



Melton Borough Council

Melton Borough

Biodiversity and Geodiversity Study

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Contents

Executive Summary	1
Glossary	2
1.0 Introduction	3
1.1 Background	3
1.2 Borough Location	3
1.3 Purpose of the Study	4
1.4 Survey & Reporting Outputs	5
2.0 Background to Conservation Policy and Legislation	6
2.1 National Planning Policy	6
2.2 Local Planning Policy	7
2.3 Legislation	9
3.0 Methodology	11
3.1 Desk Study	11
3.2 Field Surveys	12
3.3 Assessment Overview	18
3.4 Identified Notable Areas	19
4.0 RESULTS: Borough Overview	20
4.1 Statutory Designated Sites	20
4.2 Non Statutory Designated Sites	25
4.3 Protected & Notable Species	30
5.0 RESULTS: Survey	34
5.1 Overview	34
5.2 SUE Sites Results	34
5.3 SUE Site Notable Areas	44
5.4 SHLAA Sites Results	48
5.5 Allocations/Reserve Sites Results	48
6.0 Overview of Habitats Surveyed	49
7.0 Mitigation and Enhancement Recommendations	54
7.1 Designated Sites	54
7.2 Habitats	55
7.3 Recommendations for further survey	56
7.4 Wildlife Corridors	57
7.5 Biodiversity Enhancement Site (BES) Opportunities	57
7.6 Monitoring	58
8.0 References	59



TABLES

Table 1: Species typically found in key habitats.....	16
Table 2: Statutory Designated Sites	20
Table 3a: Non-statutory designated sites within or adjacent to the SUE sites.	27
Table 3b: Non-statutory designated sites within or adjacent to the SHLAA sites.....	28
Table 4.1: SUE North Site Descriptions.....	35
Table 4.2: SUE South-east Site Descriptions	37
Table 4.3: SUE South Site Descriptions.....	39
Table 4.4: SUE West Site Descriptions	41
Table 5.1. Extent of Terrestrial Habitat within each SUE Site	43
Table 5.2: SUE Sites Notable Areas Results	44

APPENDICES

APPENDIX A – SUE Site Survey: List of Figures and Figures A1- A8, B1-B8 and C1-C8	
APPENDIX B – Preferred Site Survey: Figures A1- A11, B1-B33 and C1-C11	
APPENDIX C – Preferred SHLAA Survey Results	
APPENDIX D – Preferred SHLAA Target Notes	
APPENDIX E – Biodiversity and Environmental Legislation, Conventions and Threatened Lists	
APPENDIX F – Ecological Survey Season Calendar	
APPENDIX G – Planting Species List	
APPENDIX H – Phase 1 Habitat Survey Codes	
ADDENDUM 1 - Allocation and Reserve Sites	
APPENDIX I – Allocation/Reserve Site Survey: Figures A12- A24, B34-B67 and C12-C24	
APPENDIX J – Allocation/Reserve Site Survey Results	
APPENDIX K – Additional Allocation/Reserve Site Target Notes	



Executive Summary

Below are the main findings of the study and implications of biodiversity and geodiversity to the councils emerging development strategy.

Melton Borough Council required a Biodiversity and Geodiversity Study, including a Phase 1 Habitat Survey across the Borough of Melton to identify the Boroughs existing biodiversity resources and habitats.

The purpose of the study is to evaluate sites with potential to accommodate development within the Borough up to 2036. For Stage 1 this study, a Phase 1 Habitat Survey and a desk based study were completed to identify the significance and value of habitat and areas of biodiversity interest across the Borough and throughout four potential Sustainable Urban Extension (SUE) sites. Stage 2 of this study involved an assessment of the biodiversity and geodiversity implications of a range of SHLAA development sites as they emerge through the Local Plan. Stage 3 of this study was carried out in 2016 and involved an assessment biodiversity and geodiversity implications of Allocation and Reserve Sites, the results are provided in Addendum 1 and Appendix I, J and K.

The Study will identify the significance of the habitats and species within these sites and make recommendations as to;

- The level of protection that should be afforded to them in seeking land for future development and/or;
- The mitigation required to ensure that significant habitats and species are satisfactorily conserved as part of any development proposals.

A background to conservation legislation is provided in Chapter 2, with methodologies for the desk study and field survey provided in Chapters 3 and 4.

The Borough has 15 Sites of Special Scientific Interest (SSSI), 2 National Nature Reserves, 3 candidate Local Geological Sites, 15 ancient and ancient re-planted woodlands, 245 Local Wildlife Sites (LWS) identified and 217 candidate LWS designated by the Borough Council and Leicestershire County Council. There are no Local Nature Reserves in Melton Borough at the time of writing (September 2015).

The four SUE sites have been examined in Chapter 5 together with key wildlife sites, species records and results of the Phase 1 Habitat Survey including target notes.

Three areas within the SUE sites were found to be of high ecological value with significant ecological constraints, and 37 areas with moderate ecological value with some potential ecological constraints. These are described further in Chapter 6.

The principal output of the project is a set of three maps (in Appendix A) covering each of the sites and showing the following information:

- Existing information regarding protected species and designated sites;
- The results of the Extended Phase 1 Habitat Survey, including target notes where required (target note descriptions are in Appendix D);



- Areas that may have potential to qualify as Local Wildlife Sites, and key wildlife corridors across the landscape. An indication of likely ecological value of each SUE site and preferred SHLAA site is also illustrated.

The preferred SHLAA sites have been assessed in the same manner as the SUE sites, the plans are provided in Appendix B and the desk study and survey results are summarised in Appendix C.

Glossary

BAP	Biodiversity Action Plan
BES	Biodiversity Enhancement Site
DPD	Development Plan Document (Part of the LDF process)
GCN	Great Crested Newt
GCR	Geological Conservation Review
GIS	Geographical Information System
JNCC	Joint Nature Conservation Committee
LBAP	Local Biodiversity Action Plan
LDF	Local Development Framework
LGS	Local Geological Site
LRERC	Leicester and Rutland Environmental Records Centre
LNR	Local Nature Reserve
LRWT	Leicestershire and Rutland Wildlife Trust
LWS	Local Wildlife Site (cLWS – Candidate Local Wildlife Site)
NERC	Natural Environment and Rural Communities Act (2006)
MAGIC	Multi-Agency Geographic Information for the Countryside
MBC	Melton Borough Council
NBN	National Biodiversity Network
NNR	National Nature Reserve
NPAC	National Parks and Access to the Countryside Act (1949)
NPPF	National Planning Policy Framework
PDA	Potential Development Area
RPR	Rare Plant Register
RSPB	Royal Society for the Protection of Birds
SHLAA	Strategic Housing Land Availability Assessment
SSSI	Site of Special Scientific Interest
SUE	Sustainable Urban Extension
UKBAP	UK Biodiversity Action Plan



1.0 Introduction

CONFIDENTIAL: The protected species maps within this version of the report contain information regarding the location of badger setts, bat roosts and locations of other sensitive species and should not be included in any public dissemination of this report because of the risk of persecution of these species.

1.1 Background

WYG Environment (WYG) was commissioned by Melton Borough Council to complete a Biodiversity and Geodiversity Study including an Extended Phase 1 Habitat Survey to inform development proposals within the Borough, which is expected to have a population increase to 58,000 by 2036.

The findings of the study will be used to address the requirements of the *National Planning Policy Framework* to identify important habitats and areas of biodiversity, (including wildlife corridors and stepping stones) within assessment sites within the Borough.

Local governments have a duty to consider biodiversity under the *Natural Environment and Rural Communities Act (NERC Act, 2006)*, and to have regard to the safeguard of species protected under the *Wildlife and Countryside Act 1981*, the *Conservation of Habitats and Species Regulations 2010* and other species-specific legislation.

The *National Planning Policy Framework (NPPF)*, replaces the *Planning Policy Statement 9 (PPS9) Biodiversity and Geological Conservation*, however the accompanying Government circulars (ODPM Circular 06/2005, DEFRA Circular 01/2005) and Good Practice Guide documents have not been withdrawn and form the main driver for local planning authorities to consider biological and geological diversity.

Additional emphasis has been placed on local authorities to identify ecological networks, protection of designated sites of importance, and promotion for the recovery of priority species populations linked to the national targets (See NERC Act 2006).

The Extended Phase 1 Habitat Survey will help ensure that important species can be taken into account at all stages in the planning process but specifically through land allocations for future development.

An overview map of the Borough and the survey areas are provided in Appendix A and Appendix B.

1.2 Borough Location

The Borough of Melton is located in north-east Leicestershire, and is largely rural with an area of approximately 481.4 sq kilometres and a population of 50,500. The majority of the population live in the main urban area of Melton Mowbray in the south to centre of the Borough. The remainder of the Borough is mainly rural in character with larger rural settlements including Asfordby, Bottesford, Long Clawson and Waltham on the Wolds in the west and north of the Borough.



1.3 Purpose of the Study

The purpose of the study is to evaluate sites with the potential to accommodate opportunities for development within the Borough up to 2036. A desk based study and Extended Phase 1 habitat Survey have been carried out to identify the significance and value of habitats and areas of biodiversity and geodiversity interest within the Borough. The study areas have been assessed in two stages;

- Stage 1 included the assessment of four Sustainable Urban Extension (SUE) sites located to the north, south-east, south and west of Melton Mowbray.
- Stage 2 included the assessment of thirty-one smaller scale sites identified in addition to the SUE sites options to meet the outstanding requirements for development in the emerging Local Plan.

As outline by MBC, the objectives of the biodiversity and geodiversity study are;

- To provide a proportionate, up to date and robust evidence base to underpin the Council's emerging Local Plan in the context of bio-diversity and geo-diversity;
- To update the findings of the 2008 and 2011 Bio-diversity and Geo-diversity study and to provide evidence in relation to new sites that have been identified in the emerging Local Plan;
- To appraise and refresh the findings of the 2008 and 2011 Phase 1 Habitat Surveys (AMEC update report, 2011) (regarding the broad ecological characteristics of the Borough) and the Extended Phase 1 Habitat Survey (in relation to specific site options) to establish if the findings remain robust. Where necessary, the study report will be expected to update the findings of the previous studies to ensure that they are up-to-date and robust.
- To identify the areas of Biodiversity and habitats that are designated for their protection (to include European, National and Local level sites) including Sites of Special Scientific Interest, Local Wildlife Sites, Local Geological Sites and ancient woodlands;
- To meet the requirements of the National Planning Policy Framework (paragraph 117), to "identify and map components of the local 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 for habitat restoration or creation".
- To identify other areas that warrant protection as a result of direct and indirect development pressures including "candidate" and "potential" Local Wildlife Sites;
- To identify where there are habitats that could be improved and / or linked together better (wildlife corridors etc) as a result of development;
- To set a framework for the future assessment of specific sites that emerge through the emerging Local Plan preparation;
- To make objective recommendations that assist the Sustainability Appraisal and plan making process in identifying the least detrimental locations for new development;
- To understand the relationship that Melton Borough has with its neighbours in terms of bio-diversity and habitats, including important wildlife corridors.
- To make clear policy recommendations to manage development impacting biodiversity and geo-diversity interests.



- To provide the evidence base to support the application of the mitigation hierarchy in Development Management decisions.

1.4 Survey & Reporting Outputs

The assessment sites have been grouped by SUE site location which includes areas to the north, south-east, south and west of Melton Mowbray. A Melton map in Appendix A and Borough Map in Appendix B identifies where the SUE sites and SHLAA sites are located. The characteristic habitats of each SUE and SHLAA sites have been briefly discussed along with information regarding the findings of the Extended Phase 1 Habitat Survey and desk based study for each of the individual sites. For the smaller SHLAA sites the information has been provided in a table format, see Appendix C.

The principal output is a set of three maps covering each of the SUE sites and showing the following information:

- Figure Ax: Existing information regarding protected species and designated sites by settlement;
- Figure Bx: The results of the Extended Phase 1 Habitat Survey of assessment sites, including target notes where required;
- Figure Cx: Areas that may have potential to qualify as Local Wildlife Sites, and key wildlife corridors within and around settlements. Assessment sites are also coloured coded on this plan as to whether they are considered to be likely to be of relatively low, moderate or higher ecological value.

The definitions for the habitats ecological value classifications are as follows:

- **Green:** Site appears to be of relatively low ecological value. Further surveys may still be required to inform mitigation, e.g. for great crested newts, bats or badgers, but it is considered unlikely that there are significant ecological constraints to development of the site.
- **Amber:** Site of moderate ecological value. Ecological constraints on site such may include:
 1. existing non statutory designated site of conservation value within or immediately adjacent to the site;
 2. adjacent river/brook corridor;
 3. an area of woodland or adjacent to woodland;
 4. notable grassland, including road verges;
 5. 'important' hedgerows (Hedgerows Regulations 1997, Regulation 2(3) and 4 Schedule 1); or,
 6. areas where records of notable and protected species have been identified during the desk study.

We would recommend these habitats be retained within the final development. However, it is likely that further surveys and ecological input to the detailed site proposals could potentially allow development over at least some of the site.

- **Red:** Significant ecological constraints present within or adjacent to the site, e.g. statutory designated site of conservation value within or immediately adjacent to the site or a combination of more than one of the items listed under the Amber definition present. Detailed mitigation and compensation / enhancement measures likely to be required to allow development on these sites.



2.0 Background to Conservation Policy and Legislation

This study has been prepared taking into consideration the following policies and legislation:

2.1 National Planning Policy

The National Planning Policy Framework

The NPPF supports sustainable development and a move from a net loss of biodiversity, towards net gains, through the protection and enhancement of the natural environment. Paragraph 109 of the National Planning Policy Framework (NPPF) indicates that:

“The planning system should contribute to and enhance the natural and local environment by:

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

Paragraph 113 of the NPPF indicated that local planning authorities consider distinctions between the hierarchy of international, national and locally designated sites based on their importance.

Paragraph 114 of the NPF indicates that Local Planning Authorities should set out a strategic approach in their Local Plans, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure.

Paragraph 117 of the NPPF sets out how Local planning Authorities should consider geo-diversity and bio-diversity when developing their plans; in summary LPS’s are encouraged to consider:

- Plan for biodiversity at a landscape-scale (across local authority boundaries);
- Identify and map international, national and locally designated sites of importance for biodiversity, wildlife corridors and links and areas that would benefit from habitat restoration or creation;
- Promote the protection and recovery of priority species populations, and;
- Prevent harm to geological conservation interests and encourage creation of new geological features.

Local Planning Authorities are advised to develop an evidence base in order to consider the impact of proposals on matters of biodiversity and geodiversity.

Biodiversity Action Plan (BAP)

The UK *Biodiversity Action Plan* (UKBAP – UK Steering Group, 1995; UK Biodiversity Group, 1998 - 2000) lists and prioritises habitats and species and sets national targets to be achieved. The intent of the UKBAP, however, is much broader than the protection and enhancement of less common species, and is meant to embrace the wider countryside as a whole.



The UKBAP has recently undergone a review (Biodiversity Reporting and Information Group, June 2007) resulting in the identification of 391 'Priority' Species Action Plans (SAPs), 45 'Priority' Habitat Action Plans and 162 Local Biodiversity Action Plans.

Local Biodiversity Action Plans (LBAP) identify habitat and species conservation priorities at a local level (typically at the County level), and are usually drawn up by a consortium of local Government organisations and conservation charities.

2.2 Local Planning Policy

Local and Regional Plans of relevance to the current assessment include:

- Melton Borough Development (2015) consists of the saved policies of the Melton Local Plan (1999).

The relevant planning policies which are currently still relevant to biodiversity and geodiversity are:

- C13 – Sites of Ecological, Geological or Other Scientific Importance;
- C14 – Nature Conservation Value;
- C15 – Wildlife Habitat Protection, and
- C16 – Trees and Woodland

Policy C13 states that: "Planning permission will not be granted for development which could adversely affect:

- A designated SSSI (ecological), or National Nature Reserve unless there is no other site suitable for the purpose and an over-riding national need can be shown;
- A Local Nature Reserve or Site of Ecological Interest at County or District Level unless it can be clearly demonstrated that there is an over-riding national or local need for the proposal which clearly outweighs the need to safeguard the intrinsic nature conservation value of the site;
- A designated SSSI (Geological) or RIGS (now LGS) unless there is no other site suitable for the purpose and an over-riding national need can be shown;
- A site of Geological Interest at County or District Level unless it can be clearly demonstrated that there is an over-riding national or local need for the proposal which clearly outweighs the need to safeguard the intrinsic nature conservation value of the site.

