmental Assessment;
- Noise and Vibration Assessment;
- Air Quality Assessment; and
- Topographical Survey.

Author

- 1.5 This Report has been prepared by Penny Anderson Associates Ltd ('PAA'). PAA is a specialist ecological consultancy with extensive experience in ecology survey, evaluation and assessment. Our contact details are as follows:

Penny Anderson Associates Ltd

Park Lea, 60 Park Road, Buxton, Derbyshire, SK17 6SN

T: 01298 27086

Email: enquiries@pennyanderson.com

2. CONTEXT

Applicant

- 2.1 The land subject of this application is owned and managed by Devonshire Property (MM) Limited (DPMML). DPMML is part of the Devonshire Group.
- 2.2 The Devonshire Group, known technically as the Chatsworth Settlement Trustees (CST), owns the land and estates of the Dukedom of Devonshire. Its main estates are in the vicinity of Chatsworth in Derbyshire and Bolton Abbey in North Yorkshire. It also runs visitor and other businesses on these estates, including hotels; retail and catering outlets; forestry; livestock and arable farming. It employs over 600 full time employees. It is committed to quality in all its activities and takes a responsible approach to development; as such, it measures performance in social and environmental as well as financial terms.
- 2.3 Together with the Chatsworth House Trust (registered charity no.1511149), CST's Derbyshire Estate provides over 450 full time equivalent jobs and contributes c.£50m of enabled Gross Value Added to the local economy each year (Source: New Economics Foundation 2014). Its income funds socio-economic facilities (e.g. village shop/post office) and environmental management activities (e.g. architectural conservation) without grant support. CST thereby provides benefits far beyond 'just the estate'.
- 2.4 CST has a range of interests in the Borough of Chesterfield including: agricultural land supporting modern farming; commercial properties supporting local employment; farmsteads supporting smaller scale rural enterprises; and the majority of the former Staveley Works site (including both the Clocktower Business Centre (leased to CBC and providing flexible term offices and workspaces) and the Devonshire Building (home to a gym and other enterprises)).
- 2.5 Whilst maintaining a long-term perspective, CST manages a diverse range of landholdings to achieve corporate and wider social and environmental objectives. It has thereby identified that the best long-term use for the land subject to this application would be for residential development. This will help deliver its own objective to deliver 1,000 new homes over the next ten years, and also meet the needs and aspirations of the local community and wider Borough, subject to securing a planning permission that is both attractive to the development market and commercially viable.

The Site

- 2.6 This section provides a summary of key features of the Site. The Site is more fully described within the Design and Access Statement submitted as part of the application.
- 2.7 The Site is located at Mastin Moor, to the south of Worksop Road (A619) to both the east and west of Bolsover Road, with part of the Site extending southwards to Woodthorpe Road. It encompasses some 46.2ha of mainly agricultural land. The overall Site forms a shallow valley sloping from the ridge lines along Worksop Road and Woodthorpe Road towards a watercourse that runs in a westerly direction through the Site. The highest part of the Site is around 119m Above Ordnance Datum (AOD) in the north-east with the lowest part in the south-west at around 56m AOD.
- 2.8 The Site is primarily comprised of undulating arable fields with limited features. The main features of note include:
 - An unnamed watercourse which flows in a westerly direction through the Site;
 - Bolsover Road which runs through the Site on a north-south axis;



- Pumphouse Farm (dwelling and curtilage) which is surrounded by the development proposal but does not form part of it;
- Field boundaries which are a mixture of hedgerows, stone walls and woodland; and
- Isolated trees.

2.9 The main part of the settlement of Mastin Moor is located to the north of the Site, on the northern side of Worksop Road. The settlement of Woodthorpe is located generally to the west of the Site. The Site abuts a limited number of residential properties, as well as the Mastin Moor Community Garden.

Photo 1 View Over Site from South-eastern Corner (adjacent Woodthorpe Road) looking towards Woodthorpe



Photo 2 View Over Site from Bolsover Road (Close to Community Garden) looking towards Woodthorpe



Photo 3 View Over Site from Bolsover Road looking North-west towards Worksop Road)



Photo 4 View Over Site from Near North-eastern Boundary Adjacent to Worksop Road looking towards Bolsover Road and Woodthorpe



Design Process

- 2.10 CST first considered residential development options for its land at Mastin Moor in 2011 when it was identified in the Strategic Housing Land Availability Assessment by CBC. This formed part of the evidence base for what was at the time the emerging Local Plan: Core Strategy. CST appointed planning and masterplan specialists to explore these options. Outputs from that process formed part of CST's response to consultation on the Local Plan: Core Strategy.
- 2.11 Following adoption of the Local Plan: Core Strategy in 2013 which confirmed Mastin Moor as a focus for regeneration and growth, CST appointed an expanded team of specialists. Resulting technical surveys and reports contributed to a detailed appreciation of the development opportunity and potential constraints. These informed a masterplan-led approach that fully explored design options. The process had regard to the wider setting of the Site and existing development in the locality.
- 2.12 Draft proposals were subject to extensive consultation with CBC, Derbyshire County Council and Staveley Town Council. Meetings were held with groups representing local residents and interest groups including Friends of Mastin Moor, the Woodthorpe Village Community Group and Mastin Moor Gardens and Allotments (formerly Mastin Moor Allotments Association). The resulting proposals were presented at two community consultation events in July 2016, held at

the Eventide Rest Room (Mastin Moor) and the Albert Inn (Woodthorpe), and were available to view at the same time on a website.

- 2.13 An outline planning application for 650 dwellings and other development was subsequently submitted to CBC (ref. CHE/17/00469/OUT) in June 2017. Contrary to the unequivocal recommendation of the Officer's report, and despite no objections being received from any statutory consultees, the application was refused by the Council's Planning Committee in October 2019. At the time of writing, an appeal against that refusal remains extant.
- 2.14 Feedback received during the course of the determination of the above application has informed the current proposals. The design process that has led to the proposals for which planning permission is now sought is more fully described within the Design and Access Statement.

Development Proposal

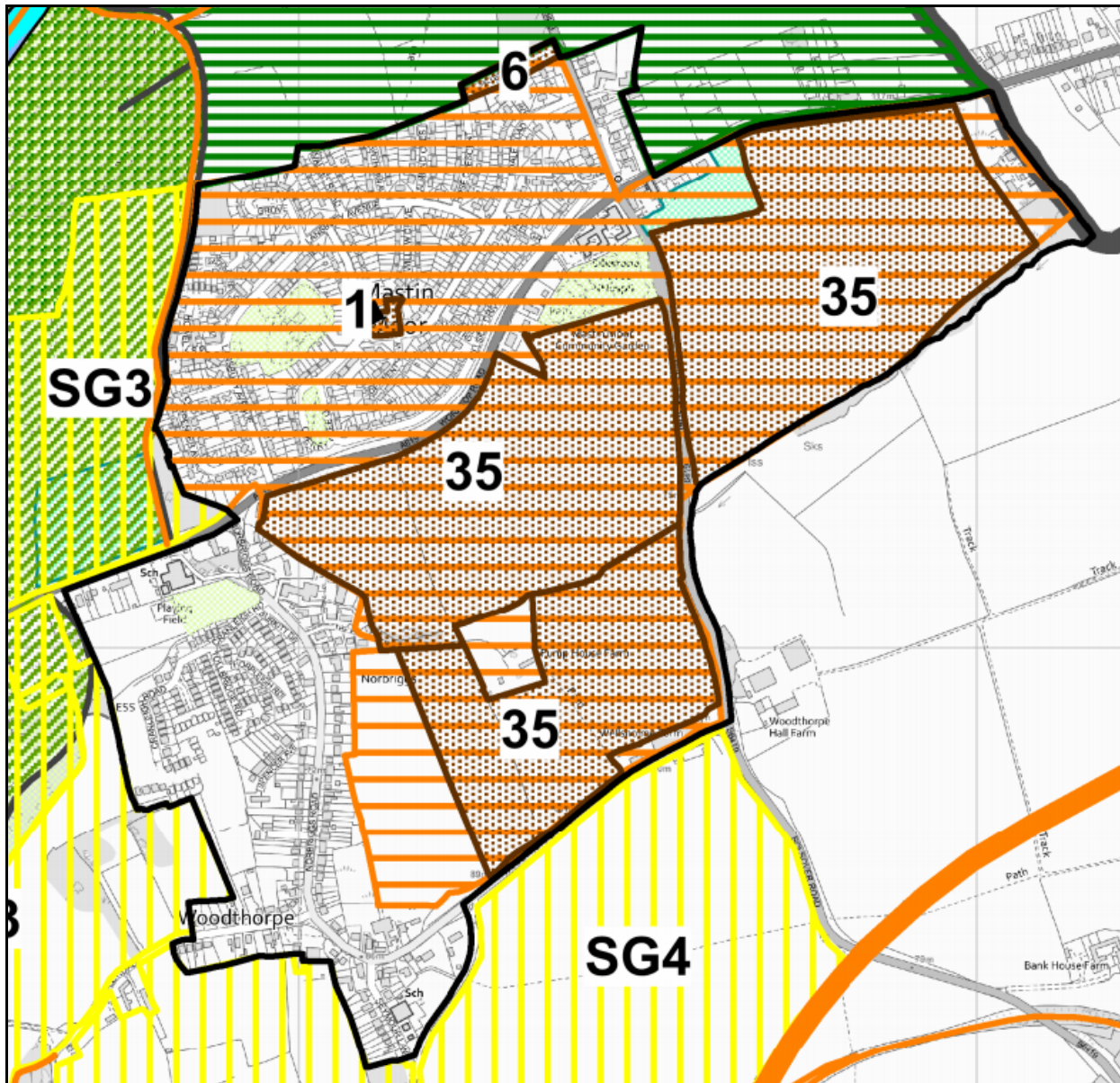
- 2.15 The proposed development seeks outline planning permission for residential development of up to 650 dwellings, a residential care facility with extra care, a Local Centre (including local retail, health facilities, leisure facilities, other local facilities and services, offices), open space, community garden extension, community building, parking and associated infrastructure and earthworks with all matters reserved except access. Details of scale, layout and landscaping are reserved for future consideration.
- 2.16 For illustrative purposes, an indicative layout has been prepared to show how the Site could be developed. Further explanation of the design principles that have been incorporated into the proposals, and how the design has been informed and influenced by the comprehensive suite of technical information and analysis, is set out in the Design and Access Statement.
- 2.17 Key aspects of the proposal include:
- Up to 650 dwellings located on land to the south of Worksop Road (east and west of Bolsover Road) extending to Woodthorpe Road;
 - A residential care facility with extra care;
 - A Local Centre (including local retail, health facilities, leisure facilities, other local facilities and services, offices) located adjacent to Worksop Road;
 - A new signal-controlled junction on Worksop Road providing access to the new Local Centre and residential areas, incorporating pedestrian and cyclist crossing facilities;
 - New priority-controlled junctions on Bolsover Road and Woodthorpe Road;
 - An extension to the Community Garden (approximately doubling its existing size), including provision for a new community building and associated car park;
 - Significant new areas of parkland, play areas and other open space;
 - Retention of existing hedgerows and trees wherever possible;
 - Additional landscape planting and ecological enhancements;
 - New walking and cycling connections;
 - New drainage infrastructure including surface water storage ponds; and
 - Financial contributions to allow the expansion of existing local services including Norbriggs Primary School.
- 2.18 The proposal, therefore, comprises a high quality development scheme designed to: address multiple deprivation issues at Mastin Moor; help regenerate the area in line with key related