Where there is a risk of damage to a designated site, planning conditions will be used, or Section 106 agreements sought, to secure the long-term management of the site, to restrict operations or to provide nature conservation features to compensate for any features lost.

Policy C14

The Habitats Directive requires Member States to endeavour to encourage the management of features of the landscape which are of major importance for wild flora and fauna. These features are those which, because of their linear and continuous structure or their function as 'stepping stones', are essential for migration, dispersal or genetic exchange. Examples include rivers with their banks, traditional field boundary systems, ponds and woods.



Policy C14 states that: "Planning permission for development which may adversely affect the nature conservation value of:

- Hedgerows and tree belts;
- Woodlands;
- River corridors and main drains;
- Marshes, ponds and lakes;
- Disused railway lines, and
- Semi-natural limestone grassland

Will only be permitted where conditions or Section 106 agreements are used to ensure their retention, replacement or re-instatement."

Policy C15

The presence of a protected species is a material consideration when a planning application is determined. The Council will take steps as necessary to protect endangered species from any adverse impacts of development by applying the following policy:

Policy C15 states that: "Planning permission will not be granted for development which would have an adverse impact on the habitat or wildlife species protected by law unless no other site is suitable for the development and the development is designed to protect the species or provision is made for the transfer of the species to an alternative site of equal value.

Policy C16

Small woodlands, hedgerows and individual trees are an integral part of the rural landscape of the area. Through recent changes in agricultural practice and disease, many trees and hedgerows have been lost. Where new development is proposed, the Council will attach particular importance to the protection of existing trees and hedgerows, adequate replanting and replacement. The Council is particularly concerned to ensure that ancient woodlands are protected from loss or damage and that clearance of broad-leaved woodlands for development (and agricultural use) are avoided. Wherever possible, areas of woodland accessible to the public or which make a significant contribution to the local landscape will be protected. Encouragement will also be given to the planting of trees and management of existing woodlands wherever possible.

Policy C16 states that: "Planning permission will not be granted for development which would result in:

- The loss or damage to areas of ancient woodland shown on the proposals map;
- The loss of trees or other woodland covered by a tree preservation order unless there is no other site suitable for the development and any trees felled are replaced at an alternative site of equal value".

Woodland Planting around Melton Mowbray

As the town of Melton Mowbray has expanded, so the urban edges have become more prominent from approach roads. Modern housing estates and industrial development provide in some instances an uncompromising and unattractive edge. Views of obtrusive elements in the town are particularly evident when approached from Grantham Road (A607), Saxby Road (B676) and Leicester Road (A607, South SUE). The Council will therefore seek to improve the appearance of the town in its



landscape setting by securing strategic planting in association with planning permissions on the edge of the town and by the planting of tree belts on the perimeter and further from the urban area along approach roads.

2.3 Legislation

2.3.1 International Legislation

Habitat Directive

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, or the 'Habitats Directive', is a European Union directive adopted in 1992 in response to the Bern Convention. Its aims are to protect approximately 220 habitats and 1,000 species listed in its several Annexes.

In the UK, the Habitats Directive is transposed into national law via the Conservation of Habitats and Species Regulations 2010 in England, Scotland and Wales, and via the Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland.

The Conservation of Habitats and Species Regulation 2010

This is the main piece of legislation which transposes the *Habitats Directive* into national law. The Regulations place a duty on the Secretary of State to propose a list of sites which are important for either habitats or species (listed in Annexes I or II of the Habitats Directive respectively) to the European Commission. These sites, if ratified by the European Commission, are then designated as Special Protection Areas (SPAs) within six years.

The Regulations also make it an offence to deliberately capture, kill, disturb or trade in the animals listed in Schedule 2, or pick, uproot, destroy, or trade in the plants listed in Schedule 5 (see Table B1, Appendix E).

The 2010 Regulations consolidate and update the *Conservation (Natural Habitats, &c.) Regulations 1994* (the 1994 Regulations) and any amendments.

2.3.2 National Legislation and Guidance

The Wildlife and Countryside Act 1981 (WCA 1981) (as amended);

The primary legislation covering endangered or threatened species in England which sets out the framework for the designation and protection of Sites of Special Scientific Interest (SSSIs).

The Countryside and Rights of Way (CROW) Act 2000

The CROW Act affords a greater level of protection to Sites of Special Scientific Interest (SSSIs), provides better management arrangements for Areas of Outstanding Natural Beauty (AONBs) and strengthens wildlife enforcement legislation (although there are no AONBs in Melton Borough). Section 74(2) of the Act requires the Secretary of State to list those habitats and species of principal



importance for the conservation of biodiversity in England, in accordance within the United Nations Convention of Biological Diversity 1992.

Natural Environment and Rural Communities Act (NERC) 2006

Section 40 of the NERC Act 2006 places a duty on all public authorities in England and Wales to have regard, in the exercise of their functions, to the purpose of conserving biodiversity. Section 41 (S41) of this Act requires the Secretary of State to publish a list (in consultation with Natural England) of habitats and species which are of principal importance for the conservation of biodiversity in England. The S41 list includes 56 habitats of principal importance and 943 species of principal importance.

Protection of Badgers Act 1992 (PBA 1992)

The main legislation protecting badgers in England and Wales is the *Protection of Badgers Act 1992* (the 1992 Act). This legislation protects both the badger itself and setts in current use.

The 1992 Act defines a badger sett as: "any structure or place which displays signs indicating current use by a badger"

The Hedgerows Regulations 1997

The *Hedgerows Regulations 1997* were made under Section 97 of the *Environment Act 1995* and came into force in 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification. Important hedgerows are defined by complex assessment criteria, which draw on biodiversity features, historical context and the landscape value of the hedgerow.



3.0 Methodology

3.1 Desk Study

Consultation with Melton Borough Council and Leicestershire County Council Ecologists has been ongoing throughout the study.

3.1.1 Existing Information

Background information for this study has been supplied by Melton Borough Council. A previous survey on similar areas was carried out in 2008 and subsequently updated in 2011. The update report (AMEC 2011) has been used for reference and up-to date information has been gathered to provide a robust assessment.

3.1.2 Record Search

Information was gathered from Leicestershire and Rutland Environmental Records Centre (LRERC) regarding the presence of nature conservation designations and protected and notable species in the wider area.

The data search covers:

- Statutory nature conservation designations, such as National Nature Reserves and Sites of Special Scientific Interest;
- Non-statutory nature conservation designations, such as Local Wildlife Sites;
- Protected species, such as badgers, great crested newts and bats; and
- Notable species, such as those listed in the local Biodiversity Action Plan.

Given the large amount of data returned from the data search, the data was filtered to highlight all records under 20 years old as records older than this are now out of date and may no longer be relevant.

The protected species layer, provided in Figures A1-A8 must be considered CONFIDENTIAL and not for dissemination to the public as the information it contains relates to potentially persecuted species.

3.1.3 Online Resources

In addition, a search for designations was made of Natural England's interactive, web-based MAGIC (Multi Agency Geographic Information for the Countryside) database, and species records were obtained from the National Biodiversity Network website (NBN Gateway).

3.1.4 GIS Analysis

Base maps and aerial photographs provided by the Borough Council were incorporated with biological records obtained from the Leicestershire and Rutland Environmental Records Centre. Other information sources used include data gathered to inform previous local plans, and the Local Biodiversity Action Plan (BAP), together with the consultant ecologists' local knowledge. All GIS analysis was undertaken using ArcGIS 10.2.2.



Using the information gathered during this study (including the data search, the phase 1 habitat survey results and aerial images), potential wildlife corridors have been identified and mapped on Figures C1-C8, in Appendix A. These corridors include rivers, brooks, active and disused railways, hedgerows, ponds, woodlands and grasslands, and attempt to connect designated sites of conservation interest throughout Melton Borough.

Complex habitats and linear features such as these wildlife corridors should be retained and enhanced where possible as a landscape wide feature within any development and appropriately buffered from direct and indirect impacts e.g. increases in lighting or disturbance.

3.1.5 Desk Study Limitations

Species records were returned from LRERC in September (SUE sites) and October/November (SHLARR sites) 2015. These returns did not include records made in 2015 and for some species/groups (e.g birds) 2014 records were not available.

Species records obtained from LRERC were predominantly supplied with a six figure Ordnance Survey grid reference (a small proportion had a four figure reference). Consequently, species records appear at the south west corner of the grids square (100 m or 1 km) where the actual observation was made.

At locations where numerous species records have been made, a number of records may occur at a particular grid reference and therefore are superimposed on the map. Thus an icon indicating notable birds may represent one record or multiple records. Where records for multiple species/groups (e.g notable birds and reptiles) occur at the same grid reference, icons have been moved the minimum distance (to the north-east) that permits all recorded species/groups to be clearly seen on the map.

3.2 Field Surveys

3.2.1 Survey Areas

Stage 1

Four potential SUE sites were identified by Melton Borough Council for this study. The location of the SUE sites is provided in the Borough plans supplied in Appendix A. The sites are located to the north, south-east, south and west of Melton Mowbray.

Stage 2

A total of thirty one preferred SHLAA sites identified by Melton Borough Council have been included in this study. The SHLAA sites are located across nine settlements within the Borough . A Borough wide plan showing the location of the SHLAA sites is provided in Appendix B Figures A1 and C1 and along with separate survey results for each settlement.

Access

These sites were accessed wherever possible from publically accessible footpaths and roads.



Where habitats were not visible from publically accessible locations or through previous studies, aerial interpretation was used to assess these habitats e.g. habitats located in depressions or beyond woodland/lines of trees. Further details for the locations of the areas assessed using aerial interpretation are provided in Section 3.2.6: Survey Limitations.

3.2.2 Extended Phase 1 Vegetation and Habitat Survey Methodology

The survey was undertaken in line with the nationally recognised methodology set out in the Institute of Ecology and Environmental Management's guidance on survey methodology (IEEM, 2010), and the Department for Communities and Local Government 'Planning for Biodiversity and Geological Conservation: A Guide to Good Practice' (ODPM, 2006). Surveys were also in accordance with the standard published Phase 1 Survey methodology (Joint Nature Conservation Committee, 2010).

Resolution was to individual field level, recording all boundary types and identifying habitats and features of substantive biodiversity and nature conservation value, especially UK priority habitats. The vegetation and habitat types within the site were noted during the walkover survey in accordance with the categories specified for a Phase 1 Vegetation and Habitat Survey (Joint Nature Conservation Committee, 2010); the survey mapping key is supplied in Appendix H. Dominant plant species were recorded for each habitat present, and in accordance with the published methodology, the survey did not record all plant species, but sufficient to allow habitat type to be confirmed and to identify areas and features of substantive biodiversity value.

The field survey comprised an 'Extended Phase 1 Survey' through the recording of evidence of protected and/or notable species of flora and fauna and recording of habitats suitable for such species. Groups considered included vascular plants, mosses and liverworts, mammals, birds, amphibians, reptiles and invertebrates and the survey recorded evidence of species and/or habitats likely to support populations or assemblages of substantive biodiversity and nature conservation value, particularly priority species.

The extended survey also identified significant habitats, species and other features which are priority habitats or species or which may act to support or function as habitats, wildlife corridors or stepping stones within the wider landscape and particularly those which may support priority species. Where necessary these features were target-noted to indicate accurate location and included:

- Supplementary information on sites, features and species of interest, particularly priority habitats and species (such as red list species);
- Information on sites too small to map and where habitat types are complex or are transitional or mosaics of habitats);

Habitats and features to be target noted comprise, veteran trees (see sections below), invasive species and other habitats or features likely to support protected and other notable species (see below).

3.2.3 Hedgerows

The survey included the recording of locations of species-rich/ancient hedgerows. A species-rich hedgerow is defined in the UK Biodiversity Action Plan as having 5 or more native woody species on average in any given 30 metre length.



These hedgerows were not assessed against The Hedgerow Regulations (1997) as this was not part of the brief. Woody species were recorded along the length of all hedgerows considered to be species-rich and the numbers of such species were counted in the hedgerow as a whole. For the purposes of this survey, and as defined by Defra (2007), woody species do not include climbers such as bramble (*Rubus*) species but do include roses (*Rosa*); also non-native woody species such as sycamore (*Acer pseudoplatanus*) do not count within this assessment, neither do species which, although native in the UK, are not considered native to Leicestershire, e.g. beech (*Fagus sylvatica*). The species statements in Jeeves (2011) have been used to determine the county status of vascular plants.

To be considered as a potential Local Wildlife Site, the hedgerow must be at least 1.3m (4ft) high and continuous with breaks only at gateways (or equivalent) and be at least 30 years old. At least 6 locally native woody species per 30m averaged out over the length of the hedge or five locally native woody species as above but with the addition of at least two associated habitat features. Such features include a ditch or stream on one or both sides for at least half the hedgerow length, a bank or stone wall supporting the hedgerow on one or both sides for at least half the hedgerow length, standard trees or pollards of at least 15cm trunk girth with an average of at least two per 100m of hedgerow, dead wood or old-laid sections along at least 10% of the hedgerow length or a parallel hedgerow within 15m.

3.2.4 Target Notes

Veteran trees

Locations of veteran trees have been mapped where identified although no further survey work has been carried out other than to list the species. Veteran trees are defined by Defra as those which 'are or look old relative to others of the same species' and by Natural England as 'a tree that is of interest biologically, culturally or aesthetically because of its age, size or condition'. The Local Wildlife Site selection criteria for mature trees were used to determine which trees were likely to fall within this category.

Mature and veteran trees are a priority habitat within the Leicester, Leicestershire & Rutland Biodiversity Action Plan. They are an important habitat resource for hole-nesting birds, roosting bats, fungi, lichens and saproxylic insects. Concentrations of mature trees are particularly valuable. The Local Wildlife Site selection criteria for mature trees were used to determine which trees were likely to fall within this category.

These criteria include evidence of heart-rot, in the form of visible rot hollows or bracket fungi or dead branches. Characteristics included: very large girth, measured at 1.3m above ground level although the qualifying girth varies between tree species. A minimum girth of 3.77m would be required for native oak trees, beech, sweet chestnut, horse chestnut, all limes, poplars and willow species; whereas a minimum of 3m would be required for ash and elm species. Designated trees may be living, dead or even fallen. Stumps should be at least 2m high.



Invasive species

Invasive plant species were recorded, and mainly comprised Himalayan balsam (*Impatiens glandulifera*) and water-fern (*Azolla filiculoides*) although, where present, other invasive species such as Japanese knotweed (*Fallopia japonica*) would be recorded where present.

3.2.5 Protected and Notable Species

The site was inspected for evidence of and its potential to support protected or notable species, especially those listed under the *Conservation of Habitats and Species Regulations 2010 (as amended)*, the *Wildlife & Countryside Act 1981 (as amended)*, including those given extra protection under the *Natural Environment and Rural Communities (NERC) Act 2006* and *Countryside & Rights of Way (CROW) Act 2000*, and listed on the UK and local Biodiversity Action Plans.

Various habitats are more likely to support specific protected species, as outlined in Table 1 below.

**Table 1: Species typically found in key habitats.**

Habitat	Species potentially present
Arable fields	Farmland birds, plants of arable margins, brown hare are also likely to be present but have not been recorded by LERC within, or close to the Assessment Areas. Allotments may support reptiles, birds, amphibians and notable invertebrates (particularly moths)
Grassland	Notable plants, reptiles, amphibians and invertebrates, particularly butterflies and moths
Tall ruderal	Invertebrates, reptiles, amphibians, nesting birds, harvest mice.
Hedgerows	Bats, badgers, birds, reptiles, amphibians, invertebrates
Woodland	Bats, badgers, birds, invertebrates, fungi
Scrub	Badgers, invertebrates, reptiles, birds, harvest mice
Rivers and brooks	Otters, water vole, birds, white clawed crayfish, bullhead, brook lamprey, aquatic invertebrates and aquatic plants
Ponds	Great crested newts, birds, water vole, red data book aquatic beetles and other aquatic invertebrates

The following species in particular were considered:

Great Crested Newts

The sites were appraised for their suitability to support great-crested newts. The assessment was based on guidance outlined in the Joint Nature Conservation Committees' published *Herpetofauna Workers' Manual* (Joint Nature Conservation Committee, 2003) and the *Great Crested Newt Conservation Handbook* (Langton, Beckett & Foster, 2001). A thorough search for ponds was not completed due to limited access, however, where they were visible from public rights of way they were recorded and mapped.

Reptiles

The assessment of reptile suitability was based on guidance outlined in the Joint Nature Conservation Committees' published *Herpetofauna Workers' Manual* (Joint Nature Conservation Committee, 2003).

Bats

Trees within the sites were appraised for their suitability to support breeding, resting and hibernating bats using survey methods based on those outlined in the Bat Conservation Trust's *Bat Surveys: Good Practice Guidelines* (Hundt; 2012) and English Nature's *Bat Mitigation Guidelines* (2004). These assessments took place from public rights of way using binoculars. Where visible, trees with potential features suitable to support roosting bats were target noted.



Badgers

Where access was possible, the sites were surveyed for evidence of badger setts or other badger activity such as paths, latrines or signs of foraging. Methodologies used and any setts recorded were classified according to published criteria (Harris, Cresswell & Jefferies, 1989).

Otters

Accessible sections of water courses were assessed for their suitability to support otters. This assessment was based on guidance outlined in Chanin, P. (2003) *Monitoring the otter*.

Water Voles

Following methods set out in the *Water Vole Conservation Handbook* (Strachan & Moorhouse, 2011), an assessment of accessible waterbodies within and adjacent to the sites was undertaken to determine their suitability to support water voles and a search for evidence of activity was undertaken, including droppings, latrines, burrows, footprints and feeding lawns, of any areas considered suitable.

Other Species

Sites were appraised for their suitability to support other protected or notable fauna including mammals, birds and invertebrates in accordance with the *Guidelines for Baseline Ecological Assessment* (Institute of Environmental Assessment, 1995). Evidence of any current or historical presence of such species was recorded. Plant species listed in the Leicestershire & Rutland Rare Plant Register (RPR) for Vice County 55 were also searched for. These comprise plants with three or fewer sites which are categorised as "rare" and those with between four and ten sites categorised as "scarce" (Jeeves, 2011).

3.2.6 Survey Limitations

To determine likely presence or absence of protected species usually requires multiple visits at suitable times of the year. As a result, this survey focuses on assessing the *potential* of the sites to support species of note, which are considered to be of principal importance for the conservation of biodiversity with reference to *National Planning Policy Framework* especially those given protection under UK or European wildlife legislation.

The results provided in this report do not contain enough ecological information to inform a planning application for an assessment site. However, they do provide an indication of a site's likely ecological value, and allow a broad assessment of sites.

The surveys in Melton Borough for the four SUE site were all carried out in August – early September 2015 and for the thirty-three preferred SHLAA sites in October 2015 which is at the end of the plant growing season, so some of the early flowering species (especially woodland and grassland species) could have been missed, however, where appropriate, an assessment of woodland quality (ancient or secondary) and grassland type could be made from the suite of plant species that were present. Although some of the areas were surveyed in October, this is not considered to represent a constraint to the survey findings, given the habitat types present at the majority of the sites.



The survey work was largely restricted to what could be seen from public rights of way. As such, a detailed search for evidence of protected species was not completed on every site, but an assessment was made of their potential to use the site.

Visibility from public rights of way and other open access land was restricted in three of the assessment sites; direct access to these sites was also unavailable at the times that the survey took place. Aerial interpretation only has been completed for these sites.

They comprised:

- West SUE: Land within and around the Defence Animal Centre HQ; no access or visibility. The area has been mapped as amenity grassland, the presence of buildings within this area was not possible to confirm.
- North SUE: Scalford Brook limited access to view this watercourse;
- North SUE: land immediately to the north-west of Scalford Road, which appears to be under construction.
- Throughout the SUEs: all land immediately adjacent to farm and residential properties.

Survey access restrictions for the SHLAA sites have been noted in Appendix C. Only one sites (MBC 104/13 Asfordby) was considered inaccessible or visible from nearby public footpaths and roadsides. These habitats have been mapped using aerial imagery.

3.3 Assessment Overview

Using the information obtained during the data search, aerial interpretation and site visits, a preliminary ecological assessment has been completed for each site. This classification is indicative, as sites were largely viewed from public footpaths and detailed species surveys have not been completed to confirm the presence or absence of notable species. Some sites, where access was not possible, have been interpreted purely using aerial images, see Section 3.2.6.

Each site has been given an indicative classification as green, amber or red, this colouring is illustrated on the plans C1-C8 in Appendix A. Further detail has been provided for the assessment defining the features in the amber classification, referenced 1-6 (see below), these references have also been provided on the C1-C8 maps.

- **Green:** Site appears to be of relatively low ecological value. Further surveys may still be required to inform mitigation, e.g. for great crested newts, bats or badgers, but there are not considered likely to be any significant ecological constraints to development of the site.
- **Amber:** There may be ecological constraints on site such as:
 1. existing non statutory designated site of conservation value within or immediately adjacent to the site;
 2. adjacent river/brook corridor;
 3. an area of woodland or adjacent to woodland;
 4. notable grassland, including road verges;
 5. 'important' hedgerows (Hedgerows Regulations 1997, Regulation 2(3) and 4 Schedule 1); or,
 6. areas where records of notable and protected species have been identified during the desk study.



We would recommend these habitats be retained within the final development. However, it is likely that further surveys and ecological input to the detailed site proposals could potentially allow development over at least some of the site.

- **Red:** Significant ecological constraints present within or adjacent to the site, e.g. statutory designated site of conservation value within or immediately adjacent to the site or a combination of more than one of the items listed under the Amber definition present. Detailed mitigation and compensation / enhancement measures likely to be required to allow development on these sites.

3.4 Identified Notable Areas

The assessment identified several notable habitats within the four SUE sites. Table 6 provides further details for the notable habitats classified as either amber or red and thus considered to be of ecological value; these areas are illustrated on plans C1-C8 in Appendix A.



4.0 RESULTS: Borough Overview

This section provides the results of the desk study and considers the statutory designated biodiversity and geodiversity resources with the Borough and then focuses on the non-statutory and protected species within and to a distance of 1km around the SUE sites.

A Borough wide plan and all Figure Ax plans include existing information regarding protected species and designated sites by SUE (Appendix A) and settlement containing surveyed SHLAAs (Appendix B).

4.1 Statutory Designated Sites

An assessment of Sustainable Urban Extension areas was carried out by AMEC in 2011, identifying the main biodiversity and geodiversity resources in their search areas around Melton Mowbray (AMEC 2011). There are no internationally designated sites such as Special Areas of Conservation, Special Protection Areas or Ramsar sites within or in close proximity to Melton Borough. Although it has been four years since the AMEC survey was carried out, there have not been any additional statutorily protected sites designated in or around Melton Mowbray since that time.

The Geological Conservation Review (GCR) is produced by the Joint Nature Conservation Committee (JNCC) and is designed to identify those sites of national and international importance needed to show all of the key scientific elements of the geological and geomorphological features of Britain. Sites designated under the GCR are of SSSI standard and display sediments, rocks, minerals, fossils and other features of the landscape that enable a specific understanding and appreciation of earth science and the geological history of Britain. The GCR means that sites formerly known as RIGS (Regionally Important Geological and Geomorphological Sites) are now known as Local Geological Sites (LGS) and they form the basis of statutory geological and geomorphological site conservation in Britain (JNCC, undated).

There are 15 SSSIs within Melton Borough, 3 of which are also National Nature Reserves. Summary information on these is shown in Table 2 below:

Table 2: Statutory Designated Sites

Designation	Site Name and approx. size	Distance & Direction and Grid Ref.	Summary of features
Site of Special Scientific Interest (SSSI)	River Eye(6ha)	Part directly adjoins the eastern boundary of the South East SUE (SK 782 185)	The site comprises an exceptional example of a lowland river, representative of clay streams in central England. The range of physical features such as riffle and pool systems, eroding earth cliffs and meanders support a wide diversity of plant and animal communities, the former including several pondweed (<i>Potamogeton</i>) species. The River Eye also supports notable invertebrates including native white-clawed crayfish, the water bug <i>Corixa panzeri</i> and the white-legged damselfly which is at the northern edge of its British range at this site.



Designation	Site Name and approx. size	Distance & Direction and Grid Ref.	Summary of features
National Nature Reserve and SSSI	Cribb's Lodge Meadows (4ha)	12.9Km east of the South East SUE (SK 899 188)	This site contains some of the best examples of species-rich neutral grasslands in Leicestershire, which have developed on soils derived from glacial boulder clay. The suite of grassland species include many indicative of good quality habitat (Axioophytes) including pepper-saxifrage (<i>Silaum silaus</i>), adder's-tongue fern (<i>Ophioglossum vulgatum</i>) and one of the few remaining colonies of green-winged orchid (<i>Anacamptis¹ morio</i>) in Leicestershire. Notable invertebrates include green hairstreak (<i>Callophrys rubi</i>) and grizzled skipper (<i>Pyrgus malvae</i>) butterflies; both of which are declining in Leicestershire & Rutland. This site is also a nature reserve owned by the LRWT
SSSI	Wymondham Rough (6ha)	6.4Km south east of the South SUE (SK 833 174)	This site contains some of the best remaining examples of neutral clay grassland in Leicestershire and has developed on glacial boulder-clay, Lower Lias clay and alluvium. Both dry and wet grassland are represented, the former including drop-wort (<i>Filipendula vulgaris</i>) and betony (<i>Stachys officinalis</i>) which are becoming scarce in the county. Wet grassland species include ragged robin (<i>Silene² flos-cuculi</i>) and water avens (<i>Geum rivale</i>). This is another nature reserve owned by the LRWT
SSSI	Stonesby Quarry (3.2ha)	5.6Km N.E of the North SUE (SK 812 251)	This is a former quarry of Lower Lincolnshire Limestone where semi-natural limestone grassland has developed, representing one of the best remaining limestone grasslands in the county. Notable plants include autumn gentian (<i>Gentianella amarella</i>), clustered bellflower (<i>Campanula glomerata</i>) and woolly thistle (<i>Cirsium eriophorum</i>). Notable breeding birds include spotted flycatcher (<i>Muscicapa striata</i>) and turtle dove (<i>Streptopelia turtur</i>).
SSSI	Briery Wood Heronry (5.6ha)	13Km N.E of the North Sue (SK 824 329)	This site contains the largest grey heron (<i>Ardea cinerea</i>) colony in Leicestershire with up to 30 pairs nesting in mature oak

¹ Formerly *Orchis morio* and listed as such on the Cribb's Lodge Meadow SSSI citation

² Formerly *Lychnis flos-cuculi* and listed as such on the Wymondham Rough SSSI citation



Designation	Site Name and approx. size	Distance & Direction and Grid Ref.	Summary of features
			and ash woodland.
SSSI	Croxton Park (97ha)	7km N.E of the North SUE (SK 819 276)	This site is of medieval origin and represents what is probably the best remaining example of mature parkland in Leicestershire with largely unimproved acidic to neutral pasture surrounding the trees. There are also areas of marshy grassland. The lichen flora is described as "outstanding" in the citation and contains more than 90 species growing on the trees and stone walls with many rare and scarce species recorded, including the only site in the county for <i>Lecania baeomma</i> . The breeding bird assemblage also includes several species which have become scarce in the county such as redstart (<i>Phoenicurus phoenicurus</i>) and corn bunting (<i>Emberiza calandra</i>).
SSSI	Frisby Marsh (10ha)	3.8Km W of South SUE (SK 686 173)	This site contains some of the best remaining marsh in Leicestershire and comprises a complex of wetland habitats including grassland and woodland. The spring-fed marshes support populations of the county-scarce ³ marsh valerian (<i>Valeriana dioica</i>) and marsh arrow-grass (<i>Triglochin palustre</i>). There are also areas of reed swamp and a relict ox-bow lake derived from the River Wreake.
SSSI	Grantham Canal (9.45ha)	9.8Km N of North SUE (SK 768 345)	This extensive site includes some of the best areas of open water and associated marginal habitats in Leicestershire and is representative of slow moving river vegetation communities in central and eastern England. The banks of the canal include neutral grassland and grazed marsh communities. The latter include tubular water-dropwort (<i>Oenanthe fistulosa</i>) which is scarce in Leicestershire and is nationally vulnerable ⁴ . A wide diversity of floating and submerged species are also present. Notable fauna include populations of variable damselfly (<i>Coenagrion pulchellum</i>) and hairy dragonfly (<i>Brachytron pratense</i>) of county importance.
SSSI	Debdale Meadow,	19Km N.E of	This is described in the citation as "an

³ i.e. found in between 4 and 10 1km squares in VC 55 (Leicestershire & Rutland)

⁴ Cheffings & Farrell 2014 Vascular Plant Red List for England



Designation	Site Name and approx. size	Distance & Direction and Grid Ref.	Summary of features
	Muston (4.3ha)	North SUE (SK 835 393)	outstanding example of a traditionally managed neutral grassland of a type now rare in lowland Britain". The grassland supports the county-scarce saw-wort (<i>Serratula tinctoria</i>) besides other herbs characteristic of unimproved swards.
SSSI	Harby Hill Wood (17ha)	6.5Km N of North SUE (SK 761 282)	This site is dominated by ash-sycamore broad-leaved woodland, grassland and spring-fed marshes. The woodland is not considered to be ancient but is notable in containing a colony of wild daffodil (<i>Narcissus pseudonarcissus</i>) although Jeeves (2011) considered this to be "doubtfully native" in Leicestershire. The species-rich dry grassland to the south of the wood contains a diverse range of species including meadow saxifrage (<i>Saxifraga granulata</i>).
SSSI	Holwell Mouth (15.7ha)	2.8Km N.W of North SUE (SK 725 245)	This site includes some of the best examples of neutral marsh in Leicestershire, developed on base-poor clay soils. It comprises a valley cut by the River Smite into Jurassic Middle and Lower Lias series. The spring-fed marsh supports a diverse flora including the county-scarce marsh valerian and various sedges. The dry grassland is also herb-rich containing many species characteristic of unimproved swards such as meadow saxifrage and pignut (<i>Conopodium majus</i>). The upper valley slopes and northern end of the site are covered in ash woodland with wood anemone (<i>Anemone nemorosa</i>) and native bluebell (<i>Hyacinthoides non-scriptus</i>).
SSSI	King Lud's Entrenchments & The Drift (24ha)	11.5Km N.E of the North SUE (SK 860 281)	The site contains some of the best remaining examples of limestone grassland in Leicestershire, representative of swards developed on soft limestones in central and southern England. This SSSI extends into South Lincolnshire. The grassland is dominated by tor-grass (<i>Brachypodium pinnatum</i>) and the diverse range of herbs include some species which are rare and declining in Leicestershire and nationally such as basil-thyme (<i>Clinopodium acinos</i> ⁵) and purple milk-vetch (<i>Astragalus danicus</i>)

⁵ Formerly *Acinos arvensis* and listed as such on the SSSI citation.



Designation	Site Name and approx. size	Distance & Direction and Grid Ref.	Summary of features
			which are both listed on the county RPR.
NNR, SSSI	Muston Meadows (8.7ha)	17Km N.E of North SUE (SK 823 366)	This site contains some of the best remaining examples of neutral clay grassland in the Midlands and provides a fine example of ridge and furrow grassland. The diverse range of herbs includes the largest colony of green-winged orchids in the county. The field ponds support a population of great crested newts. The species-rich hedgerows and mature trees add further biodiversity value to the site.
SSSI	Owston Wood (140ha)	10Km S.E of both the South and South-East SUEs (SK 790 065)	The woodland is noted for its ancient semi-neutral woodland which remains and is dominated by Ash <i>Fraxinus excelsior</i> and hazel <i>Corylus avellana</i> with smaller areas of alder <i>Alnus glutinosa</i> .
SSSI, LGS Site	Sproxton Quarry (5.4ha)	11Km N.E of both the North and South-East SUEs (SK 863 252)	This is a geological SSSI and provides one of the finest and most complete sections of the Lower Lincolnshire Limestone Formation together with the underlying Grantham and Northampton Sand Formation. The main significance of this section rests in the stratigraphical and sedimentological features of the Lower Lincolnshire Formation, particularly its rare ammonites.
SSSI	Terrace Hills Pasture (11.2ha)	11.8Km S of the South SUE (SK 794 309)	The site contains some of the best remaining examples of calcareous old pasture in Leicestershire. The pasture occupies the slopes of a large undulating field which in part had been previously quarried and is studded with pits and mounds. To the north, the soils are derived from the Jurassic Marlstone rock bed whilst to the south; they are derived from clays of the Middle Lias series. The sward contains many species associated with calcareous soils including notable herbs such as meadow saxifrage and small scabious (<i>Scabiosa columbaria</i>). An area of marsh derived from a small spring contains typical wetland plants including the county-scarce marsh arrow-grass.