Local Plan policy; respect but integrate with the distinct communities of Woodthorpe and Mastin Moor; acknowledge and address the specific physical challenges and constraints of the Site (e.g. topography, drainage).

Planning Policy

- 2.19 Section 38 (6) of the Planning and Compulsory Purchase Act 2004 requires that the determination of planning applications is undertaken in accordance with the development plan, unless material considerations indicate otherwise. The relevant document for this application is the Chesterfield Local Plan (2020) (the Local Plan).
- 2.20 The Local Plan allocates the Site for development by way of Policy CLP3 Flexibility in Delivery of Housing. Table 4 within the Local Plan references the Site as H35 (Land South of Worksop Road, and East and West of Bolsover Road, Mastin Moor), having a capacity of 650 dwellings, the extent of which is shown on the Local Plan Policies Map. Policy RP1 Regeneration Priority Areas sets out further specific requirements for any development within Site H35.
- 2.21 Other relevant policies of the Local Plan include: CLP1 Spatial Strategy, CLP2 Principles for Location of Development, CLP4 Range of Housing, CLP6 Economic Growth, CLP8 Vitality and Viability of Centres, CLP9 Retail, CLP10 Social Infrastructure, CLP11 Infrastructure Delivery, CLP13 Managing the Water Cycle, CLP14 A Healthy Environment, CLP15 Green Infrastructure, CLP16 Biodiversity, Geodiversity and the Ecological Network, CLP17 Open Space, Play Provision, Sports Facilities and Allotments, CLP20 Design, CLP21 Historic Environment, CLP22 Influencing the Demand for Travel.
- 2.22 An extract from the Local Plan Policies Map showing the extent of the allocation and the wider Mastin Moor Regeneration Priority Area is shown below.

Figure 1 Local Plan Policies Map (extract)



2.23 The National Planning Policy Framework (NPPF) 'sets out the Government's planning policies for England and how these are expected to be applied'. Paragraph 10 of the NPPF sets out that '*at the heart of the [NPPF] is a presumption in favour of sustainable development*'. Paragraph 11 states that '*For decision-taking this means:*

c) approving development proposals that accord with an up-to-date development plan without delay; or

d) where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date, granting permission unless:

i. the application of policies in this Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed; or

ii. any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole.'

Planning Assessment

- 2.24 The proposal performs well against relevant Local Plan policies. In particular, it will deliver development in accordance with Policies CLP1 Spatial Strategy, CLP2 Principles for Location of Development, Policies CLP3 Flexibility in Delivery of Housing and Policy RP1 Regeneration Priority Areas.
- 2.25 It is also considered that there are no material considerations that indicate anything other than the fact that the LPA should determine the application in line with the extant plan as outlined above.
- 2.26 In addition, key benefits of the proposal would include:
- Provision of new, high quality housing;
 - New development in an area with acknowledged regeneration needs;
 - Greater variety of housing type and tenure (including Affordable Housing) to meet the diverse needs of the local community (including housing to buy and rent);
 - Extension of the Community Garden (approximately doubling its existing size) including provision for a new community building and parking area;
 - Improved local services and facilities (including provision for retail, health and other local and community services within a new Local Centre);
 - Significant new areas of parkland, play areas and other open greenspace available to existing and new residents;
 - New housing in a location where future residents will have a realistic choice of walking, cycling or using public transport, in preference to using private motor vehicles;
 - Additional capacity at local schools;
 - Opportunities for skills and learning through training programmes during construction and operational phases of the development;
 - New employment opportunities during construction and operational phases of the development;
 - Additional landscape planting and ecological enhancements;
 - New traffic signal-controlled junction on Worksop Road to include pedestrian and cyclist crossing facilities; and
 - On-site water storage to help reduce existing off-site flood risk.
- 2.27 The proposal will, therefore, provide opportunities and benefits for all sections of the local community, including existing and future residents. Benefits will accrue in the short and longer term. It will help to overcome issues that can lead to deprivation and will contribute to regeneration in line with Local Plan objectives.

3. ECOLOGY BACKGROUND AND LEGISLATION

Introduction

- 3.1 PAA was commissioned by the Chatsworth Settlement Trustees in 2017 to conduct an extended Phase 1 habitat survey of Land off Worksop Road, Mastin Moor in order to inform the master planning process for the Site prior to any planning application. In 2020, PAA undertook an update of the extended Phase 1 habitat survey and associated desk review.
- 3.2 This report presents the findings for the extended Phase 1 habitat survey, including the desk study results and methodologies used, and highlights the ecological constraints and opportunities for the Site.

Legislative Context

- 3.3 The text given 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.
- 3.4 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 2017 (amended); further details can be obtained from the Joint Nature Conservation Committee (JNCC) website at www.jncc.defra.gov.uk.
- 3.5 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).
- 3.6 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.
- 3.7 Finally, the NPPF provides guidance for local authorities on the content of the Local Plans and is a material consideration in determining planning applications. Briefly, with an overall focus on sustainable development, the NPPF states that developments should aim to engender positive outcomes for habitats and 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 for should be refused. 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, sites of biodiversity or geological value and soils;
- recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services; and
- minimising impacts on biodiversity and providing net gains for biodiversity including establishing coherent ecological networks that are more resilient to current and future pressures.

3.8 To protect and enhance biodiversity and geodiversity, plans should:

- Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
- promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

Protected Species

3.9 Protected species legislation relevant to the Site is provided within Appendix 1.

4. METHODS

Desk Study

- 4.1 A data request was made to the Derbyshire Biological Records Centre, to provide information on protected species and sites within 1.5km of the Site boundary. In addition, on-line resources such as Multi-Agency Geographic Information for the Countryside website 'www.magic.gov.uk' (MAGIC), Nature on the Map 'www.natureonthemap.naturalengland.org.uk' were utilised to obtain details of designated conservation sites and protected/notable species.