None of the Boroughs statutory designated sites are located within or adjacent to the SHLAA sites.



The extent of the River Eye SSSI covers 13.65Ha between the O/S Grid References SK 764188 and SK 802186. Only a small fraction of this SSSI borders the South East SUE site although nearly half of the SSSI length is within 1km.

4.2 Non Statutory Designated Sites

The lack of internationally designated sites and relatively low number of nationally designated sites in the counties of Leicestershire and Rutland means that those sites of local importance assume increased local significance (quote from Evans, D. 1989, Leicester County Ecologist and LWS Panel Member, in Draft Guidelines for the selection of Local Wildlife Sites (LWS) in Leicester, Leicestershire & Rutland, 2011 update).

Current planning guidance requires that Local Development Frameworks indicate the location of designated sites, including locally designated sites.

4.2.1 Local Wildlife Sites

The current system of identifying non-statutory wildlife sites in Leicester, Leicestershire and Rutland is the Local Wildlife Sites system. These are designated locally by the Leicester, Leicestershire and Rutland Local Wildlife Site Panel of local nature conservation experts. The procedure for their designation follows national guidance published by DEFRA in 2006 (local sites, guidance on their identification, selection and management). A total of 230 Local Wildlife Sites have been identified within Melton Borough. Local Wildlife Sites in proximity to surveyed sites are identified on the data search plans for the relevant SUE sites (Figures A1-A8 in Appendix A) and SHLAA sites (Figures A1-A11 in Appendix B). The description below has been provided by the Leicestershire County Council Ecologist and the Local Record Centre.

Sites may only be designated if they meet the criteria set out in the 'Guidelines for the selection of Local Wildlife Sites in Leicester, Leicestershire and Rutland' published by Leicestershire County Council on behalf of the Local Wildlife Sites Panel. These guidelines are revised periodically and the most up-to-date version is from 2011. The criteria are based on the Local Biodiversity Action Plan (LBAP) and the current list of UK Biodiversity Conservation Priority habitats and species and have been largely determined by the Panel. The designation is therefore a material consideration in the planning process (see Chapter 2).

The first Local Wildlife Sites were designated in Leicester, Leicestershire and Rutland in 2000. Because it can be demonstrated through survey data why and how a site meets the Local Wildlife Site criteria, the system is transparent and objective and the condition of the sites can be readily monitored. Local Wildlife Sites are (by definition) of County-wide value for wildlife.

A weakness of the Local Wildlife Site system in Leicester, Leicestershire and Rutland is that it is not necessarily based on comprehensive survey of an area, and the suite of designated Local Wildlife Sites only represents a portion of sites that have biodiversity value. The proportion of sites of value designated as Local Wildlife Sites varies across the overall area of Leicester, Leicestershire and Rutland but may be as low as 10%.



Candidate Local Wildlife Sites

Local Wildlife Sites must have the consent of the landowner before designation, in line with national guidance. This means that some sites that are known to meet the Local Wildlife Site criteria are not designated as Local Wildlife Sites, for example because the landowner does not wish it; or because the landowner has not been approached for permission or is unknown; or because formal designation is pending. These sites are known as Candidate Local Wildlife Sites, and have the same status in planning terms as designated Local Wildlife Sites; the Local Wildlife Site criteria underpin a robust system that stands up to legal challenge, giving a more easily understood basis for site selection that can be readily defended at public inquiries.

Potential Local Wildlife Sites

These are sites where survey data indicates that it is likely that the site will meet the Local Wildlife Site criteria but for which further survey data is needed to be sure. All Potential Local Wildlife Sites are important in the context of the Local BAP, since they all support priority habitats and/or priority species and are therefore a material consideration in the planning system. These include species rich hedgerows and notable grassland habitats as detailed in Table 5.2 for the SUE sites and Appendix C for the SHLAA sites.

Geodiversity Sites

Since 2006, Defra has recommended the term Local Geological Sites (LGS) to replace the previously used term "Regionally Important Geological Sites" or RIGS (Defra 2006, Defra 2008). The LGSs in Leicestershire are still being reviewed to ensure they have all been recorded under a consistent assessment framework. As with biological Local Wildlife Sites, candidate Local Geology Sites are termed cLGS in Table 3a within or adjacent to the SUE sites and Table 3b within or adjacent to the SHLAA sites. All LGS's within Melton Borough are shown on the borough wide Plan SHLAA A1.

Location of Local Wildlife Sites

A total of seven Local Wildlife Sites and three candidate Local Wildlife Sites are located within the SUE sites or directly adjoin them. A large proportion of Melton Country Park has been formally ratified as an LWS since the AMEC report of 2011 when it was listed as a candidate LWS (cLWS). The remaining areas in Melton Country Park are under consideration as cLWS to allow the entire Melton Country Park to be designated as a LWS.

The North SUE contains three candidate Local Wildlife Sites (cLWS), one of which extends northwards from Melton Country Park outside the survey area and 1km data search buffer zone. A further three Local Wildlife Sites directly adjoin the boundaries of the SUE area.

The West SUE contains three Local Wildlife Sites and another that adjoins it.

Summary details of Local Wildlife Sites within or adjacent to the SUE are shown in Table 3a; the numbers in brackets refer to the designation number. A further three Local Wildlife Sites are located adjacent or within 30m of the SHLAAs, these are shown in Table 3b.

**Table 3a: Non-statutory designated sites within or adjacent to the SUE sites.**

North SUE			
Designation	Site Name	Distance & Direction	Summary of features
cLWS	Melton to Bingham Disused Railway (90046)	Within the SUE	Semi-improved neutral grassland with scrub.
cLWS	Sysonby Farm Ash	Within SUE	Veteran tree
cLWS	Nottingham Road Ash	Within SUE	Veteran tree
LWS	Scalford Brook (46785)	Adjacent to the SUE	A range of physical features such as gravel substrate, natural meanders and sections of fast flowing water interspersed by deep pools. Marginal aquatic vegetation is also present.
LWS	Melton Country Park (80080)	Adjacent to SUE	This site has been designated for standing water with swamp vegetation, semi-improved neutral grassland and scrub. There are recent records of water vole (a local Red Data Book species) and foraging bats. The site is also of significant value to the local community as public open space.
LWS	Nottingham Road Hedgerow (45397)	Adjacent to SUE	Ancient species-rich hedgerow
cLGS	Browns Hill Quarry	2Km N of the North SUE	The geological interest of the site consists of an excellent exposure of Middle Lias Marlstone and Upper Lias Paper Shales. Above these, the Upper Lias Shales are part of the Whitby Mudstone Formation. Exposures are particularly fossil rich.
cLGS	Holwell North Quarry	2.5Km N of the North SUE	The major interest of the site lies in an outstanding exposure of Upper Lias clays, shales and limestone and Middle Lias (Jurassic) Marlstone similar to that of Browns Hill Quarry. As with that site, the exposures in this quarry are also fossil rich.



South-east SUE			
None			
South SUE			
None			
West SUE			
Designation	Site Name	Distance & Direction	Summary of features
LWS	Melton Railway Sidings (east and west) (27072)	Within SUE	Semi-improved neutral grassland and elements of wet grassland. Aquatic vegetation present along the ditch forming the northern boundary of the site.
LWS	Melton Railway Sidings (north) (26148)	Within SUE	Semi-improved neutral grassland with elements of wet grassland
LWS	Bull Field (46165)	Within SUE	Semi-improved neutral grassland with ox-bow from the River Eye. The LWS also includes marginal vegetation on the south bank of the river
LWS	Leicester Road Grassland (26149)	Adjoins SUE	Semi-improved neutral and wet grassland and an area of swamp which is seasonally inundated

Table 3b: Non-statutory designated sites within or adjacent to the SHLAA sites.

Long Clawson			
Designation	Site Name	Distance & Direction	Summary of features
LWS	Bottesford (54206)	30 m to west MBC/057/13	Mesotrophic grassland
cLWS	Long Clawson Cemetery (90571)	Adjacent to MBC /168/15	Mesotrophic grassland
LWS	Waltham on the Wolds (28467)	East of Bescaby Lane MBC/055/13	Mesotrophic grassland



County, District and Parish Level Sites

Prior to the adoption of the Local Wildlife Site system, a different system of non-statutory sites was used. This three-tier system of County, District and Parish Level Sites was less transparent than the Local Wildlife System and did not need to meet published criteria for designation. A great advantage of the old County, District and Parish system was that it was largely based on comprehensive surveys of the area, carried out between 1979 and 1991. In many ways therefore, it represents a better picture of the overall biodiversity value of an area than the current Local Wildlife Site system as fewer sites would have been missed.

Despite this, it is of course out-of-date and many of the original sites are known to have been damaged, destroyed or neglected. Conversely, new sites of value will have been discovered (for example on formerly developed land, much of which can be of great value to biodiversity). Other sites may have been agriculturally improved or developed.

Some habitats were under-represented in the Parish, District, County system (veteran trees and semi-improved grasslands for example), possibly reflecting their relative frequency in the landscape compared with the present day. It is known that these two habitats have suffered serious decline in value and extent across lowland Britain in the last 25 years. Plantation woodlands now seem to be over-represented, in the context of a great deal of new woodland planting in our area over the last 25 years. So, although most of the woodland Parish level sites are still present, few meet the Local Wildlife Site criteria.

Despite this, the County, District, Parish level sites are still the only comprehensive evaluation of sites in Leicestershire and Rutland for biodiversity value, and as many of the sites are still present and meet the Local Wildlife Site criteria, they are an important part of the Site Alert System. It should be noted that many of the County level sites have subsequently been designated as SSSIs and are therefore of national value. If a site was designated as either a County, District or Parish level site, it should be assumed that it is still of value unless recent surveys demonstrate otherwise.

A large number of County, District and Parish level sites were provided by LERC. Those listed as defunct, destroyed, former etc have been excluded from this analysis.

Leicestershire Biodiversity Action Plan Habitats

Leicestershire Local BAP habitats of relevance to the Borough include: semi-natural broad-leaved woodland, eutrophic standing water, rivers, field margins, floodplain wetlands, hedgerows, mature trees, mesotrophic lakes, neutral grassland, roadside verges, rocks and built structures, springs and flushes, urban habitat and wet woodland.

Wildlife Corridors

Green networks were defined by Barker (1997) as 'natural or permanently vegetated, physically connected spaces, situated in areas otherwise built up or used for intensive agriculture, industrial purposes or other intrusive human activities. They may include land to which there is no general access, such as private gardens and estates'. Features such as these can be used as corridors to allow species to travel between rural and urban areas. Narrow strips of habitat may be vulnerable to edge effects and consequently the wider corridor can be, the better for many species.



Retention and enhancement of an integrated complex of wildlife corridors at the local and landscape scale is essential to allow species dispersal, particularly as climate change is already affecting the population and range of many UK species. One of the retained policies in the now defunct PPS9 states that 'networks of natural habitat can link sites of biodiversity importance and provide routes or stepping stones for migration, dispersal and genetic exchange of species in the wider environment. Local authorities should aim to maintain networks by avoiding or repairing the fragmentation and isolation of natural habitats through policies such as plans. Such networks should be protected from development, and, where possible, strengthened by or integrated within it'.

Consequently, one of the main purposes of this study is to identify habitat features that may function as wildlife corridors through the survey areas and connecting them with other features of biodiversity value within the Borough. These should be conserved and enhanced wherever possible. These corridors will not carry a statutory designation but will provide an indication of where landscape scale features of value to wildlife are present.

Veteran Trees

Generally, veteran trees have not been designated as Local Wildlife Sites, except where they contribute to habitats which meet the Local Wildlife Site criteria in their own right such as water courses or species-rich hedgerows. There are however a few individual veteran trees which have recently been identified as candidate or potential Local Wildlife Sites in the years preceding this survey. Previously unrecorded potential veteran trees were also found during the current survey and the locations of these have been target noted. Such trees often provide roosting features for bats, habitat for hole-nesting birds and support numerous invertebrates and occasionally other epiphytic plants too (such as ferns, mosses or lichens).

Biodiversity Enhancement Sites

The Borough contains several designated sites which have their own biodiversity management aimed at enhancing / maintaining the conservation status of the site. The Borough currently has no potential Biodiversity Enhancement Site (BES). Leicester City Council has identified several BES's within the city which would benefit from biodiversity management and enhancement and are considered suitable sites for biodiversity offsetting for future development within the city. Similarly Melton Borough Council would like to identify potential BES's within the SUE sites; these have been discussed in Section 6.4.

4.3 Protected & Notable Species

Protected and notable species records were obtained from LRERC with detailed assessment of records going back to 1995. The protected species layer should be considered CONFIDENTIAL and not for dissemination to the public as the information it contains relates to potentially persecuted species. The Leicester and Rutland Ornithological Society have also deemed some bird species (which are not listed on Schedule 1 of the Wildlife & Countryside Act) to be vulnerable to egg collectors or to disturbance at the nest and details of these species must also be kept confidential. The Ax plans have been published in a non-confidential version which does not include the location of otter or badger evidence.



4.3.1 Great Crested Newts & Other Amphibians

Great crested newt (*Triturus cristatus*) has been recorded from the environs of Melton Country Park in the North SUE, including garden ponds. There is also a cluster of records from the vicinity of Burton Lazars within 1km of the South East and South SUEs and from the golf course in the West SUE.

Great crest newt has been recorded to the west of Ashfordby Hill, at the Melton Sailing Club north of Frisby on the Wreake, has an abundance of records at Long Clawson and has been recorded at ponds in Melton Mowbray, Somy, and Waltham on the Wolds.

Common frog (*Rana temporaria*), common toad (*Bufo bufo*) and smooth newt (*Lissotriton vulgaris*) were widely recorded from across the four SUE sites and SHLAA Settlements.

4.3.2 Reptiles

Grass snake (*Natrix natrix*) was the only reptile with records returned through the data search and was recorded from the vicinity of all four SUE sites. It was recorded from Melton Country Park and Scalford Brook in the North SUE as well as for gardens near the country park. This species has also been recorded from Burton Lazars and gardens on the southern fringe of Melton Mowbray in the South East SUE and Eye Kettleby Lake and Dalby Airfield in the South SUE. The majority of records came from the vicinity of the West SUE and the River Wreake and tributaries.

All SHLAA settlements include record for reptiles, all grass snake, with their abundance being greater in areas of grassland associated with waterbodies.

4.3.3 Bats

Common pipistrelle (*Pipistrellus pipistrellus*) and undifferentiated pipistrelle species were the most frequently recorded bats in all four SUE sites and several roosts were identified outside the SUE's. There were also several roosts of unidentified bats in the Burton Lazars area adjacent to the South East SUE and on the southern and western fringes of Melton Mowbray adjacent to the South SUE and West SUE respectively.

Noctule (*Nyctalus noctula*), soprano pipistrelle (*Pipistrellus pygmaeus*) and brown long-eared bat (*Plecotus auritus*) were also widespread across all four SUE sites with numerous roosts identified outside the SUE's. There were also records for undifferentiated bat species of the genus *Myotis* with several records adjacent to all four of the SUE sites. *Myotis* bats which had been defined to species level comprised single records for Natterer's bat (*Myotis nattereri*), Daubenton's bat (*M. daubentonii*) and two records of whiskered bat (*M. mystacinus*); both of the latter relating to roosts.

All SHLAA settlements include numerous records for bat, with their abundance being greater in areas of buildings and potential bat roost sites.

4.3.4 Badger

Badgers (*Meles meles*) were widely recorded across all four SUE sites and in almost all the settlements containing SHLAA sites, with many records of setts. It seems likely that badgers are present across the majority of Melton Borough and the mapped distribution of badgers is merely a reflection of where they have been specifically searched for.



Badger evidence has been recorded in abundance at all SHLAA settlements with their greatest abundance recorded at Waltham in the Wolds.

4.3.5 Water Vole

There are records of water voles (*Arvicola amphibius*) from Melton Country Park, Scalford Brook and Thorpe Road stream in the North SUE, the River Eye and tributaries in the South East SUE, the Rivers Eye and Wreake in the South SUE and these rivers in the West SUE also.

Water vole records were provided for Melton Mowbray SHLAA settlements area only, as detailed above.

4.3.6 Otter

Otters (*Lutra lutra*) were recorded from Melton Country Park and Scalford Brook adjacent to the North SUE, the River Eye in the South East SUE, the River Wreake in the South SUE and a tributary of the River Wreake in the West SUE.

Otter has been recorded to the west of Ashfordby Hill near the weir, at waterbodies near Ashfordby north of Frisby on the Wreake, and along waterbodies at Melton Mowbray.

4.3.7 Birds

A range of legally protected bird species records, listed on Schedule 1 of the Wildlife & Countryside Act (1981) were returned through the data search with particular concentrations at Melton Country Park and around Melton Mowbray where there are also concentrations of bird-watchers. The most frequently recorded Schedule 1 species are redwing (*Turdus iliacus*) and fieldfare (*Turdus pilaris*) which are common winter visitors and have not historically bred in Leicestershire. Other records of Schedule 1 species are considered to involve passage migrants or winter visitors such as green sandpiper (*Tringa ochropus*), pintail (*Anas acuta*), garganey (*Anas querquedula*), Goldeneye (*Bucephala clangula*), Mediterranean gull (*Larus melanocephalus*), red-throated diver (*Gavia stellata*), osprey (*Pandion haliaetus*) and bearded tit (*Panurus biarmicus*). A record of quail (*Coturnix coturnix*) from Burton Lazars was also considered likely to be a passage migrant from the date (August).

There are two species recorded from the search area that could relate to breeding birds. There are many records of kingfishers (*Alcedo atthis*) from various water courses in and adjacent to all four SUE areas and where there is also suitable breeding habitat. Barn owl (*Tyto alba*) is also widely distributed across the four SUE sites, but with a marked concentration to the south-east of Melton.

In addition, fly-over records of red kite (*Milvus milvus*), hobby (*Falco subbuteo*) and peregrine (*Falco peregrinus*) which were recorded over Melton Mowbray at various points and times could all relate to breeding birds as at least some of the records were during the breeding season and all three species have wide hunting ranges. Both red kite and peregrine are now resident in the county.

Notable bird species have been recorded at each of the SHLAA settlements, but there are no records of notable birds from within or immediately adjacent to the SHLAAs.



4.3.8 White-clawed crayfish

There is a marked concentration of white-clawed crayfish (*Austropotamobius pallipes*) records from the River Eye, including within the SSSI section, to the east and south of Melton Mowbray. However the latest record dates from 1998.

White-clawed crayfish records have not been supplied in association with the SHLAA settlements.

4.3.9 Other Invertebrates

No other invertebrate species were returned through the data search although East Midlands Butterfly Conservation data (1970 – 2014) have records of dingy skipper (*Erynnis tages*) and grizzled skipper (*Pyrgus malvae*) from the Asfordby Hill settlement which is also within 1km of the western SUE site. Both these species are listed on the LBAP as well as priority species on Section 41 of the NERC Act (2006). Other butterflies and moths listed on Section 41 of the NERC act have also been recorded at this locality including small heath (*Coenonympha pamphilus*), cinnabar moth (*Tyria jacobaeae*) and latticed heath (*Chiasmia clathrata*).

4.3.10 Vascular Plants

Only one species of legally protected plant (listed on Schedule 8 of the W&CA 1981) was returned through the data search, comprising Deptford pink (*Dianthus armeria*) at the Asfordby Hill settlement and within 1km of the West SUE site.



5.0 RESULTS: Survey

5.1 Overview

A Melton plan showing the location of each SUE sites is provided in Appendix A, Figure A1 and C1. A Borough wide plan showing the location of each SHLAA sites is provided in Appendix B, Figure A1 and C1.

A summary of the characteristics of each SUE is provided in the section 5.2 below. The survey results for the SHLAA sites are provide in Section 5. Survey results are informed by the field survey (and interpretation of aerial photographs for areas of land for which access was not available at the time of the survey).

Figures supplied in Appendix A for the SUE sites and Appendix B for the SHLAA sites are as follows:

- The relevant data search is provided in Figure SUE A1-A8 and Figure SHLAA A1-A11), which shows the designated statutory and non-statutory sites in the surrounding areas, as well as protected and notable species records.
- The extended phase one habitat maps associated with the can be found in Figure SUE B1-B8 and Figure SHLAA B1-B33.
- Key features considered likely to be used as wildlife corridors within and adjacent to the four SUE areas are illustrated in Figure SUE C1-C8 and the nine SHLAA sites are illustrated in Figure SHLAA C1-C11. These maps show features such as species-rich hedgerows, unmanaged species-poor hedgerows with mature trees, active and disused railway lines with semi-natural vegetation and rivers and drains with marginal aquatic vegetation.

Target notes are shown on the phase one plans (Figure Bx); these relate to particular features such as invasive species, evidence of protected species, mature trees with bat roost potential and potential veteran trees. The target note sections on the following tables give an indication of the distribution of target-note worthy features within each SUE and SHLAA area. A full description of each target note including a grid reference is provided in Appendix D. Where no target notes appear on the plans, it can be assumed that no target note worthy features were recorded at the time the survey took place.

5.2 SUE Sites Results

The results for the SUE sites have been presented in a series of tables including:

- Tables 4.1- 4.4 - an overview of desk study and extended phase 1 habitat survey results for each SUE site.
- Table 5.1. – the total area and the extent of terrestrial habitat within each SUE Site
- Table 5.2 – an assessment of the SUE Sites key ecological features as shown on Figures SUE C1-C8.

Table 4.1: SUE North Site Descriptions

SUE	North
<p>Designated Sites</p>	<p>There are no statutory sites of nature conservation interest within or adjacent to this SUE. However, there are a number of Local Wildlife Sites in the surrounding countryside, including: Melton Country Park, Nottingham Road Hedgerow and Scalford Brook and three candidate LWSs: comprising Melton to Bingham Disused Railway Line and two potential veteran trees; Sysonby Farm Ash and Nottingham Road Ash. There are no Local Geology Sites within this SUE.</p>
<p>Species records</p>	<p>Within the North SUE badger, bats, great crested newts (GCN), and notable birds have been recorded.</p> <p>Badger, bat roosts, GCN, notable birds, otter and reptiles have been recorded on adjacent land, in buildings or nearby watercourses.</p>
<p>Picture</p>	<div data-bbox="424 875 1406 1525" data-label="Image">  </div> <p data-bbox="424 1552 1027 1581">Disused Railway Line North of Melton Country Park</p>
<p>Habitat Description</p>	<p>The North SUE is predominantly intensively managed agricultural land with improved or species-poor semi-improved, grazed grassland to the west of the A606 (Nottingham Road) and arable land to the east of the road. Semi-natural grassland is restricted to the environs of Scalford Brook and the disused Melton to Bingham disused railway line to the north of Melton Country Park and along some road verges. Wet ditches within the grassland contained populations of lesser water-parsnip (<i>Berula erecta</i>). This species is considered to be characteristic of good quality habitat and has a restricted distribution in the county.</p> <p>The only woodland in this SUE has been planted and contains species, including</p>



	<p>conifers, not considered native to Leicestershire. The hedgerows are predominantly species-poor and dominated by hawthorn (<i>Crataegus monogyna</i>) although there are five lengths of species rich hedgerows containing seven or more locally native woody species. There are several mature trees with bat roost potential.</p>
<p>Species Recorded</p>	<p>Schedule 1 Bird (WCA,1981):</p> <ul style="list-style-type: none"> Kingfisher (<i>Alcedo atthis</i>), along Scalford brook and associated scrub habitats, with eroding river cliffs providing suitable nesting opportunities. <p>Notable (NERC 41) species:</p> <ul style="list-style-type: none"> Moths - latticed heath (<i>Chiasmia clathrata</i>) and shaded broad-bar (<i>Scotopteryx chenopodiata</i>), recorded along the section of disused railway line north of Melton Country Park Birds - willow tit (<i>Poecile montanus</i>), reed bunting (<i>Emberiza schoeniclus</i>), bullfinch (<i>Pyrrhula pyrrhula</i>), dunnock (<i>Prunella modularis</i>) and farmland bird assemblage including whitethroat (<i>Sylvia communis</i>), starling (<i>Sturnus vulgaris</i>) and yellowhammer (<i>Emberiza citrinella</i>). <p>Other common and widespread species noted:</p> <ul style="list-style-type: none"> Butterflies, comma (<i>Polygonum c-album</i>) and ringlet (<i>Aphantopus hyperantus</i>).
<p>Wildlife Corridors</p>	<p>Scalford Brook is an established wildlife corridor which passes through the east of this SUE and bisects the Melton-Bingham disused railway line LWS and Melton Country Park. Networks of hedgerows, including some important hedgerows, form corridors through the landscape to the west and north and also connect with wildlife corridors in the west SUE, forming an ideal bat commuting route.</p>
<p>Target Notes</p>	<p>TN1- TN15</p>

Table 4.2: SUE South-east Site Descriptions

SUE	South-east
Designated Sites	The River Eye SSSI is located on the eastern boundary of this SUE, but there are no non-statutory sites of nature conservation interest within or adjacent to the South-east SUE. There are no Local Geology Sites within this SUE.
Species record	No records within the south-east SUE, however white clawed crayfish have been recorded in the River Eye which abuts the east of this SUE. Adjacent to this SUE – badgers, bats, GCN and reptiles.
Picture	 <p data-bbox="424 1391 1074 1424">Arable field with adjacent arable margin and hedgerow</p>
Habitat Description	The South-East SUE covers the smallest area of the four SUE sites and is predominantly intensively managed arable farmland delimited by trimmed species-poor hedgerows and fences. There are however six lengths of species-rich hedgerows containing seven or more locally native woody species and mature trees. Semi-natural habitat is restricted to a narrow band of horse-grazed semi-improved grassland alongside a drain to the west of Leg Lane and a short section of the River Eye SSSI along part of the eastern boundary of the SUE where there is semi-natural linear woodland and marginal aquatic vegetation. The woodland along the river is the only substantial area of this habitat within the SUE although plantations occur in close proximity to it.
Species Recorded	Protected Species : <ul style="list-style-type: none">• Badger



	<p>Notable (NERC 41) species:</p> <ul style="list-style-type: none"> Birds - song thrush (<i>Turdus philomelos</i>), house sparrow, bullfinch and dunnoek and farmland bird assemblages including yellow wagtail (<i>Motacilla flava</i>), whitethroat, house sparrow (<i>Passer domesticus</i>), yellowhammer and linnnet (<i>Carduelis cannabina</i>). <p>Other common and widespread species noted:</p> <ul style="list-style-type: none"> Butterflies - holly blue (<i>Celastrina argiolus</i>). Roesell's bush-crickets (<i>Metrioptera roeselii</i>), first recorded in Leicestershire in 2004, this is now widespread throughout the county and is no longer considered nationally scarce due to its substantial range expansion since 2000.
<p>Wildlife Corridors</p>	<p>A strong corridor of important hedgerows links the urban green space in the south-east of Melton Mowbray with the active railway wildlife corridor and the River Eye corridor. Along the eastern edge of the SUE another wildlife corridor is located along a line of important hedgerows and a tributary of the River Eye which connects these habitats with the settlement of Burton Lazars to the south.</p>
<p>Target Notes</p>	<p>TN16- TN18</p>

Table 4.3: SUE South Site Descriptions

SUE	South
Designated Sites	There are no statutory or non statutory sites of nature conservation interest within or adjacent to South SUE. There are no Local Geology Sites within this SUE.
Species records	<p>Within the South SUE the following species have previously been recorded: badger, bats and several GCN records including potential breeding ponds.</p> <p>Badgers, bat roosts, GCN, notable birds otter to the north-west, and reptiles to the north-west and south-east have been recorded on adjacent land/watercourse.</p>
Picture	 <p>Green lane - stepping stone for wildlife amongst the arable fields</p>
Habitat Description	<p>The South SUE is predominantly intensively managed arable farmland with some fields of improved or semi-improved species-poor grassland at both the western and eastern extent; in both of which there are fields containing ridge and furrow features of varying intensity indicating that they have not been recently ploughed. The fields are delimited by trimmed species-poor hedgerows and some of these have become defunct and gappy. There are however five lengths of species-rich hedgerows containing seven or more locally native woody species.</p> <p>Semi-natural habitats are restricted to a small brook, which ultimately flows into the River Wreake outside the SUE area to the north-west, and a disused railway line which has scrubbed over. There are three water bodies within this SUE, one within grazed grassland and two either side of the disused railway line; the western one being managed as a fishing lake with planted marginal vegetation and non-native trees and shrubs. There are only two small areas of woodland within this SUE, both of which are</p>



	plantations containing species not considered native to Leicestershire.
Species Recorded	<p>Notable (NERC 41) species:</p> <ul style="list-style-type: none"> Birds - song thrush, house sparrow, and starling; and farmland bird assemblages including tree sparrow (<i>Passer montanus</i>), yellowhammer, linnet and skylark (<i>Alauda arvensis</i>) <p>Other notable birds (medium conservation concern) noted:</p> <ul style="list-style-type: none"> Green woodpecker (<i>Picus viridis</i>), common terns (<i>Sterna hirundo</i>) mallard (<i>Anas platyrhynchos</i>).
Wildlife Corridors	Streams flowing into the River Wreake, the disused railway lines and network of established hedgerows throughout this SUE form corridors between the land to the west through Melton Mowbray and through the landscape with the settlement of Burton Lazard to the south where many notable and protected species have been recorded.
Target Notes	TN19- TN31

Table 4.4: SUE West Site Descriptions

SUE	West
Designated Sites	<p>There are no statutory sites of nature conservation interest within or adjacent to the West SUE. However, there are a number of Local Wildlife Sites in the surrounding countryside, including Melton Mowbray Railway Sidings and Bull Field and Hedgerow. There are no Local Geology Sites within this SUE.</p>
Species record	<p>There are very few species records supplied for the land north of Asfordby Road, probably due to limited public access. Only reptiles and notable birds have been recorded on land immediately north of Asfordby Road.</p> <p>South of Asfordby road the following species have been recorded within the West SUE: badger, GCN, otter, several reptile records, water vole, white clawed crayfish.</p> <p>Adjacent to this SUE badger, bat roosts and foraging/commuting bats, GCN , notable birds and reptiles have been recorded.</p>
Picture	 <p>River Wreake showing woodland, mute swans and carpet of duckweed species</p>
Habitat Description	<p>The West SUE is predominantly grassland, the majority being improved and species-poor semi-improved grassland (grazed by horses) but also including amenity grassland of sports pitches and a golf course besides that within a sewage works; all of which is either intensively grazed or mown. Despite this, this SUE has the greatest proportion of semi-natural habitats in relation to its size of all the SUE areas. This includes semi-improved neutral grassland alongside the River Wreake, the active railway line and a disused railway line in the north-east of the SUE. The fields are delimited by species-poor hedgerows although one species-rich hedgerow was identified.</p>



	<p>Besides the River Wreake, there are two static water bodies within this SUE; comprising an ox-bow shaped pond in the south west and a square, artificial fishing lake in the north east, surrounded by mature willow trees. A potential veteran ash tree is located in a hedgerow near the fishing lake.</p> <p>There are two main areas of semi-natural woodland in this SUE, alongside the River Wreake and around the water body in the south west corner; both being dominated by willows (<i>Salix spp.</i>). The remainder of the woodland within the SUE has been planted, in particular on the golf course.</p>
<p>Species Recorded</p>	<p>Protected Species:</p> <ul style="list-style-type: none"> • Badger <p>Notable birds (medium conservation concern) noted:</p> <ul style="list-style-type: none"> • Birds - gulls, comprising black-headed (<i>Chroicocephalus ridibundus</i>), common (<i>Larus canus</i>) and lesser black-backed (<i>Larus fuscus</i>) were recorded foraging and loafing on playing fields and horse paddocks. Mallard was recorded along the river corridor. <p>Notable plants (listed as Scarce in the RPR or which have restricted distributions in the county):</p> <ul style="list-style-type: none"> • Greater duckweed (<i>Spirodela polyrhiza</i>) (RPR species) and fat duckweed (<i>Lemna gibba</i>) forming part of a diverse aquatic plant community on the River Wreake. <p>Common and widespread species noted:</p> <ul style="list-style-type: none"> • Birds – grey heron (<i>Ardea cinerea</i>), mute swan (<i>Cygnus olor</i>) and moorhen (<i>Gallinula chloropus</i>) along the river corridor • Butterflies - common blue butterfly (<i>Polyommatus icarus</i>) • Moth - vapourer moth (<i>Orgyia antiqua</i>); day flying. • Dragonflies - brown hawkler (<i>Aeshna grandis</i>) and migrant hawkler (<i>Aeshna mixta</i>) near the river corridor. • Other inverts - Rõesell’s bush-crickets, widespread in the taller grassland areas and ruderal vegetation. <p>Invasive species:</p> <ul style="list-style-type: none"> • Himalayan balsam (<i>Impatiens glandulifera</i>) and water-fern (<i>Azolla filiculoides</i>) established along the River Wreake / Eye corridor
<p>Wildlife Corridors</p>	<p>The River Wreake (downstream of the River Eye) and associated drains, the active and disused railway lines all provide good quality wildlife corridors both within the SUE and forming connections with habitats and designated sites in the wider landscape which also have biodiversity value.</p>
<p>Target Notes</p>	<p>TN32- TN46</p>