Field Survey

- 4.2 An initial extended Phase 1 habitat survey of the Site was undertaken on 20 May 2014, with updates completed on 11th and 20th August 2020 by Ecologist Caroline Boffey (ACIEEM¹) under good weather conditions (fine and dry with good visibility). The survey method followed the standard JNCC (2010) technique for classifying and mapping British habitats. The survey aimed to provide a record of habitats that are present within the Site and to further investigate those that are likely to be ecologically important.
- 4.3 The survey included a general assessment for the presence or potential presence of protected species, noting any areas of suitable habitat and the location and type of any field signs recorded. In particular, this component of the field survey focused on the potential for the following species: bats, badger, great crested newt (*Triturus cristatus*, GCN), reptiles and breeding birds.

Survey Constraints

- 4.4 No significant constraints were identified for this assessment.

¹ Associate member of Chartered Institute of Ecology and Environmental Management (CIEEM)

5. RESULTS

Desk Study

- 5.1 The results of the desk study, including the 2020 updates, are summarised below. See Appendix 2 for details of species record locations and designated sites.

Designated Sites

Statutory Designated Sites

- 5.2 One Local Nature Reserve (LNR) exists within the search area, Norbriggs Flash. No SSSI or other statutorily designated sites are found within the desk study search area.

Non-statutory Designated Sites

- 5.3 Three Local Wildlife Sites (LWS) are found with the search area; these are presented in Table 1.

Table 1 Local Wildlife Sites

Site Name	Distance from Site Boundary	Reason for Interest
Romley Hall Farm Meadows	1.31km E	Ancient semi-natural ash woodland
Pinnock North Flash (Norbriggs Flash)	1.05km NW	Lowland swamp
Netherthorpe Flashes	1.13km SW	Lowland swamp

- 5.4 In addition, there are a further five potential LWS listed.

Priority Habitats

- 5.5 Several priority habitat deciduous woodlands were revealed within the search area. The nearest of these to the Site boundary is 350m to the north-east.
- 5.6 One priority habitat lowland fen area was found within the search area. This habitat is approximately 1.1km to the north-west.
- 5.7 Two priority habitat ancient woodlands were found within the search area. The nearest of these to the Site boundary is approximately 1.15km to the east.
- 5.8 Two priority habitat traditional orchards were found within the search area. The nearest of these to the Site boundary is approximately 1.24km to the north-west.

Protected Species

Great Crested Newts

- 5.9 Eight records of GCN were returned within the search area. These records date from between 1996 and 2019. The closest of these records to the Site boundary is located approximately 582m to the east.
- 5.10 An ordinance survey map search revealed there is a ditch located within the Site. There is also a ditch located 300m north of the Site boundary and a pond located 414m to the west of the Site boundary at Netherthorpe Flashes.

Other Amphibians

- 5.11 A single record for common toad (*Bufo bufo*) was returned within a 1.5km radius search of the central grid reference. This record dates from 2009 and is located approximately 555m to the west of the Site boundary.

Bats

- 5.12 Five records of bat roosts were provided, these included two pipistrelle species (*Pipistrellus* sp.) roosts and a Daubenton's bat (*Myotis daubentonii*) roost. Two further roosts of unidentified bat species were returned. The common pipistrelle (*Pipistrellus pipistrellus*) roost record was the most recent, noted in 2015 at Netherthorpe School, approximately 160m to the west of the Site boundary.

Otter

- 5.13 Two records of otter (*Lutra lutra*) were returned within a 1.5km radius search of the central grid reference. These records date from 2013 and 2018. The closest record to the Site boundary is approximately 810m to the west. This record is associated with the Netherthorpe Flash.

Water Vole

- 5.14 A total of eleven records for water vole (*Arvicola amphibius*) were returned within a 1.5km radius search of the central grid reference. The dates for these records range between 1997 and 2001 and the nearest record to the Site boundary is approximately 375m to the west at Netherthorpe Flashes.

Badger

- 5.15 No records of badger were returned in 2020 within the 1.5km search area.

Birds

- 5.16 The Red and Amber conservation status assessment (Eaton *et al.* 2015) is based on a number of criteria including historical decline, trends in population and range, rarity, localised distribution and international importance. Red listed species are the most critical group, followed by Amber. Green listed species are of least concern.
- 5.17 In addition, Schedule 1 bird species are protected under the WCA (1981 as amended). It is an offence to intentionally disturb any of these species during the breeding season without a valid licence. Species considered to be of Principal Importance (the Section 41 species) are also considered as part of the assessment of the local bird population.
- 5.18 All Schedule 1 and Section 41 bird species recorded within the 1.5m search area are listed in Table 2, along with their nature conservation status.

Table 2 Bird Species of Principal Importance

Common Name	Scientific Name	No. of Records	Amber	Red	Section 41	Schedule 1
Barn owl	<i>Tyto alba</i>	1				X
Black-tailed godwit	<i>Limosa limosa</i>	1		X	X	
Bullfinch	<i>Pyrrhula pyrrhula</i>	4	X		X	
Cuckoo	<i>Cuculus canores</i>	1		X	X	
Curlew	<i>Numenius arquata</i>	1		X	X	
Dunnock	<i>Prunella modularis</i>	3	X		X	
Grasshopper warbler	<i>Locustella naevia</i>	2	X		X	
Grey partridge	<i>Perdix perdix</i>	1	X		X	
Herring gull	<i>Larus argentatus</i>	1		X	X	
House sparrow	<i>Passer domesticus</i>	2		X	X	
Kingfisher	<i>Alcedo atthis</i>	2				X
Lapwing	<i>Vanellus vanellus</i>	2		X	X	
Lesser redpoll	<i>Carduelis cabaret</i>	1		X	X	
Linnet	<i>Carduelis cannabina</i>	1		X	X	
Reed bunting	<i>Emberiza schoeniclus</i>	2	X		X	
Skylark	<i>Alauda arvensis</i>	2		X	X	
Song thrush	<i>Turdus philomelos</i>	9		X	X	
Spotted flycatcher	<i>Muscicapa striata</i>	1		X	X	
Starling	<i>Sturnus vulgaris</i>	2		X	X	
Swift	<i>Apus apus</i>	2	X		X	
Tree pipit	<i>Anthus trivialis</i>	1		X	X	
Tree sparrow	<i>Passer montanus</i>	1		X	X	
Twite	<i>Linaria flavirostris</i>	1		X	X	
Willow tit	<i>Poecile montanus</i>	1		X	X	
Yellow wagtail	<i>Motacilla flava</i>	1		X	X	
Yellowhammer	<i>Emberiza citrinella</i>	3		X	X	

Reptiles

- 5.19 A total of 24 record for grass snake were returned within the 1.5km search area. These records are dated between 2002 and 2015. The closest to the Site boundary is located approximately 124m to the south.
- 5.20 A single older record for adder (*Vipera berus*) was returned within the 1.5km search area. This record dates from 2002 and is located approximately 430m to the west of the Site boundary.
- 5.21 A single older record for common lizard (*Zootoca vivipara*) was returned within the 1.5km search area. This record dates from 2002 and is located approximately 30m north of the Site boundary.

Other Species

- 5.22 Records for the S41 priority species, dingy skipper (*Erynnis tages*) and the Nationally Threatened (Derbyshire Red Data Book) species lesser water-plantain (*Baldellia ranunculoides*) were returned for the search area. None occur within or close to the Site.

Field Survey

- 5.23 The results of the field survey for each sub-site (West and East of Bolsover Road) are reported separately.

Habitats

- 5.24 The habitat types for each sub-site are described in the following paragraphs. Common names of plants only are used within the text and follow Stace 2019, see botanical species lists (Appendix 3) for scientific botanical names. See Figure 2 for habitat map.

West of Bolsover Road

- 5.25 The Site is characterised by large arable fields, consisting of wheat and beans at the time of survey (previously wheat and oilseed rape in 2014), delineated by native, mature hedgerows.
- 5.26 The habitat types are provided below, and described in more detail in the following paragraphs.
- Arable fields;
 - Hedgerows;
 - Mature trees and tree lines;
 - Scrub;
 - Stream;
 - Semi-improved neutral grassland;
 - Poor semi-improved grassland;
 - Improved grassland; and
 - Tall ruderal.

Arable Fields

- 5.27 In 2014, the field margins varied across the Site consisting of treated strips of sparsely vegetated ground. The arable fields were planted with wheat or beans at the time of the 2020 survey. In contrast to the 2014 survey, the field margins were all untreated in 2020. They were characterised by abundant false oat-grass and frequent to locally dominant common nettle, with cow parsley, and barren brome also prominent in the vegetation. The margins again varied from relatively wide grassland strips to very narrow/non-existent, being planted up to the edge of the adjacent hedgerows.

Hedgerows

- 5.28 The fields are delineated by a total of 17 hedgerows (H2-H15, H17, H18 and H24; with H16, recorded previously, being outside the current survey area). The hedgerows are primarily intact, mature, and dominated by hawthorn. Other woody species recorded within the hedgerows included hazel, elder, holly, field maple, blackthorn, sycamore, and occasional pedunculate oak and ash trees. The management of the hedgerows varies across the Site, however, they are mostly managed in some way, in particular along the sides adjacent to crops.