**Table 5.1. Extent of Terrestrial Habitat within each SUE Site**

Habitat	Area of habitat with each SUE (ha) or (m) for hedges ,			
	North SUE	South-east SUE	South SUE	West SUE
TOTAL AREA	272.29	84.69	226.58	234.43
Broad-leaved semi-natural woodland	0.31	Nil	0.65	2.03
Broad-leaved plantation	0.77	0.90	0.13	4.18
Mixed plantation	1.75	Nil	0.19	Nil
Coniferous plantation	0.10	0.41	0.27	0.10
Dense continuous scrub	1.94	0.33	0.49	6.05
Tall ruderal	0.21	.89	1.41	11.76
Semi-improved neutral grassland	1.27	.86	Nil	12.13
Poor semi-improved grassland	60.52	3.18	70.17	126.45
Improved grassland	141.66	Nil	13.93	4.72
Arable	42.35	78.65	127.33	10.23
Amenity grassland	Nil	Nil	1.36	37.67
Native species rich hedgerow	1,798	1,816	1,356	106
Native species poor hedgerow (incl. with trees)	25,432	5,765	20,988	12,041



5.3 SUE Site Notable Areas

Table 5.2: SUE Sites Notable Areas Results

North SUE			
Feature	Description	Ecological constraint ref.	Grid Reference
Semi-improved neutral grassland	Along north and south verges of Bartholomew Way, containing herbs characteristic of less improved swards (bird's-foot trefoil, black knapweed and meadow vetchling)	3 & 4	SK 73654 20890 – SK 74156 20963
Watercourse and protected species records.	Land north of Bartholomew Way includes a tributary of the River Wreake, associated hedgerow and mature trees, protected species records include GCN.	2, 4 & 6	SK 73948 21108
Species-rich hedgerow	On the west side of Nottingham Road, containing 8 native woody species	5	SK 73903 21499 – SK 74009 21341
Watercourse and protected species records.	Land adjacent to Sysonby Lodge a tributary of the River Wreake with mature trees and low eroding earth banks, potentially providing habitat for notable invertebrates. Protected species records include bats.	2 & 6	SK 74419 21198
Species-rich hedgerow	West side of Scaford Road, containing 8 native woody species (verge is biodiversity enhancement site).	4 & 5	SK 74978 22329 – SK 75069 22064
Species-rich hedgerow	East side of Scaford Road, containing 10 native woody species. The verge is also herb rich, containing at least 5 species characteristic of less improved swards such as burnet-saxifrage (<i>Pimpinella saxifraga</i>).	4 & 5	SK 74992 22326 – SK 75087 22011
Herb-rich neutral grassland	Section of Melton to Bingham disused railway line, with good quality grassland indicators, including black knapweed, meadow buttercup, meadow vetchling, ox-eye daisy, yellow oat-grass and bird's-foot trefoil. A Local Wildlife Site. This site also supports notable moths.	1, 2 & 6	SK 76000 21696 – SK 76010 21162
Section of Scaford Brook	Section forming part of the SUE boundary, natural meanders, areas of eroding river cliff (with kingfisher nesting potential) and bordered by mature trees.	1,2 & 3	SK 76015 21277 – SK 76180 22207
Semi-improved neutral grassland	Alongside Scaford Brook, including area of medieval earth works. This habitat supports good quality grassland indicator species such as lady's bedstraw, bird's-foot trefoil and meadowsweet. A biodiversity	1,2 & 3	SK 76171 21935



	enhancement site.		
Species-rich hedgerow	West side of Melton Spinney Road, containing 8 native woody species.	5	SK 76710 20996 – SK 76764 21516
Woodland edge	A woodland edge located to the west of Melton Country Park that provides a buffer between this site and any future development.	3	SK 75685 20956
South-East SUE			
Feature	Description	Ecological constraint ref.	Grid Reference
Species-rich hedgerow	Within arable farmland aligned north-south and intersected by footpath, 7 native woody species	5	SK 76589 18001 – SK 76638 18390
Species-rich hedgerow	Length under electricity pylons aligned north-south, pond at northern end. 7 native woody species including wayfaring tree and white willow	5	SK 76773 18662 – SK 76784 18423
Species-rich hedgerow	Length aligned east-west with dense scrub block at eastern end. 9 native woody species including woodland hawthorn and hazel	5	SK 76746 17422 – SK 77127 17645
Section of River Eye SSSI	Located on eastern SUE boundary, bordered by mature white willows.	1 & 2	SK 77320 18252 – SK 77334 18444
Species-rich hedgerow	East side of Burton Road (A606) north of Sawgate Road, extending out of the SUE area to the north west. 7 native woody species but verge unexceptional	5	SK 76281 17432 – SK 76352 17394
Species-rich hedgerow and neutral grassland verge	East side of Burton Road, south of Sawgate Lane. 10 native woody species including wild privet, dogwood and field rose. The verge is the same length as the hedgerow and contains black knapweed, meadow vetchling and common cat's-ear	4 & 5	SK 76360 17387 – SK 76620 17135
Species-rich hedgerow	Boundary between arable field and narrow field of semi-improved neutral grassland. Tall and up to 3m thick in places and containing one mature tree with bat roost potential. 9 native woody species present including crab apple, dogwood and hazel	5	SK 76745 17418 – SK 77130 17649
Semi-improved neutral grassland	Horse grazed, bordered to the south by the hedgerow listed above. Species indicative of less improved swards include meadow barley and meadow buttercup. Other species may also be present as dwarf non-flowering rosettes.	4 & 5	SK 76844 17629



South SUE			
Feature	Description	Ecological constraint ref.	Grid Reference
Species-rich hedgerow	Alongside tributary of River Wreake, 10 native woody species including white willow, osier, crab apple and hazel.	2 & 5	SK 73266 17564 – SK 73268 17210
Watercourse corridor	Tributary of the River Wreake forms part of a wildlife corridor and connects two species rich hedgerows	2	SK 73261 17696
Species-rich hedgerow	South side of Leicester Road (A607), 7 native woody species but verge unexceptional	5	SK 73171 17813 – SK 73567 17922
Water course corridor	Located to the north-east of Sunnyside Farm is a tributary of the River Wreake flows through this woodland section from Eye Kettleby Lakes.	2 & 3	SK 73717 17286
Species-rich hedgerow	South side of Kirby Lane, aligned east-west. 8 native woody species plus other planted species. Grass verge unexceptional	5	SK 74290 17503 – SK 74579 17509
Species-rich hedgerow	West of Rydale Manor, forming boundary between sports pitch and arable field. 8 native woody species.	5	SK 74157 17530 – SK 74171 17877
Species-rich hedgerow	Forming the south boundary to a farm track along part of the southern SUE boundary. 8 native woody species with mature trees including one with bat roost potential and a small pond at the western end.	5	SK 75779 16864 – SK 76107 16850
Woodland	A small block of woodland located to the west of Old Guadalupe	3	SK 73965 16899
Protected Species Records	Several ponds with great crested newts identified during the desk study. A large area of suitable terrestrial habitat has been identified including grassland and a network of hedgerows.	6	SK 76304 16859

West SUE			
Feature	Description	Ecological constraint ref.	Grid Reference
Species-rich hedgerow	On east side of Riverside Road, 8 native woody species including spindle and hazel	5	SK 73969 19025 – SK 74010 19160
Semi-improved	On north bank of River Eye, includes	2	SK 74079 19137



West SUE			
Feature	Description	Ecological constraint ref.	Grid Reference
neutral grassland	some species indicative of less improved swards such as black knapweed, common sorrel and meadow buttercup		
Species-rich marginal vegetation	Along both banks of the River Eye within the SUE area and beyond. Marginal vegetation is dominated by reed sweet-grass and, for considerable stretches Himalayan balsam but native species persist and include common club-rush, branched bur-reed, flowering-rush, arrowhead, bulrush, marsh marigold and greater yellow-cress. Submerged species include a water star-wort species, rigid hornwort and Nuttall's water-weed. Floating species include yellow water-lily, ivy-leaved, common, fat and greater duckweeds. The latter being scarce in Leicestershire and is listed in the RPR. The invasive water fern is also present in patches	4	SK 74366 19173 SK 73648 18263
Species-rich marginal vegetation	Section of canal south of the sewage treatment works, including the area surrounding the weir with adjacent wet woodland. The latter is dominated by mature crack willows and alders with a species-poor ground flora as is typical for this habitat. Dead wood is present. Marginal vegetation includes most species listed above but with the addition of marsh woundwort. Invasive Himalayan balsam and water fern are both present.	4	SK 73659 18272 – SK 73931 18572
Semi-improved neutral / wet grassland	Located on the east bank of the River Eye and north of the railway line. This is a Local Wildlife Site although currently in decline due to neglect. A population of great burnet is present, indicative of good quality grassland; Ant hills produced by yellow meadow-ants (<i>Lasius flavus</i>) are also present.	1,2 & 6	SK 74123 18988
Semi-improved neutral grassland	Located in a small triangular area adjacent to the active railway line. Suitable reptile habitat with abundant refugia and basking opportunities.	1,2 & 6	SK 73977 18609
Semi-improved	On disused railway line between school	2 & 6	SK 74251 19003



West SUE			
Feature	Description	Ecological constraint ref.	Grid Reference
neutral grassland	playing field and the river. Herb species indicative of less improved swards include black knapweed, meadow vetchling, perforate St. John's-wort and red clover. Scrub encroachment taking place from the embankment sides.		
Semi-improved neutral and wet grassland	Bull Field - a large field on the east side of the River Eye. Not obviously agriculturally improved although it had been mown prior to the survey. This includes a wet ditch linking directly to the river. Species recorded included meadow buttercup, meadowsweet, water mint and tufted hair-grass.	Tbc	SK 74106 18976
Drain corridor and protected species	Asfordby Golf Course and land east of Sysonby Grange Lane with records of several protected species.	2, 5 & 6	SK 73643 18955
Protected species	Small field north of Asfordby Road with historical record of reptiles 2001	6	SK 73743 19319
Adjacent woodland	Small block of woodland adjacent to the SUE, potential to support protected species	3	SK 73480 20145
Drain corridor and woodland	Brook which feeds into a pond (former oxbow) surrounded by woodland with potential to support protected species.	2 & 3	SK 73379 18444

5.4 SHLAA Sites Results

The Preferred SHLAA sites (Stage 2 study) location, site size, desk study results, survey results, ecological value assessment and recommendations for further surveys and enhancements are provided in table format in Appendix C. The results table in Appendix C should be read in conjunction with the plans supplied in Appendix B and target notes supplied in Appendix D.

5.5 Allocations/Reserve Sites Results

The results of the Allocation / Reserve Site study (Stage 3 study) completed in 2016 are provided in Addendum 1 and include the plans in Appendix I, survey results appendix J and target notes in Appendix K.



6.0 Overview of Habitats Surveyed

6.1.1 Arable Land

The majority of the arable land was under cereals at the time of the survey although there were several fields of oil-seed rape and a few of maize found throughout the SUE sites and SHLAA sites at Waltham on the Wolds and the sites in the west of Ashfordby. Odd field corners had been left fallow in places which had become dominated by ruderal vegetation. Horticultural land such as allotments were also included within the definition of arable, as also were strips of vegetation sown as game cover along field boundaries (predominantly in the South SUE). Arable margin plants comprised largely common and widespread species across all SUEs and SHLAA sites where this habitat was recorded although a single plant of buckwheat (*Fagopyrum esculentum*) was found in the South SUE. This is not considered a native species but a casual, described as "rare" in Jeeves (2011).

6.1.2 Semi-Natural Woodland

Only two types of semi-natural woodland were identified within the SUE areas, comprising wet woodland and secondary woodland which had developed on previously non-wooded land. It is considered that there is no semi-natural ancient woodland within any of the SUE areas. Individual planted trees have been mapped as such.

Wet Woodland

This woodland type was most prevalent alongside water courses and was dominated by white willow (*Salix alba*) and crack willow (*Salix fragilis*) with a shrub layer dominated by broad-leaved shrub willows (goat willow *Salix caprea* and grey sallow *Salix cinerea*) with hawthorn in the drier areas. The herb layer was species-poor as is often typical of this habitat, stinging nettles dominating several areas. Some of the wet woodland had become colonised by Himalayan balsam (*Impatiens glandulifera*). Marsh woundwort (*Stachys palustris*) was recorded on the margins of the wet woodland alongside the River Wreake.

Secondary Woodland

This woodland type was dominated by sycamore (*Acer pseudoplatanus*) with some wych elm (*Ulmus glabra*) and ash (*Fraxinus excelsior*) and a shrub layer of hawthorn, blackthorn (*Prunus spinosa*) and bramble (*Rubus fruticosus* agg.). The herb layer was species-poor and dominated by stinging nettles (*Urtica dioica*) and ivy (*Hedera helix*). Other ground flora species included lords-and-ladies (*Arum maculatum*), red campion (*Silene dioica*) and wood avens (*Geum urbanum*). The habitat within two of the SHLAA sites at Asfordby Hill MBC 004/15 and MBC 111/13 have developed as secondary woodland from lack of management.

6.1.3 Plantation Woodland

The plantation woodland included broad-leaved, mixed and coniferous woodland, with the largest combined area being of broad-leaved woodland. Species commonly planted include horse chestnut (*Aesculus hippocastanum*), sycamore, ash, pedunculate oak (*Quercus robur*), common lime (*Tilia x europaea*), rowan (*Sorbus aucuparia*), beech (*Fagus sylvatica*), black poplar hybrids (*Populus x canadensis*), Lombardy poplar (*Populus nigra* var *italica*) and common whitebeam (*Sorbus aria*). Coniferous species recorded in the mixed woodland included Scots pine (*Pinus sylvestris*), Leyland



cypress (x *Cupressocyparis leylandii*), European larch (*Larix decidua*) and Japanese larch (*Larix kaempferi*). Some of the purely coniferous woodland appeared to be commercial Christmas tree plantations of Norway spruce (*Picea abies*).

In all cases and even where the trees were mature (i.e. trunk girths over 1m circumference), the ground flora was species-poor and in some cases did not differ markedly from adjacent grassland or ruderal habitats.

This habitat was limited to small areas within the SUE sites and the SHLAA sites. The habitat within SHLAA sites at Waltham on the Wolds MBC 164/15 is predominantly young plantation woodland.

6.1.4 Scrub

Dense scrub had colonised railway embankments, both active and disused, and former grassland areas adjacent to such features. Hawthorn and blackthorn dominated most areas of dense scrub but there were also several areas of dense brambles. Ivy appeared to be the dominant ground flora species but red campion, ground-ivy (*Glechoma hederacea*), nipplewort (*Lapsana communis*) and lords-and-ladies were also widespread in this habitat type.

Small areas of scrub were noted throughout the SUE and several of the SHLAA sites. The most extensive area of scrub was recorded along the railway embankment within the Melton Mowbray SHLAA.

6.1.5 Introduced Shrub

This was a very minor component of the habitat types recorded and was found in and around areas of new houses and on the golf course. Species included cultivated roses (*Rosa* sp.) and gorse (*Ulex europaeus*). Although the latter is native, the situation left no doubt that it had been planted.

6.1.6 Ruderal Vegetation

The largest areas of this habitat were within the West SUE where there were extensive stands to the south of the sewage works and in a horse paddock to the north of the active railway line. Only small patches of this habitat was recorded within the SHLAA sites. Typical species included stinging nettle (*Urtica dioica*), creeping thistle (*Cirsium arvense*), spear thistle (*Cirsium vulgare*), broad-leaved dock (*Rumex obtusifolius*), curled dock (*Rumex crispus*), common ragwort (*Senecio jacobaea*), rosebay willowherb (*Chamerion angustifolium*), great willowherb (*Epilobium hirsutum*), bristly ox-tongue (*Helminthotheca echioides*) and mugwort (*Artemisia vulgaris*).

6.1.7 Hedgerows

The number of hedgerow lengths within a site was determined by the pattern of inter-connecting hedgerow sections so the section beyond the point where another hedgerow intersected was counted as a different hedgerow. This is in accordance with *The Hedgerows Regulations 1997*. A green lane is an unsurfaced route (often but not always a public footpath or bridleway) which is delimited by hedgerows.

Hedgerows were defined as either species-rich or species-poor, depending on the number of locally native woody species recorded along the length of the hedgerow. Locally native species are all those



which occur naturally within Melton Borough and these were determined from the distribution maps in *The Flora of Leicestershire* (Primavesi 1988).

Species-rich hedgerows were defined as those with seven or more locally native woody species along their lengths. These were typically located alongside water courses, green lanes, tracks and minor roads, some having a winding sinuous nature. They also sometimes contained large examples of slow-growing species such as field maple (*Acer campestre*) and mature ash trees. Species present which were usually absent from species-poor hedgerows included hazel (*Corylus avellana*), wild privet (*Ligustrum vulgare*), spindle (*Euonymus europaeus*), woodland hawthorn (*Crataegus laevigata*) and dogwood (*Cornus sanguinea*).

All those hedgerows with six or fewer locally native woody species were classed as being species-poor. The majority of the hedgerows within the SUE sites and the SHLAA sites were considered to be enclosure act hedgerows, usually dominated by just two species: hawthorn or blackthorn, sometimes a mixture of the two although there were a few hedgerows where wych elm predominated. Other species present tended to be those which are distributed by birds such as elder (*Sambucus nigra*) and dog rose (*Rosa canina*). Occasional tree species were recorded within the hedgerows which were dominated by ash trees.

Hedgerows bordering gardens often included various exotic species such as lilac (*Syringa vulgaris*), garden privet (*Ligustrum ovalifolium*) and beech as well as locally native species. These hedgerows have been classified as species-poor no matter how many species occur as only locally native species count towards determination of species-rich hedgerows.

Climbing species encountered included bramble, honeysuckle (*Lonicera periclymenum*), black bryony (*Tamus communis*), white bryony (*Bryonia dioica*), bittersweet (*Solanum dulcamara*) and hedge bindweed (*Calystegia sepium*).

6.1.8 Amenity Grassland

This grassland type occurred on playing fields, the golf course and within the sewage treatment works in the West SUE area and also as narrow strips alongside roads within the urban fringes; these latter were too small to show on the extended phase one habitat plans. This grassland did not appear to differ in composition from the average garden lawn, being dominated by commercially available strains of fescue (*Festuca*) and bent (*Agrostis*) grasses. Herbs were restricted to species such as daisy (*Bellis perennis*), dandelion species (*Taraxacum* sp.) and plantains (*Plantago* sp.). It was all subject to intensive mowing regimes. The bright green appearance indicates a high level of fertiliser input.

6.1.9 Improved Grassland

The improved grassland was dominated by perennial rye-grass (*Lolium perenne*) and crested dog's-tail (*Cynosurus cristatus*) with some white clover (*Trifolium repens*). Other herbs were restricted to odd ruderal species such as docks (*Rumex*) thistles (*Cirsium*) and ragwort (*Senecio jacobaea*). These grasslands were all bright green, indicating high fertiliser input. Some had been mown for silage prior to the survey as the bales had been left in the field. Other areas of this grassland type were grazed by cattle or sheep at the time of the survey.



6.1.10 Poor Semi-improved Grassland

This is the most abundant (in terms of area) grassland within the four SUE areas and the SHLAA sites. This habitat contained array of grasses not usually associated with significant agricultural improvement or high fertiliser levels such as false oat-grass (*Arrhenatherum elatius*), cock's-foot (*Dactylis glomerata*), rough meadow-grass (*Poa trivialis*), tufted hair-grass (*Deschampsia cespitosa*) and meadow foxtail (*Alopecurus pratensis*). Agricultural grasses such as perennial rye-grass were also evident. Herbs were generally few in both number of species and numbers of individuals but typically included self-heal (*Prunella vulgaris*), red bartsia (*Odentites vernus*), red clover (*Trifolium pratense*), field bindweed (*Convolvulus arvensis*), creeping buttercup (*Ranunculus repens*) and ribwort plantain (*Plantago lanceolata*). Ruderal herbs were also evident, including ragwort, stinging nettles, docks and thistles.

Some of the fields in the SUE and at the Bottesford and Long Clawson SHLAA sites showed strong ridge and furrow features indicating that they had not been ploughed and some also had small amounts of meadow barley (*Hordeum secalinum*) and bird's-foot trefoil (*Lotus corniculatus*) which are considered to be reliable indicators of good quality grassland but which here exist as relics of a former grassland type which occurred prior to fertiliser input and/or re-seeding.

6.1.11 Semi-improved Neutral Grassland

This grassland type had the most restricted distribution of the four types identified within the SUE areas, indicating the high level of agricultural improvement that has taken place across Melton Borough. Three of the areas of this grassland type had previously been designated as Local Wildlife Sites and occurred along the River Wreake corridor in the West SUE area. Most of these were no longer considered to represent good examples of this habitat type due to neglect and encroachment of scrub and ruderal vegetation and in one other, along the disused railway line north of Longfield School, the area of good quality grassland covered a very small area due to encroachment by scrub.

All areas of this habitat type contained at least a few herb species indicative of good quality grassland such as great burnet (*Sanguisorba officinalis*), black knapweed (*Centaurea nigra*), meadow vetchling (*Lathyrus pratensis*), bird's-foot trefoil, perforate St. John's-wort (*Hypericum perforatum*), meadow buttercup (*Ranunculus acris*) and greater burnet-saxifrage (*Pimpinella major*).

This habitat also occurred on some of the road verges, sometimes in association with species-rich hedgerows. There were a few species more usually associated with saline habitats which occurred on some road verges which had probably arrived through the spreading of salt in the winter months. These included reflexed saltmarsh-grass (*Puccinellia distans*), fox-tail barley (*Hordeum jubatum*) and spear-leaved orache (*Atriplex prostrata*).

Further discussions of these areas of grassland are given in Section 7 below.

6.1.12 Ephemeral Vegetation

This habitat occurred throughout all four SUE areas but the areas concerned were too small to show on the phase one habitat plans. It occupied the sides of unsurfaced tracks, as a mosaic within bare ground, especially within the sewage treatment works, around the fringes of both used and disused car parks and on the fringes of urban areas. Species recorded included small willowherb species (*Epilobium* sp), annual meadow-grass (*Poa annua*), knotgrass (*Polygonum aviculare*), scentless may-weed (*Tripleurospermum inodorum*) and various common mosses.



6.1.13 Static Waterbodies

There are several static waterbodies throughout the four SUE and two of the SHLAA sites. The majority are considered to be artificial, for example on the golf course, as reservoirs within farmland, fishing lakes and providing flood defence on the margins of urban areas and to provide drinking water within grazed grassland. Some of these were extensively surrounded and shaded by mature trees and not all of them were visible from publicly accessible land. Marginal vegetation was not visible on some of these waterbodies, even those where good views could be obtained.

Both fishing lakes (in the South and West SUEs) had vegetation which had almost certainly been planted and included white water-lily (*Nymphaea alba*) and cultivars with pink flowers; which are not considered native in Leicestershire (Jeeves 2011). Emergent vegetation included bulrush (*Typha latifolia*), reed canary-grass (*Phalaris arundinacea*) and yellow iris (*Iris pseudacorus*). Within the SHLAA sites the majority of the ponds were dry or densely covered in bulrush.

6.1.14 Riparian Marginal Vegetation

Riparian vegetation along the Rivers Eye and Wreake included extensive species-rich communities including emergent, floating and submerged vegetation and these are described more fully in Section 7.4 Wildlife Corridors below. The River Devon at Bottesford was lacking in this habitat, and was dominated by tall ruderal and scrub.

6.1.15 Swamp Vegetation

This vegetation type was restricted to two areas of reed bed, dominated by common reed (*Phragmites australis*) which had been planted as part of the water treatment process and occurred in close association with the two sewage treatment works within the West SUE. Some of the riparian marginal vegetation falls into this category (section 7.4 Wildlife Corridors) and has been mapped as such.

6.1.16 Built Structures

There were various built structures within all four SUE sites, including huts providing shelter for horses and sundry farm and council depot buildings. An old brick bridge spanning the River Wreake in the West SUE had areas of crumbling bricks and was of an age where potential bat roost features could be present. It also had a population of wall-rue fern (*Asplenium ruta-muraria*) which has a localised distribution in the county being most frequent on un-natural substrates such as walls and bridges. This has been target noted as TN 37 (due to the bat roost potential) on Figure SUE B7.

SHLAA sites in Melton Town centre, Bottesford, Croxton Kerrial and Long Clawson include a number of commercial and farm buildings which were assessed for their potential to support bats and nesting birds.



7.0 Mitigation and Enhancement Recommendations

7.1 Designated Sites

7.1.1 SSSI's

There are no designated sites located within any of the SUE or SHLAA sites. The River Eye SSSI is the only designated site located adjacent to the SUE site (South East).

The River Eye SSSI within Melton Borough is split into six definable ecological units. The entire SSSI is currently (September 2015) in an unfavourable state with no change (Natural England, Designated Sites website, Leicestershire SSSIs); due to water chemistry, river profile and riparian vegetation targets not being met across all six units. However, the section bordering the South-East SUE (adjacent to Lag Lane) has been assessed independently of the remaining five units and this section has passed the Species Composition target in supporting many characteristic macrophyte (aquatic plant) assemblages which are representative of those listed in the 1983 SSSI citation.

One of the main reasons why the River Eye is not currently in favourable condition is due to the amount of phosphates entering the river from the adjacent, mainly arable, river catchment. It is acknowledged in NE's SSSI condition assessment that there has been a decrease in the amount of phosphates in the river since 1998 but that this rate of decrease has not been considered sufficient (by NE) to enable favourable status to be achieved. The River Profile target has also not been met due to historic over-dredging and impoundment (weir). No mention is made of invasive species in the SSSI condition assessment but this must also be considered a factor governing the condition status of the SSSI.

It is recommended that a protection zone is established between the River Eye SSSI and any future development in the South-East SUE to avoid any direct impact on the designated site or any incidental indirect effects (e.g. sediment runoff or chemical spillage) within the water body.

Stoneby Quarry SSSI and LGS site is the nearest designated site to a SHLAA site. The former quarry of lower Lincolnshire Limestone is located Waltham on the Wolds is located on the opposite side of Bedcaby Road from the MBC 055/13 SHLAA site. It is not anticipated that the development of this SHLAA site would directly impact the designated site but further measures may be necessary to avoid any indirect effects on the designated site. Furthermore it is recommended that more detailed botanical surveys are carried out at SHLAA MBC 055/13 for the presence of similar grassland species which may have been over looked during the survey which took place in October. Also the site has been noted due to the presence of several fungi species. More detailed fungal surveys are recommended also prior to the development of this site.

7.1.2 Local Wildlife Sites

All of the Local Wildlife Sites within and directly adjacent to the SUE sites are assessed as having declined in quality to varying degrees since they were originally designated. In all circumstances, this is considered to be due to natural vegetation succession processes coupled with lack of management. Evidence for this has been taken by comparing the species lists on the respective LWS survey



proformas with the vegetation communities present at the time of the current surveys (August and September 2015).

ASFH 3 Asfordby Hill includes part of two LWS within the site and a LWS adjacent to the east of the site; all three are designated as calcareous grassland and woodland. There are also several cLWS located adjacent to the west of the site. The entire site has a mosaic of habitats present which are also likely to qualify for local designation. The development of the entire ASFH 3 site is considered likely to effect the LWS's, the other mosaic of habitats onsite, connectivity between the cLWS and LWS and the wildlife which use the site. Further assessment of the site has been recommended to inform options for the development of this site.

BOT 3 at Bottesford includes part of cLWS Reference 91368. The field, which extends to the River Devon, is being considered for designation as a LWS for its mesotrophic grassland habitat. It is considered likely the cLWS would be affected by the development of BOT 3 site, however there may be the opportunity to enhance the cLWS through management or removal of Japanese knotweed, retention of hedges, retention and enhancement of some semi-natural grassland habitats.

HAR 6 at Harby is located next to cLWS Grantham Canal which is located on the sites north-western boundary of the site. The canal is designated as a SSSI further upstream from Harby. If the woodland on the western boundary of the site can be retained and protected it is considered unlikely that development at HAR6 would affect the cLWS. There is also potential to enhance the site further through the retention of hedges and trees , provision for nest boxes and bat boxes in the woodland.

Site LONG 4(MBC /168/15 Stage 2) at Long Clawson is located next to a LWS. Long Clawson cemetery is a candidate Local Wildlife Site and at the time of the survey the mesotrophic grassland had not been recently managed, however it is likely that only part of the grassland is managed to allow the public to access the cemetery. It is considered unlikely the site would be affected by the development on adjacent land, but there may be the opportunity to enhance through management or through the erection of bat and bird boxes the Local Wildlife Site as a result of the development.

7.2 Habitats

There are many simple and inexpensive measures that can be incorporated into final designs that will benefit local biodiversity. To maximise the habitat potential of development sites in the future it could be recommended that areas of landscaping and ornamental beds around buildings could be planted with native trees, shrubs and wildflowers in preference to purely ornamental species to provide additional feeding and nesting opportunities. A suggested species list appropriate to Melton Borough is provided in Appendix G.

Ponds and wetland areas always increase habitat diversity and can be incorporated into developments of any size.

7.2.1 Hedgerows

As well as potentially qualifying as 'important' hedgerows under the hedgerow regulations, or as Local Wildlife sites, hedgerows also provide important corridors for species such as birds, bats, badgers, hedgehogs through the landscape. It is recommended wherever possible to retain hedgerows within



site designs, and where appropriate to enhance them through additional hedgerow planting or improved management.

Planting hedgerows within developments helps to provide connectivity with the wider environment. Wherever possible species used should be native species, ideally from local seed stock.

7.2.2 Watercourses

Where water courses are present on or adjacent to a site, it is recommended that the bank side vegetation is retained intact, and increases in disturbance and human access are avoided. A standard recommended buffer is 8-10m although a larger buffer may be recommended where water courses are particularly important for biodiversity.

7.2.3 Invasive species

The Wildlife and Countryside Act 1981 (as amended in 2010) recognises several invasive plant species listed in Schedule 9 of the Act (see Appendix E, Table B2).

Additionally, under the Environmental Protection Act 1990, soil contaminated with Japanese knotweed and giant hogweed could be classed as controlled waste and must be disposed of safely at an appropriately licensed landfill site.

Invasive species should be appropriately controlled prior to any development to ensure they are not spread into the wider environment during any building works or habitat management.

7.3 Recommendations for further survey

It is likely that the majority of the SHLAA and SUE sites would require a detailed ecological survey to inform any future planning application.

Site specific recommendations for further survey are made in Appendix C to inform a detailed planning application for any of the sites where;

- Features suitable to support protected species exist for example:
 - Trees or buildings that could support roosting bats
 - Ponds and terrestrial habitat suitable for great crested newts (either on the site, or close to the site)
 - Woodland and / or hedgerow suitable for birds, badgers, invertebrates
 - Grassland and edge (e.g. woodland and hedgerow) habitat suitable for reptiles
 - Water courses that could support water vole, otter or white-clawed crayfish
- Grassland habitat is present that has potential support notable species, in this instance detailed vegetation surveys are recommended to take place between May and July.



- Habitat with potential to support notable fungi species (SHLAA MBC 055/13), in this instance detailed fungal surveys are recommended to take place on multiple survey occasions between September – end November.
- Further survey at the Local Wildlife Sites located within the western SUE

Further surveys may be restricted as to when they can take place during the year. A guide to ecological survey seasons is included in Appendix F

7.4 Wildlife Corridors

A number of features considered likely to be of importance for the ecological functionality of the landscape have been recorded during the interpretation of aerial photographs and field surveys. These are illustrated on Figures C1-C8 in Appendix A and Figures in Appendix B C1-C11 and include railway lines (both active and disused), rivers, brooks and drains, hedgerows, road verges and other grasslands. Some of these are considered likely to qualify as Local Wildlife Sites or fall within the definition of LBAP habitats.

A broad recommendation is that complex habitats and linear features such as these should be surveyed in detail to inform any future management and enhancement. These landscape features should be retained within any development and suitably buffered from direct and indirect impacts (such as increases in lighting and disturbance). Where high ecological value is determined, careful consideration should be used in determining an appropriate level of stand-off for any development.

Retention and enhancement of an integrated complex of wildlife corridors at the local and landscape scale is essential to allow species dispersal, given that climate change is already affecting the population and range of many UK species.