Mature Trees and Tree Lines

- 5.29 Mature trees are found across the Site within hedgerows, in the centre of cereal fields.
- 5.30 Four mature pedunculate oak trees are found within the centre of the arable fields on the western side of the Site, in addition two mature ash trees are found within the Pumphouse private grounds. Several trees were identified as having potential for roosting bats and identified for further detailed surveys.
- 5.31 The planted tree line along Woodthorpe Road consists of lime, pedunculate oak, ash, sycamore, elder with a common nettle and bramble-dominated border. This is outside of the survey area.

Scrub

- 5.32 There are several small patches of bramble-dominated scrub at field boundaries, next to the access track to the Pumphouse and adjacent to the stream amongst the tall ruderal vegetation.

Stream

- 5.33 A stream runs through the centre of the Site. It is shaded along the majority of its length with very little aquatic vegetation. Hedgerows 3 and 5 run along the southern boundary of the stream, here the ground flora is characterised by bramble and common nettle, with great willowherb, false oat-grass and occasional other species such as hogweed and rosebay willowherb.
- 5.34 Due to the steep banks adjacent to the stream in some places, it was not possible to estimate the depth of the water, however, it is considered to be deep enough to potentially support small fish if suitable habitat was present.
- 5.35 The central section of the stream is un-shaded, in this area there is a section of tall ruderal vegetation with species indicative of damp conditions, see tall ruderal description below for more details. Tall ruderal vegetation is also present along the stream edges at the west of the Site, also see below for description.

Tall Ruderal

- 5.36 The patch of tall ruderal vegetation in the central section consists of species indicative of wet conditions such as locally abundant great willowherb and occasional grey willow. In addition, common nettle and bramble are frequent to locally abundant. At the west of the Site is a patch of Himalayan balsam (a non-native invasive plant species) amongst the tall ruderal vegetation c.4x4m in extent. This was not recorded within the 2014 survey and appears to have established within the intervening years.

Semi-improved Neutral Grassland

- 5.37 The grassland verges alongside Bolsover Road consist of semi-improved grassland strips. Species indicative of the semi-improved conditions included tansy, yarrow, creeping cinquefoil, common knapweed and ribwort plantain, as recorded also in 2015. The species were all at least occasional.

Poor Semi-improved Grassland

- 5.38 A wider margin of poor semi-improved grassland is present alongside the stream to the west of Bolsover Road, dominated by false oat-grass and common nettle, with frequent barren brome and hogweed and localised patches of hedge bindweed, Yorkshire fog and cock's-foot.

Improved Grassland

- 5.39 A grassy track of improved grassland to the west of Bolsover Road contains abundant perennial rye-grass, with frequent red fescue, white clover and dandelion.
- 5.40 Managed lawns are found within the grounds of the Pumphouse property, outside of the survey area.

East of Bolsover Road

- 5.41 The following habitats were recorded within the Site east of Bolsover Road and are described in more detail below.
- Arable field;
 - Hedgerows; and
 - Semi-improved neutral grassland.

Arable Field

- 5.42 The large arable field was planted with wheat at the time of the survey. The relatively narrow field margins were dominated by grasses, such as false oat-grass and soft brome with other areas dominated by common nettle.

Hedgerows

- 5.43 The fields are delineated by a total of six hedgerows (H1, H19-H23); these are primarily intact, mature, and dominated by hawthorn. Other woody species recorded within the hedgerows included hazel, elder, field maple and blackthorn. The management of the hedgerows varies, however, they are mostly managed in some way, in particular along the sides adjacent to crops.

Semi-improved Grassland

- 5.44 The grassland verges alongside Bolsover Road, in particular in the centre of the Site, consist of semi-improved grassland strips. Species indicative of the semi-improved conditions included tansy, yarrow, creeping cinquefoil, common knapweed, and ribwort plantain, all of which were at least occasional.

Protected Species

- 5.45 The protected species issues are described below.

Bats

- 5.46 A number of trees were identified to have some potential for roosting bats, these are marked as T1, T2, T3, T6, T7, T15, T16, T17 and T22 on Figure 2. The trees are located within optimal bat foraging habitat, as they are near to the stream and have a number of features with potential to support roosting bats, such as rot holes, cavities and flaking bark. In addition, the Site is likely to support foraging and commuting bats, in particular along hedgerows, tree lines and the stream.

Riparian Mammals

- 5.47 The stream does not represent suitable habitat for otter or water vole.

Great Crested Newt

- 5.48 The stream habitats are not considered to provide suitable habitat for amphibians due to the predominantly shaded and subsequent vegetation-free nature of the channel. In addition, it is

likely that there is some flow along its length which would reduce the likelihood of amphibians breeding.

Badger

- 5.49 Evidence of badger on Site was minimal, however, this was primarily considered to be due to the intensive management of the field boundaries which would make finding characteristic evidence, such as footprints or latrines, difficult. There was, however, a mammal path alongside the central area of stream, west of Bolsover Road, and several push-through places in hedgerows as recorded previously, although fewer than previously recorded, along with several new weak paths and push-throughs, and a latrine at the far north-east corner of the Site containing dried badger dung.
- 5.50 Two setts, S2 and S3, identified during the previous detailed badger survey were relocated in 2020 within the Site. S2 is a large, single hole with moss and vegetation at the entrance, and cobwebs, and is considered to be inactive. Sett S3, a single entrance hole of an outlier sett within mature hedgerow, has ivy partially growing over the entrance, cobwebs, and a lack of paths leading to it, and is, therefore, also considered to be currently inactive. There are no signs of badger entering the Site from the woodland at the north-eastern corner (adjacent to the Site) where the sett S1 was recorded previously.
- 5.51 Further details of current sett locations and signs of use by badgers can be provided on request, if required.

Breeding Birds

- 5.52 In 2014, a number of bird species were recorded whilst conducting the extended Phase 1 habitat survey, these were primarily common and widespread species such as robin² (*Erithacus rubecula*), common blackbird (*Turdus merula*) and chaffinch (*Fringilla coelebs*), however, farmland indicator species grey partridge (*Perdix perdix*) and yellowhammer (*Emberiza citrinella*) were also recorded. These two species are also red listed and S41 priority species. Buzzard was recorded during the survey in 2020, near to the stream at the east of Bolsover Road.
- 5.53 The hedgerows, mature trees, stream banks and arable fields are likely to provide important habitats for breeding birds, in particular as the Site is large. The hedgerows are well connected and provide a dispersal route to the wider countryside.

Non-Native Invasive Plant Species

- 5.54 Two Schedule 9 non-native invasive plant species were recorded within the Site: Japanese knotweed and Himalayan balsam, shown on Figure 2. At the corner of the field near the housing, west of Bolsover Road, is a small patch of cleared ground with a young shoot of Japanese knotweed starting to come up, and further north-east along the field margin is another small population of Japanese knotweed. Within the tall ruderal vegetation alongside the stream at the west of the Site is a patch of Himalayan balsam approximately 4x4m in extent.

² Bird names follow British Ornithologists' Union 2017

6. DISCUSSION AND RECOMMENDATIONS

Evaluation of Habitats and Their Function for Wildlife

- 6.1 No habitats of high National conservation value are found on the Site. The habitats with the highest value are the hedgerows, semi-improved neutral grassland verges and the woodland bordering the stream.
- 6.2 All hedgerows of at least 30m length which consist of at least one native species qualify under the UK S41 priority habitat description, therefore, all hedgerows on Site would be classed at S41 habitat. The hedgerows are largely dominated by hawthorn, however, other woody species including field maple, elder, ash, hazel and holly also occur. Diversity of species within each hedgerow ranges from one to ten, although some of these species are at low frequency and so the hedgerows are unlikely to qualify as LWS under the Derbyshire LWS guidelines (Derbyshire Wildlife Trust 2011). The height of woody material at the base of the hedgerows is generally, 0-0.5m, providing good cover for hedgehog (*Erinaceus europaeus*). It is recommended to retain the hedgerows where possible as they provide an important habitat for wildlife, in particular to bats, birds, hedgehog and badger.
- 6.3 Within the Derbyshire LWS grassland selection criteria, ten vascular plant species from Table 2 (Derbyshire Wildlife Trust 2011, page 43) should be recorded at least occasionally within the sward for the Site to qualify as a possible LWS. The grassland verges along Bolsover Road contain five of these species and would not, therefore, qualify as a LWS, however, it is recommended that these verges are retained where possible as they are the only examples of this habitat within the Site and provide a valuable nectar source for invertebrates.
- 6.4 The woodland adjacent to the stream was assessed under the criteria for LWS woodland, in a similar manner to grasslands, woodlands with at least 12 species within Table 1 of the guidance (Derbyshire Wildlife Trust 2011, page 21) would qualify as a possible LWS. This small area of woodland contained a patch of five of these species, and would not, therefore, qualify. It is recommended, however, that this woodland strip is retained as a buffer to the stream and as a continuation of wildlife habitat adjacent to the Site.

Protected Species

Bats

- 6.5 A number of trees with potential to support bat roosts were identified. Further surveys would be required, between the months of May and September, in order to confirm if a roost is present (these have subsequently been undertaken and repeated). In addition, activity transects are recommended to ascertain the level of use of the Site by commuting/foraging bats (again these were undertaken and additional static bat detector data were also collected in 2020). Should the woodland alongside the stream be affected by proposed development, a dedicated assessment of the trees within the streamside woodland is also recommended.

Breeding Birds

- 6.6 The Site's network of hedgerows is likely to provide nesting sites and foraging resources for birds, in addition to potential winter food sources in the form of berries, in particular the hawthorn.
- 6.7 It is recommended that a breeding bird survey is conducted to ascertain the importance of the Site for farmland birds, in particular given the size of the Site and the combination of mature hedgerows and large cereal fields.

Badger

- 6.8 The two, single-holed badger setts present within the Site (previously recorded and still present in 2020) were considered to be inactive at time of survey in 2020. Setts can rapidly come back into use, even if currently inactive. If any badger setts were to be impacted by the development then a licence may be required.
- 6.9 A limited amount of badger activity within the Site was recorded in 2020, however, along with several push-throughs and a mammal path near to the stream, very similar in number and extent to those signs previously recorded.

Riparian Mammals

- 6.10 No further recommendations for otter or water vole are considered necessary.

Summary

- 6.11 The following ecological considerations are relevant to the Site:
- Potential impact upon bat roosting (within identified trees – T1, T2, T3, T6, T7, T15, T16, T17 and T22) and foraging/commuting resources;
 - Impact upon breeding bird assemblage;
 - Impact upon badger foraging resources and their accessibility;
 - Potential impacts upon local grass snake populations;
 - Retention or re-creation of hedgerows and semi-improved neutral grassland road verges;
 - Retention of the stream and adjacent woodland with an undeveloped buffer zone; and
 - Presence of Japanese knotweed and Himalayan balsam Schedule 9 non-native invasive species.
- 6.12 Further dedicated protected species surveys were recommended and have been carried out in 2015 and repeated in 2020 in relation to bats, badgers and breeding birds.
- 6.13 Grass snake are protected under the WCA (1981 as amended) and as such any Site clearance should take account of their potential to be present within suitable habitat on Site.
- 6.14 The presence on Himalayan balsam and Japanese knotweed need to be considered under any future Construction Environmental Management Plan and Landscape and Ecology Management Plan prepared for the Site.

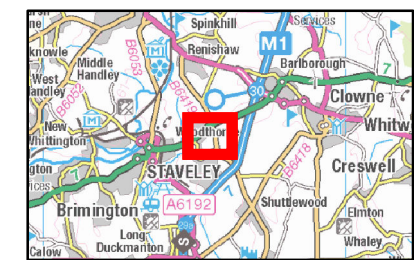
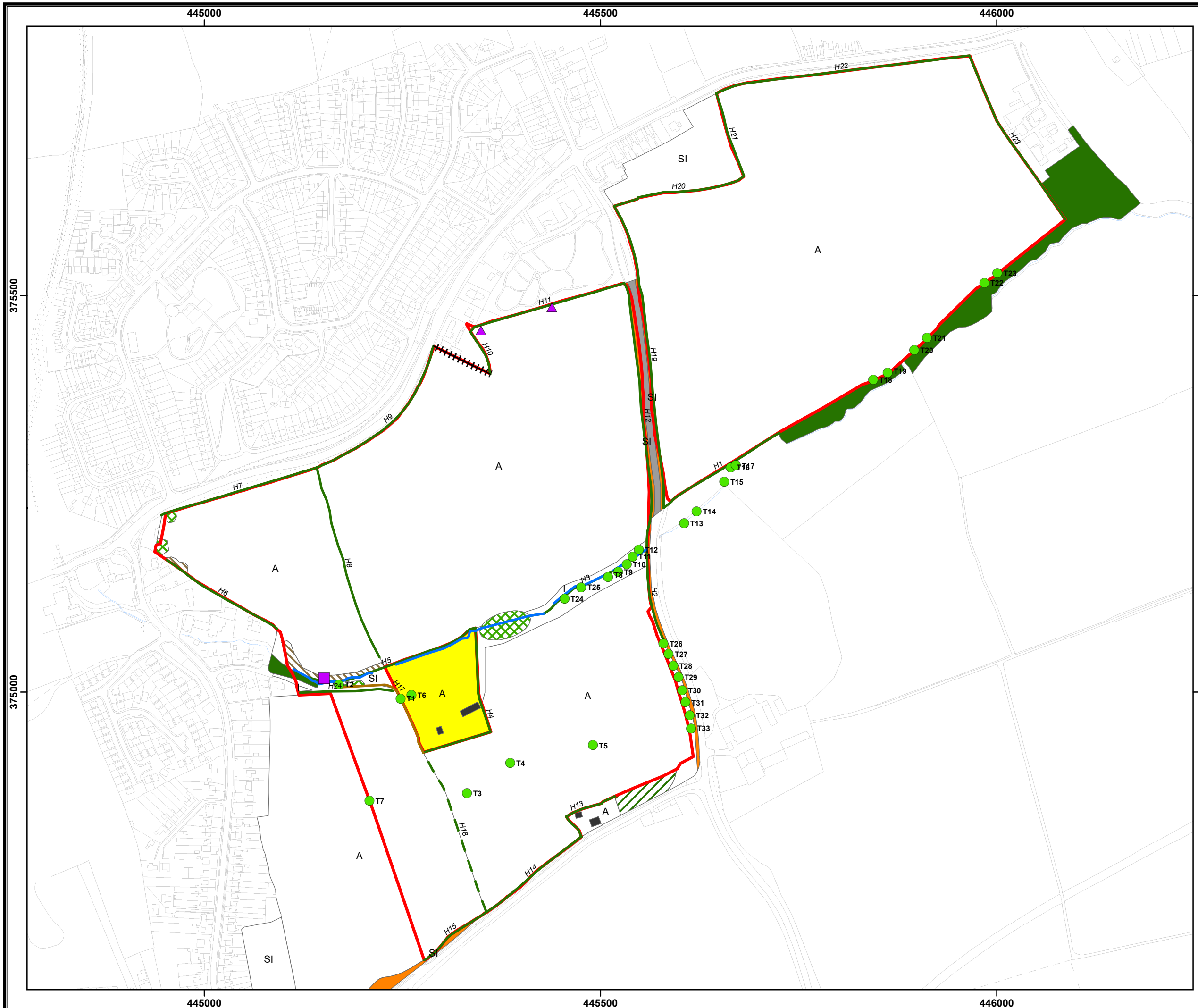
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8. ABBREVIATIONS

AOD	Above Ordnance Datum
CBC	Chesterfield Borough Council
CIEEM	Chartered Institute of Ecology and Environmental Management
CROW	Countryside and Rights of Way
CST	Chatsworth Settlement Trustees
DPMML	Devonshire Property (MM) Limited
EU	European Union
GCN	Great Crested Newt(s)
JNCC	Joint Nature Conservation Committee
LNR	Local Nature Reserve(s)
LPA	Local Planning Authority
LWS	Local Wildlife Site(s)
MAGIC	Multi Agency Geographic Information for the Countryside
NERC	Natural Environment and Rural Communities
NPPF	National Planning Policy Framework
PAA	Penny Anderson Associates Ltd
SSSI	Site of Special Scientific Interest
WCA	Wildlife and Countryside Act

FIGURE



Legend

Planning boundary

Type

- Broadleaved woodland - semi-natural
- Broadleaved woodland - plantation
- Scrub - dense/continuous
- Neutral grassland - semi-improved
- Improved grassland
- Poor semi-improved grassland
- Tall herb/ruderal
- Arable
- Amenity grassland
- Building
- Hardstanding
- Running water
- Intact hedge - species-poor
- Defunct hedge - species-poor
- Fence
- Hardstanding
- Scattered trees
- Japanese Knotweed
- Himalayan Balsam

British National Grid
Projection: Transverse Mercator
False Easting: 400000.000000
False Northing: 100000.000000
Central Meridian: 2.000000
Scale Factor: 0.999601
Latitude Of Origin: 49.000000

ISO A3

Metres

0 20 40 80 120

Penny Anderson Associates Ltd
Parklea, 60 Park Road,
Buxton, Derbyshire, SK17 6SN.
Telephone 01298 27086

Project Name
Mastin Moor

Discipline
Ecology

Title:
**Phase 1
Habitat Survey**

Scale 1:4,500	Drawing No. Figure 2
Drawn By MDM	Originator CB
PAA Ref. G:\CHST04_Mastin_Moor\Maps\Figures\	Date 07/10/2020
	Revision 1.0

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APPENDICES

APPENDIX 1

Protected Species Legislation Summaries

SUMMARY OF THE LEGISLATION RELATING TO BADGERS AND THEIR SETTS

Badgers (*Meles meles*) are not an endangered species but have a long history of persecution and cruelty. As such, badgers and their setts are protected under the Protection of Badgers Act 1992 (as amended), which makes it illegal for any person to kill, injure or take a badger. It is also an offence to destroy, damage or obstruct a badger sett, or to disturb a badger whilst it is within a sett. There are also additional offences relating to possession of, buying and selling a dead badger, or anything derived from a badger, and causing a dog to enter a sett.

The Act defines a sett as 'any structure or place which displays signs of current use by a badger'. Setts are defined by English Nature (1995) as 'usually underground tunnel systems providing shelter for badgers, but may include other structures used by badgers such as hay bales, drainage culverts, or cellars'. 'Current use' is more difficult to define but is usually interpreted by the presence/absence of badger field signs over several observations of the sett (Natural England 2006).

In addition, the National Planning Policy Framework (NPPF 2019) has an overall focus on sustainable development, and states that developments should aim to engender positive outcomes for habitats and 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 for should be refused. Reference is made to Circular 06/2005 *Biodiversity and Geological Conservation - Statutory Obligations and Their Impact within the Planning System* in respect of statutory obligations for biodiversity and geodiversity conservation.

The commitment to preserving, restoring or enhancing biodiversity is further emphasised for England and Wales in Section 40 of the NERC Act 2006.

Local authorities in England are required to consider the likelihood of any proposed development adversely affecting badgers' foraging territory, or links between them, or significantly increasing the likelihood of road or rail casualties amongst badger populations. The planning guidance for Wales, Technical Advice Note (Wales) 5, identifies the need to comply with the Protection of Badgers Act 1992.

English Nature, 1995. *Species Conservation Handbook*. English Nature, Peterborough.

Natural England, 2006. *Guidance on 'Current Use' in the definition of a badger sett*. Natural England, Peterborough.

Please note: the above text provides a brief summary of the legislation in relation to badgers for England and Wales and the original Act and amendments should be referred to for the precise wording.

SUMMARY OF THE LEGISLATION RELATING TO BATS

All wild species of bat are protected under the Wildlife and Countryside Act (WCA) 1981, which has also been amended by later legislation, including the Countryside and Rights of Way (CROW) Act 2000 and the Conservation of Habitats and Species Regulations 2017 (amended), and this legislation is applicable to England and Wales. Bats are listed on Schedule 5 of the WCA and are therefore subject to some the provisions of Section 9 which, with the amendments, make it an offence to:

- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection (S9:4b).
- Intentionally or recklessly obstruct access to any structure or place used for shelter or protection by a bat (S9:4c).

There are additional offences in relation to buying and selling (S9:5) any live or dead animal of this species or anything derived from them.

Bat species are also listed under Annexes IIa and IVa of the EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora, also known as the 'Habitats Directive'. Inclusion on Annex IVa means they are consequently identified as European Protected Species (EPS) and protected under the Conservation of Habitats and Species Regulations 2017 (amended).

The Conservation of Habitats and Species Regulations 2017 (amended) state that a person commits an offence if they:

- (a) deliberately capture, injure or kill any wild animal of a European protected species,
- (b) deliberately disturb wild animals of any such species, in such a way as –
 - (i) to impair their ability to survive, to breed or reproduce, or to rear their young, or
 - (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate, or
 - (iii) to affect significantly the local distribution or abundance of the species to which they belong;
- (c) deliberately take or destroy the eggs of such an animal, or
- (d) damage or destroy a breeding site or resting place of such an animal.

Under these Regulations it is an offence to damage or destroy a breeding site or resting place whether the animal is in occupation or not, and protection extends to all life stages of the animal in question. There are additional offences relating to possession, control and sale of a live or dead bat or part of such an animal.

In addition, seven native British bat species, including the soprano pipistrelle (*Pipistrellus pygmaeus*) and the brown long-eared bat (*Plecotus auritus*), that are frequently found in buildings, are listed as a 'Priority Species' under the 2011 biodiversity strategy for England, *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*, under the 2012 UK Post-2010 UK Biodiversity Framework. These Priority Species are also referred to as 'species of principal importance' for the conservation of biodiversity in England and Wales within Section 74 of the CROW Act 2000, and Sections 41 (England) and 42 (Wales) of the Natural Environment and Rural Communities (NERC) Act 2006.

In addition, the National Planning Policy Framework (NPPF 2019) has an overall focus on sustainable development, and states that developments should aim to engender positive outcomes for habitats and 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 for should be refused. Reference is made to Circular 06/2005 *Biodiversity and Geological Conservation - Statutory Obligations and Their Impact within the Planning System* in respect of statutory obligations for biodiversity and geodiversity conservation.

The commitment to preserving, restoring or enhancing biodiversity is further emphasised for England and Wales in Section 40 of the NERC Act 2006.

Please note: the above text provides a brief summary of the legislation in relation to bats in England and Wales and the original Acts, Regulations and any amendments should be referred to for the precise wording.

SUMMARY OF THE LEGISLATION RELATING TO BREEDING BIRDS

All wild species of breeding birds and their nests are protected under Part 1 of the Wildlife and Countryside Act (WCA) 1981, as amended by later legislation including the Countryside and Rights of Way (CROW) Act 2000. This legislation applies in England and Wales.

Part 1 (Section 1:1) of the WCA states that:

'If any person intentionally,

- (a) kills, injures or takes any wild bird;
- (b) takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or
- (c) takes or destroys an egg of any wild bird,

he shall be guilty of an offence.'

Part 1 (Section 1:5) of the WCA (amended by the CROW Act 2000) refers to specific birds listed on Schedule 1 of the WCA, and states that:

'If any person intentionally or recklessly,

- (a) disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or
- (b) disturbs dependent young of such a bird,

he shall be guilty of an offence and liable to a special penalty.'

Schedule 1 includes birds such as Western barn owl (*Tyto alba*), black redstart (*Phoenicurus ochrurus*), woodlark (*Lullula arborea*) and Cetti's warbler (*Cettia cetti*). Please refer to the WCA for a complete list of Schedule 1 species.

Some provisions are made to allow the killing and taking of certain species under certain circumstances, as follows:

- Birds listed on Schedule 2 (Part 1) of the Act may be taken or killed outside of the 'close season' for each individual species (the 'close season' is defined by the Act). This includes various wild duck and geese species.
- Birds listed on Schedule 2 (Part 2) of the Act may be killed or taken by authorised persons at all times. This includes species such as carrion crow (*Corvus corone*), Eurasian magpie (*Pica pica*), feral pigeon¹ (*Columba livia*) and greater Canada goose (*Branta canadensis*). An 'authorised person' is defined as a person who has written authorisation to undertake the act from the relevant statutory authority. The written authority is in the form of a licence, either a general licence which covers a number of the more typical 'pest' species, or an individual licence for other individual species. In England these licences are issued by Natural England and in Wales by the Welsh Assembly Government.

Please note: the above text provides a brief summary of the legislation in relation to breeding birds in England and Wales and the original Act and any amendments should be referred to for the precise wording.

¹ Also known as rock dove

SUMMARY OF THE LEGISLATION RELATING TO REPTILES

All six of the native British reptile species are afforded varying degrees of protection under the Wildlife and Countryside Act (WCA) 1981, as amended by various later legislation, and this legislation is applicable to England and Wales. All six species are listed on Schedule 5 of the WCA.

The four widespread species, common lizard (*Zootoca vivipara*), slow-worm (*Anguis fragilis*), grass snake (*Natrix helvetica*) and adder (*Vipera berus*) are afforded part protection under Section 9(1), making it an offence to intentionally kill or injure any of these species of reptile. The two rarer species, sand lizard (*Lacerta agilis*) and smooth snake (*Coronella austriaca*), are subject to a greater degree of protection under Section 9(4) which, with the amendments, make it (in brief) an offence to:

- Intentionally or recklessly disturb a sand lizard or smooth snake while it is occupying a structure or place used for shelter or protection (S9:4b); or
- Intentionally or recklessly obstruct access to any structure or place a sand lizard or smooth snake uses for shelter or protection (S9:4c).

All six species are afforded protection from buying, selling or exchange under Section 9(5) of the WCA.

Sand lizard and smooth snake are also listed under Annexes IIa and IVa of EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora, also known as the 'Habitats Directive'. Inclusion on Annex IVa means they are consequently identified as European Protected Species (EPS) and protected under the Conservation of Habitats and Species Regulations 2017 (amended).

The Conservation of Habitats and Species Regulations 2017 (amended) state that a person commits an offence if they:

- (a) deliberately capture, injure or kill any wild animal of a European protected species,
- (b) deliberately disturb wild animals of any such species, in such a way as –
 - (i) to impair their ability to survive, to breed or reproduce, or to rear their young, or
 - (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate, or
 - (iii) to affect significantly the local distribution or abundance of the species to which they belong;
- (c) deliberately take or destroy the eggs of such an animal, or
- (d) damage or destroy a breeding site or resting place of such an animal.

Under these Regulations it is an offence to damage or destroy a breeding site or resting place whether the animal is in occupation or not, and protection extends to all life stages of the animal in question. There are additional offences relating to possession, control and sale of a live or dead sand lizard or smooth snake or part of such an animal.

In addition, all six reptile species are listed as a 'Priority Species' under the under the 2011 biodiversity strategy for England, *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*, under the 2012 UK Post-2010 UK Biodiversity Framework. These Priority Species are also referred to as 'species of principal importance' for the conservation of biodiversity in England and Wales within Section 74 of the CROW Act 2000, and Sections 41 (England) and 42 (Wales) of the Natural Environment and Rural Communities (NERC) Act 2006.

In addition, the National Planning Policy Framework (NPPF 2019) has an overall focus on sustainable development, and states that developments should aim to engender positive outcomes for habitats and 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 for should be refused. Reference is made to Circular 06/2005 *Biodiversity and Geological Conservation - Statutory Obligations and Their Impact within the Planning System* in respect of statutory obligations for biodiversity and geodiversity conservation.

The commitment to preserving, restoring or enhancing biodiversity is further emphasised for England and Wales in Section 40 of the NERC Act 2006.













Please note: the above text provides a brief summary of the legislation in relation to reptiles for England and Wales and the original Acts, Regulations and any amendments should be referred to for the precise wording.

APPENDIX 2














Desk Study Data

KEY





Species

	GCN		GCN 500m buffer		White-clawed Crayfish		Otter
	Water Vole		Reptile		Bat Roost		Bat Sighting
	Badger Sett		Badger Sighting		BAP Bird		Schedule 1 Bird
	Swift		BAP Mammal		BAP Toad		Toad Crossing
	BAP Fish		Black Poplar		Veteran Tree		BAP Invertebrate
	Derbyshire Red Data List Plant		Invasive Species				

Habitats

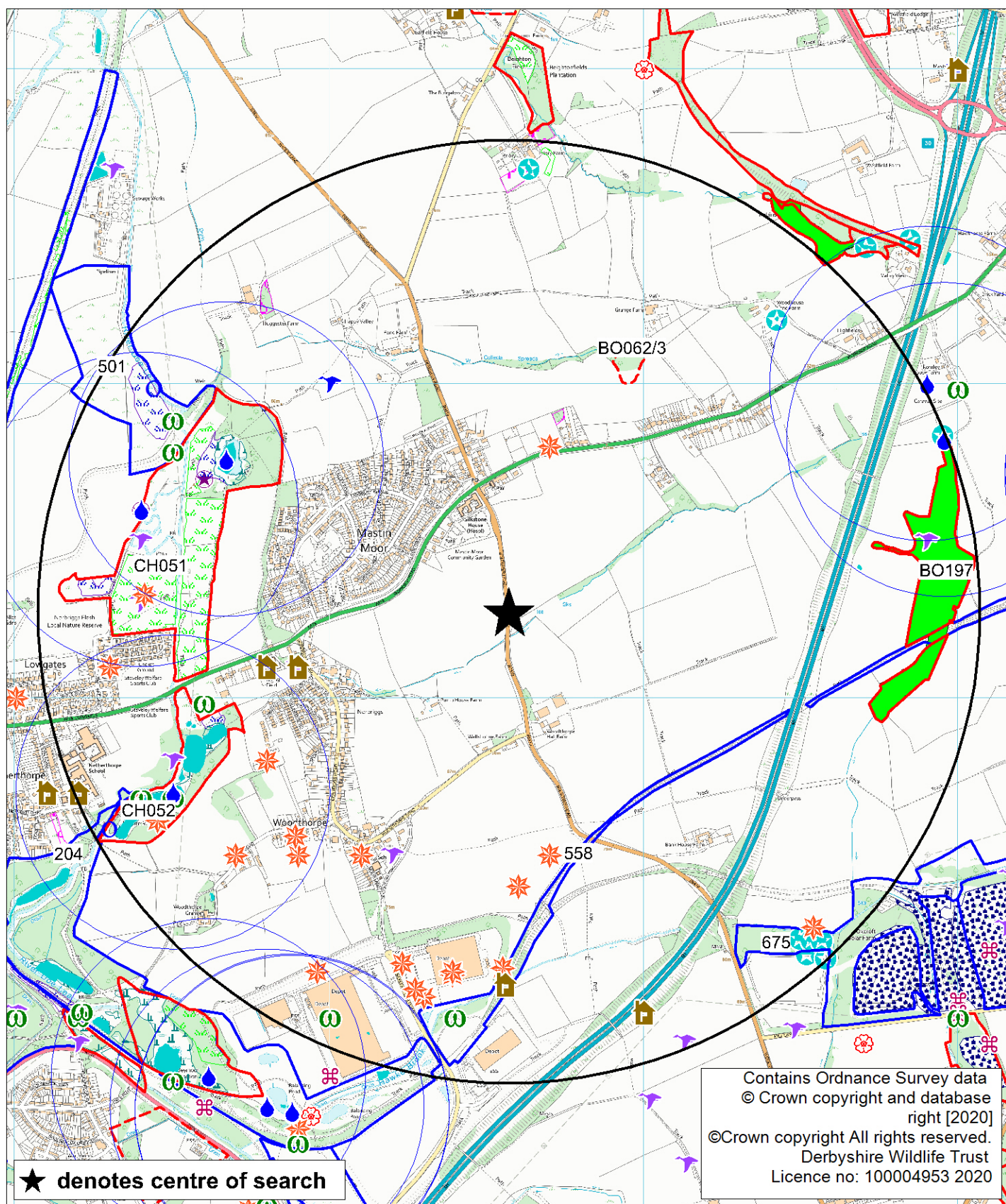
	Traditional Orchard
	Open Mosaic
	Purple Moor Grass and Rush Pasture
	Lowland Heath
	Lowland Fen
	Semi-natural Grassland
	Reedbed
	Lakes
	Historical Wood Pasture and Parkland
	Ponds
	Notable Invertebrate Ponds
	Ancient & Semi-natural Woodland
	Ancient Replanted Woodland

Non-statutory Designations

	Regionally Important and Geological and Geomorphological Sites (RIGS)
	Derbyshire Wildlife Trust Reserves
	Local Wildlife Sites (LWS)
	Potential Local Wildlife Sites (pLWS)
	Grade 3 Sites

Statutory Designations

	Sites of Special Scientific Interest (SSSI)
	Special Protection Area (SPA)
	Special Area of Conservation (SAC)
	National Nature Reserve (NNR)
	Local Nature Reserve (LNR)



**Produced for Penny Anderson Associates Ltd
by Derbyshire Biological Records Centre
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Mastin Moor**

APPENDIX 3
Botanical Species Lists

Appendix 3a Botanical Species List - Entire Site

Common Name	Scientific Name	DAFOR								
		Field Interiors (incl. margins)	SI Neutral Grass Verges	Brook (general)	Brook Woodland	Tall Ruderal	Scrub	Hedges (general)	Improved Grassland	Poor Semi- improved Grassland
Woody Species										
Alder	<i>Alnus glutinosa</i>							R		
Apple species	<i>Malus</i> sp.							R		
Ash	<i>Fraxinus excelsior</i>				O			R-O		
Birch species	<i>Betula</i> sp.							R		
Blackthorn	<i>Prunus spinosa</i>				O			O-F		
Bramble	<i>Rubus fruticosus</i> agg.	O		F-LA		O	A-D	O		R
Cypress species	<i>Cupress</i> sp.							R		
Dog rose	<i>Rosa canina</i>							R-O		
Elder	<i>Sambucus nigra</i>				LF			F		
English elm	<i>Ulmus procera</i>							R		
Field maple	<i>Acer campestre</i>				O			F		
Grey willow	<i>Salix cinerea</i>					F-LA	LA			
Hawthorn	<i>Crataegus monogyna</i>				F			F-A		
Hazel	<i>Corylus avellana</i>				O			O		
Holly	<i>Ilex aquifolium</i>							R-O		
Ivy	<i>Hedera helix</i>	O-LA			LD					
Pedunculate oak	<i>Quercus robur</i>							R-O		
Silver birch	<i>Betula pendula</i>							R		
Snowberry	<i>Symphoricarpos albus</i>							R		
Spindle	<i>Euonymus europaeus</i>							R		
Sycamore	<i>Acer pseudoplatanus</i>				O			O		
Wild cherry	<i>Prunus avium</i>							R		
Wild privet	<i>Ligustrum vulgare</i>							R		
Wych elm	<i>Ulmus glabra</i>							R		
Grasses and Rushes										
Barren brome	<i>Anisantha sterilis</i>	F-LA								F
Black-grass	<i>Alopecurus myosuroides</i>	LO								R
Cock's-foot	<i>Dactylis glomerata</i>	O-LA	LF						O	LF
Common couch	<i>Elytrigia repens</i>	O								
False oat-grass	<i>Arrhenatherum elatius</i>	A-LD	A	F		F				A-D
Hard rush	<i>Juncus inflexus</i>					R				
Meadow foxtail	<i>Alopecurus pratensis</i>									
Oat species	<i>Avena</i> sp.	R-LF								
Perennial rye-grass	<i>Lolium perenne</i>								A	
Red fescue	<i>Festuca rubra</i>		F-A						F	
Reed canary-grass	<i>Phalaris arundinacea</i>					R				R
Rough meadow-grass	<i>Poa trivialis</i>	O	F	R-LA						O-F
Soft brome	<i>Bromus hordeaceus</i>	O-LA	O							
Wheat	<i>Triticum</i> sp.	LD								
Yorkshire fog	<i>Holcus lanatus</i>		O							LA
Herbs and Ferns										
Bluebell	<i>Hyacinthoides non-scripta</i>				VLA					
Bracken	<i>Pteridium aquilinum</i>	R								
Cleavers	<i>Galium aparine</i>	O-LF	LF							
Common chickweed	<i>Stellaria media</i>	O								
Common field-speedwell	<i>Veronica persica</i>	R								
Common knapweed	<i>Centaurea nigra</i>		O-LF							
Common nettle	<i>Urtica dioica</i>	F-LD	O	F-A	O-LF	O-LA				A
Common poppy	<i>Papaver rhoeas</i>	R								
Common ragwort	<i>Senecio jacobaea</i>		O							R
Common vetch	<i>Vicia sativa</i>									
Cow parsley	<i>Anthriscus sylvestris</i>	F-LA	O-LF							O
Crane's-bill species	<i>Geranium</i> sp.	LA								
Creeping buttercup	<i>Ranunculus repens</i>				VLA				F	
Creeping cinquefoil	<i>Potentilla reptans</i>		O-F						LF	
Creeping thistle	<i>Cirsium arvense</i>	O-LA	O			LA				O
Cut-leaved crane's-bill	<i>Geranium dissectum</i>	LO								
Daisy	<i>Bellis perennis</i>								O	
Dandelion	<i>Taraxacum officinale</i> agg.								F	
Dog's mercury	<i>Mercurialis perennis</i>				R					
Field bindweed	<i>Convolvulus arvensis</i>	LF							R	
Field forget-me-not	<i>Myosotis arvensis</i>	R								
Garlic mustard	<i>Alliaria petiolata</i>	O								
Goat's-beard	<i>Tragopogon pratense</i>		R							
Great willowherb	<i>Epilobium hirsutum</i>			O-LA		A-LD				R
Greater plantain	<i>Plantago major</i>								O-F	
Groundsel	<i>Senecio vulgaris</i>	R								
Hedge bindweed	<i>Calystegia sepium</i>					O-LA	A			LF
Hedge mustard	<i>Sisymbrium officinale</i>	R-LO							R	
Hedge woundwort	<i>Stachys sylvatica</i>			R						
Himalayan balsam	<i>Impatiens glandulifera</i>					LA				
Hogweed	<i>Heracleum sphondylium</i>	O	O	O						F-LA
Japanese knotweed	<i>Reynoutria japonica</i>	R								
Knotgrass	<i>Polygonum aviculare</i>	R								
Lesser burdock	<i>Arctium minus</i>	R		O						
Lesser celandine	<i>Ficaria verna</i>				LF					
Lesser trefoil	<i>Trifolium dubium</i>									
Lords-and-Ladies	<i>Arum maculatum</i>				O					
Male-fern species	<i>Dryopteris</i> sp.				O					
Nipplewort	<i>Lapsana communis</i>	LA								
Oilseed rape	<i>Brassica napus</i>									
Pineappleweed	<i>Matricaria discoidea</i>	R-LA								
Prickly sow-thistle	<i>Sonchus asper</i>	R								
Red campion	<i>Silene dioica</i>				O					
Red clover	<i>Trifolium pratense</i>		O-LF							
Ribwort plantain	<i>Plantago lanceolata</i>		O							
Rosebay willowherb	<i>Chamaenerion angustifolium</i>			LF						
Scentless mayweed	<i>Tripleurospermum inodorum</i>	LA								
Spear thistle	<i>Cirsium vulgare</i>	R								

Common Name Scientific Name		DAFOR								
		Field Interiors (incl. margins)	SI Neutral Grass Verges	Brook (general)	Brook Woodland	Tall Ruderal	Scrub	Hedges (general)	Improved Grassland	Poor Semi- improved Grassland
Tansy	<i>Tanacetum vulgare</i>		O-LF							R
White clover	<i>Trifolium repens</i>								F	
White dead-nettle	<i>Lamium album</i>	R	R							R
Wild angelica	<i>Angelica sylvestris</i>			R-O						
Wood avens	<i>Geum urbanum</i>	R								
Wood dock	<i>Rumex sanguineus</i>	R								
Yarrow	<i>Achillea millefolium</i>		O						R	O-F
Yellow archangel	<i>Lamium galeobdolon</i>				VLA					

KEY

D-Dominant, A-Abundant, F-Frequent, O-Occasional, R-Rare, L-Locally

Red text - non native invasive plant species as listed on Schedule 9 of the WCA 1981 (amended)

Appendix 3b Indicative Botanical Species List - Hedges Only

Common Name	Scientific Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	17	18	19	20	21	22	23	24
Woody Species																								
Alder	<i>Alnus glutinosa</i>					R																		
An apple	<i>Malus</i> sp.						O																	
Ash	<i>Fraxinus excelsior</i>		R-O	O	R	R	F	R	R	R	R		R				R	R	R		O-LA	LO		
Black briony	<i>Tamus communis</i>		R							R	R								R			R	R	
Blackthorn	<i>Prunus spinosa</i>		R		LA	LA		LO	R	LF		R	R						O			F-LA		
Birch species (non-native)	<i>Betula</i> sp.						R																	
Cherry species	<i>Prunus</i> sp.		R	LA																R				
Cypress species	<i>Cupressus</i> sp.						R																	
Dog rose	<i>Rosa canina</i>			R			R	R	R	R												O		R-O
Elder	<i>Sambucus nigra</i>		O	O	F	O	O	R	O	O	O	O	R	O			O	O	O	O	O	O	O	O
English elm	<i>Ulmus procera</i>																					R		
Field maple	<i>Acer campestre</i>		R		A		O			R		R	O			LF		LF	O			LF	R	
Grey willow	<i>Salix cinerea</i>																			R				
Hawthorn	<i>Crataegus monogyna</i>	D	F-D	F	F-A	O	A	D	A	F-LA	D	D	D	A	A	D	D	D	A-LD	F-A	D	F-LD	D	D
Hazel	<i>Corylus avellana</i>			O	LA					R		R	R			R			O				R	
Holly	<i>Ilex aquifolium</i>			R			R						R			O	R	R	R-O			O		
Lime species	<i>Tilia</i> sp.																							
Pedunculate oak	<i>Quercus robur</i>		R	R		R												R	R	R				
Silver birch	<i>Betula pendula</i>						R																	
Snowberry	<i>Symphoricarpos albus</i>												R	R	A									
Spindle	<i>Euonymus europaeus</i>						R																	
Sycamore	<i>Acer pseudoplatanus</i>		O			O	O	R	R					R		O	R		R	R			R	
Wild cherry	<i>Prunus avium</i>											R		O										
Wild privet	<i>Ligustrum vulgare</i>			R							R								R					
Wych elm	<i>Ulmus glabra</i>							R																
Total Woody Species		1	9	9	6	7	12	7	6	8	5	6	8	5	2	5	5	6	11	6	3	9	6	3
Management																								
Managed/cut on all sides		Y	Y		Y			Y					Y				Y	Y						Y
Part managed/cut							Y	Y		Y	Y	Y		Y	Y						Y	Y	Y	
Umanaged				Y		Y										Y			Y	Y				

Penny Anderson
Associates Ltd
CONSULTANT ECOLOGISTS



Park Lea, 60 Park Road, Buxton, Derbyshire SK17 6SN