A mixture of habitats, including dry and wet habitats, is required crossing the landscape to provide migration routes and foraging habitats for wildlife. These are necessary at a range of scales and will require different vegetation and different types of management. Planning comments from Natural England have suggested that green corridors for incorporation within large scale developments should generally not be less than 500m (0.5km) long and be a minimum of 25m wide consisting of green habitat (i.e. excluding hard surfacing, close mown amenity grassland etc.). However, any retention and enhancement of existing features should be considered potentially to benefit biodiversity.

7.5 Biodiversity Enhancement Site (BES) Opportunities

These BESs are all composed of notable habitats and some are Local Wildlife Sites or candidate Local Wildlife Sites which have been identified as being of value to wildlife and which would further benefit from improvement to their quality. Where possible, it is recommended that the BESs (shown on the Figures C1-C8 in Appendix A) located within the SUE sites, are further extended and /or their quality enhanced. No BES's have been provided in the SHLAA sites as the majority are not considered large enough to support areas for biodiversity enhancement, however there will be the opportunity to enhance the habitats within the SHLAA sites, which would be informed by further surveys.



Specific enhancement advice is provided for each of the habitat types identified as BESs, comprising semi-improved neutral grassland (including road verges), marginal aquatic vegetation and mature wet woodland.

Semi-improved Neutral Grassland

All of the BES areas containing this habitat already support grassland species (both herbs and grasses) that are indicative of less improved swards but have become encroached upon by dense scrub or ruderal vegetation, (often both). In the case of the three largest areas (one in the North SUE and two in the West SUE), there is evidence that states these areas once supported more diverse plant communities than currently exists but that the point has not yet been reached where a return to this state is no longer possible. Management recommendations include:

- Annual mowing of existing coarse grasses and removal of cuttings in the late summer or autumn (hence avoiding the main bird nesting season);
- Removal of scrub over the winter months (again avoiding the bird nesting season).

This would also apply to road verges where scrub is encroaching onto the grassland from the adjacent hedgerow.

Marginal Aquatic Vegetation

This habitat type occurs along the Rivers Eye and Wreake and the short section of canal along the former. Although these areas support extensive and diverse native vegetation communities, there are extensive stands of invasive Himalayan balsam and floating water fern which are currently adversely impacting on the native vegetation through outcompeting them. Removal of the invasive species is recommended.

Mature Wet Woodland

This habitat type occurs in the West SUE surrounding a water body. It is dominated by mature willow trees and the value of this habitat is primarily to invertebrates, especially those that need dead wood in either adult or larval stages (saproxylic species; mostly true-flies, wood wasps and beetles). Minimal management is recommended for this habitat type, including allowing dead wood to stand where it is and that dying trees are allowed to senesce and decay naturally. The provision of bird and bat boxes would enhance this site for these species.

7.6 Monitoring

This study provides a snap-shot of habitats present in the Borough and their condition at the time of the survey. The GIS layers obtained during the desk study and field work has been provided to Melton Borough Council and should provide baseline information for comparison with future more detailed surveys within the SUE and SHLAA sites.



8.0 References

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APPENDIX A – SUE Site Survey: List of Figures and Figures A1- A8, B1-B8 and C1-C8



Figure	Title
A	Wildlife Sites and Protected/Notable Species
A1	Melton Mowbray and SUE Sites A
A2	North SUE (West) Map A
A3	North SUE (East) Map A
A4	South-east SUE Map A
A5	South SUE (East) Map A
A6	South SUE (West) Map A
A7	West SUE (South) Map A
A8	West SUE (North) Map A
B	Extended Phase 1 Habitat
B1	Melton Mowbray and SUE Sites B
B2	North SUE (West) Map B
B3	North SUE (East) Map B
B4	South-east SUE Map B
B5	South SUE (East) Map B
B6	South SUE (West) Map B
B7	West SUE (South) Map B
B8	West SUE (North) Map B
C	Value Assessment, Biodiversity Enhancement Sites and Wildlife Corridors
C1	Melton Mowbray and SUE Sites C
C2	North SUE (West) Map C
C3	North SUE (East) Map C
C4	South-east SUE Map C
C5	South SUE (East) Map C
C6	South SUE (West) Map C
C7	West SUE (South) Map C
C8	West SUE (North) Map C



APPENDIX B – Preferred Site Survey: List of Figures and Figures A1- A11, B1-B33 and C1-C11



Figure	Settlement Name	Title
A	Wildlife Sites and Protected/Notable Species	
A1	Melton Borough	Melton Borough and SHLAA Sites Map A
A2	Asfordby	Asfordby Map A
A3	Asfordby Hill	Asfordby Hill Map A
A4	Bottesford	Bottesford Map A
A5	Croxtan Kerrial	Croxtan Kerrial Map A
A6	Frisby on the Wreake	Frisby on the Wreake A
A7	Long Clawson	Long Clawson Map A
A8	Melton Mowbray	Melton Mowbray Map A
A9	Somerby	Somerby Map A
A10	Waltham on the Wolds	Waltham on the Wolds Map A
A11	Wymondham	Wymondham Map A
B	Extended Phase 1 Habitat	
B1	Asfordby	MBC/104/13 Map B
B2	Asfordby	MBC/106/13 Map B
B3	Asfordby Hill	MBC/004/15 Map B
B4	Asfordby Hill	MBC/073/13 Map B
B5	Asfordby Hill	MBC/111/13 Map B
B6	Asfordby Hill	MBC/112/13 Map B
B7	Asfordby Hill	MBC/113/13 Map B
B8	Bottesford	MBC/057/13 Map B
B9	Bottesford	MBC/181/15 Map B
B10	Bottesford	MBC/012/13 Map B
B11	Croxtan Kerrial	MBC/079/13 Map B
B12	Croxtan Kerrial	MBC/080/13 Map B
B13	Croxtan Kerrial	MBC/092/13 Map B
B14	Croxtan Kerrial	MBC/095/13 Map B
B15	Frisby on the Wreake	MBC/191/15 Map B
B16	Long Clawson	MBC/026/15 Map B



Figure	Settlement Name	Title
B17	Long Clawson	MBC/027/15 Map B
B18	Long Clawson	MBC/028/13 Map B
B19	Long Clawson	MBC/144/15 Map B
B20	Long Clawson	MBC/150/15 Map B
B21	Long Clawson	MBC/168/15 Map B
B22	Long Clawson	MBC/169/15 Map B
B23	Melton Mowbray	MBC/053/15a Map B
B24	Melton Mowbray	MBC/053/15b Map B
B25	Melton Mowbray	MBC/053/15c Map B
B26	Somerby	MBC/048/13 Map B
B27	Somerby	MBC/146/14 Map B
B28	Waltham on the Wolds	MBC/054/13 Map B
B29	Waltham on the Wolds	MBC/055/13 Map B
B30	Waltham on the Wolds	MBC/164/15 Map B
B31	Waltham on the Wolds	MBC/192/15 Map B
B32	Wymondham	MBC/056/13 Map B
B33	Wymondham	MBC/070/13 Map B
C	Value Assessment and Wildlife Corridors	
C1	Melton Borough	Melton Borough and SHLAA Sites Map C
C2	Asfordby	Asfordby Map C
C3	Asfordby Hill	Asfordby Hill Map C
C4	Bottesford	Bottesford Map C
C5	Croxton Kerrial	Croxton Kerrial Map C
C6	Frisby on the Wreake	Frisby on the Wreake Map C
C7	Long Clawson	Long Clawson Map C
C8	Melton Mowbray	Melton Mowbray Map C
C9	Somerby	Somerby Map C
C10	Waltham on the Wolds	Waltham on the Wolds Map C
C11	Wymondham	Wymondham Map C



APPENDIX C – Preferred SHLAA Survey Results

Appendix C - SHLAA Preferred Site Survey Results

SHLAA Reference	Settlement	Location & Map Reference	Area (Ha)	Accessibility	Target Notes	Designated Sites	Habitats and Flora	Potential Protected & Notable Fauna	Further Survey Recommendations	Enhancement Recommendations	Ecological Assessment	pLWS Description
MBC/104/13	Asfordby	A6006 A2, B1, C2	3.2	No access granted, largely hidden from public rights of way. Assessment based on aerial interpretation only.	No	None	No access. Appears to be grassland, tall ruderal and scrub with hedgerows and trees	Not assessed.	Badger survey. Reptile survey. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required. Bat assessment of tree.	Dependent on results of species surveys	Site of moderate ecological value. Terrestrial habitat with potential to support reptiles, badgers, amphibians and foraging bats.	None
MBC/106/13	Asfordby	Station Lane, A2, B2, C2	0.7	Yes	No	None	Poor semi-improved grassland, species poor hedges and former pond (no open water)	Pond may have potential for GCN.	Badger Survey. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required.	Dependent on results of species surveys	Site of low ecological value	None
MBC/004/15	Asfordby Hill	Melton Road A3, B3, C3	0.6	Yes	No	None	Amenity grassland, species poor hedgerow, broadleaved woodland, mature trees	Potential badger and reptile habitat. Potential GCN terrestrial habitat	Badger Survey. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required.	Dependent on results of species surveys	Site of moderate ecological value, most the site includes broadleaved woodland.	None
MBC/073/13	Asfordby Hill	Melton Road A3, B4, C3	0.7	Yes	No	Candidate LWS ref 90718 (mine site and stream) 250 m north	Improved grassland, species poor hedgerow and mature trees	Potential terrestrial habitat for GCN and reptiles.	Badger surveys. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required.	Dependent on results of species surveys	Site of low ecological value	None
MBC/111/13	Asfordby Hill	West Road, A3, B5, C3	0.7	Yes	No	LWS ref 39275 (calcareous grassland) 60 m to north and notable plant records nearby (Deptford pink, <i>Dianthus armeria</i>).	Broad-leaved woodland	Potential badger and reptile habitat. Potential GCN terrestrial habitat	Badger surveys. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required.	Dependent on results of species surveys	Site of moderate ecological value, the site is broadleaved woodland.	None
MBC/112/13	Asfordby Hill	Glebe Hill, A3, B6, C3	1.6	Yes	No	None	Arable, species poor hedgerows, scrub and tall ruderal vegetation.	Potential badger and reptile habitat. Potential GCN terrestrial habitat	Badger surveys. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required.	Dependent on results of species surveys	Site of low ecological value	None

SHLAA Reference	Settlement	Location & Map Reference	Area (Ha)	Accessibility	Target Notes	Designated Sites	Habitats and Flora	Potential Protected & Notable Fauna	Further Survey Recommendations	Enhancement Recommendations	Ecological Assessment	pLWS Description
MBC/113/13	Asfordby Hill	Compton Road, A3, B6, C3	1.9	Yes	TN 47	None	Arable, species poor hedgerows, scrub and tall ruderal vegetation. Underground structure	Underground structure may have potential for hibernating bats. Potential badger and reptile habitat. Potential GCN terrestrial habitat	Badger surveys. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required. Bat hibernacula survey	Dependent on results of species surveys	Potential bat hibernacula otherwise site of low ecological value	None
MBC/012/13	Bottesford	Barrats Site, A3, B7, C3	20.3	Yes	TN 88 and 89	None	Arable, species poor hedgerows, mature trees, poor semi-improved and improved grassland, running water, standing water. Faint ridge and furrow in small field in north of the site.	Winter Beck has potential for water vole, otter and white-clawed crayfish. Drain on north boundary has standing water with potential for GCN. Terrestrial habitat for GCN and reptiles. Badger potential	Full assessments for otter, water vole and white-clawed crayfish. Badger survey. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required.	Dependent on results of species surveys	Winter Beck has potential for aquatic mammals and white-clawed crayfish otherwise the site is of low ecological value	
MBC/057/13	Bottesford	Rectory Farm, A4, B9, C4	14.2	Yes	TN28, 49, 50, 51, and 53	LWS ref 54206 (mesotrophic grassland) 30 m to west.	Poor semi-improved grassland, species poor hedgerows, mature trees, farm buildings, river Devon.	Potential badger and reptile habitat. Potential GCN terrestrial habitat. River Devon sub-optimal for otter, water vole and white-clawed crayfish. Mature trees and buildings with potential bat roosts.	Full assessments for bats, otter, water vole and white-clawed crayfish. Badger survey on adjacent railway embankments. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required.	Dependent on results of species surveys	Site of moderate ecological value. Potential for roosting bats and River Devon passing through the site and dis-used railway abutting (wildlife corridors). Ridge and furrow in east fields	None
MBC/181/15	Bottesford	Normanton Lane, A4, B10, C4	0.6	No direct access. Viewed from adjacent land. Assessment considered adequate.	No	None	Not accessed. Poor semi-improved grassland, species poor hedgerow, mature tree, scrub, tall ruderal	Potential badger and reptile habitat. Potential GCN terrestrial habitat. Mature ash may have bat roost potential (Cat 2)	Bat assessment of mature tree. Badger survey of site and adjacent railway embankment. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required.	Dependent on results of species surveys	Site of low ecological value	None
MBC/079/13	Croxton Kerrial	Saltby Road, A5, B11, C5	1.4	Yes	No	None	Improved grassland with fenced boundaries	Sub-optimal habitat for foraging badgers, reptiles and terrestrial habitat for GCN.	Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required.	None	Site of low ecological value	None

SHLAA Reference	Settlement	Location & Map Reference	Area (Ha)	Accessibility	Target Notes	Designated Sites	Habitats and Flora	Potential Protected & Notable Fauna	Further Survey Recommendations	Enhancement Recommendations	Ecological Assessment	pLWS Description
MBC/080/13	Croxton Kerrial	Top Road A5, B12, C5	1.1	Yes	No	None	Poor semi-improved grassland and species poor hedgerows. Mature horse chestnut tree.	Sub-optimal habitat for common reptiles and terrestrial habitat for GCN.	Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required.	Dependent on results of species surveys	Site of low ecological value	None
MBC/092/13	Croxton Kerrial	Middle Street A5, B13, C5	1	Yes	TN54 and 55	None	Complex of farm buildings including pre 20th century farmhouse and out buildings. Gardens including mature trees.	Potential habitat for roosting bats in buildings (high) and trees (Cat 2).	Bat assessments of buildings and trees.	Dependent on results of species surveys	Potential for bat roosts otherwise low ecological value	None
MBC/095/13	Croxton Kerrial	Saltby Road A5, B14, C5	0.3	Assessment made from adjacent land and aerial photography considered adequate.	No	None	Not accessed., Gardens, paddock and mature trees	Trees with potential for bats (Cat2)	Bat assessments of mature trees.	Dependent on results of species surveys	Site of low ecological value	None
MBC/191/15	Frisby on the Wreake	Great Lane A6, B15, C6	2.1	Yes	TN84, 85 and 86	None	Improved grassland (with ridge and furrow marks), species poor hedgerows and mature trees.	Potential badger and reptile habitat. Potential GCN terrestrial habitat	Badger and reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required.	Dependent on results of species surveys	Site of low ecological value	None
MBC/026/15	Long Clawson	Melton Road A7, B16, C7	3.4	Yes	TN56 and 57	Candidate LWS ref 90568 (mesotrophic grassland) 260 m to west.	Poor semi-improved grassland field with species poor hedgerow and a pond within (no open surface). Faint ridge and furrow marks.	Badger signs (latrines and paths). Pond may have GCN potential. Sub-optimal habitat for reptiles	Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required.	Dependent on results of species surveys	Site of low ecological value	None
MBC/027/15	Long Clawson	The Sands A7, B17, C7	0.6	No	TN 87	Candidate LWS ref 90560 (pond) 100m north.	Poor semi-improved grassland, mature trees and species-poor hedgerows. Stream/drain beyond west boundary.	Landowner reports badgers present just to the north of the site. Mammal path located on northern boundary. Potential badger and reptile habitat. Potential GCN terrestrial habitat.	Badger and reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required.	Dependent on results of species surveys	Site of low ecological value	None
MBC/028/13	Long Clawson	Back Lane A7, B18, C7	0.9	Yes	TN58 and 59	None	Poor semi-improved grassland field (grazed) with species poor hedgerow boundaries. Pond on south boundary.	HSI score for pond 'below average'. Sub-optimal terrestrial habitat for GCN and reptiles	Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required.	Dependent on results of species surveys	Site of low ecological value	None

SHLAA Reference	Settlement	Location & Map Reference	Area (Ha)	Accessibility	Target Notes	Designated Sites	Habitats and Flora	Potential Protected & Notable Fauna	Further Survey Recommendations	Enhancement Recommendations	Ecological Assessment	pLWS Description
MBC/144/15	Long Clawson	Broughton Lane A7, B19, C7	1.1	Yes	TN60, 61 and 62	None	Improved grassland field (mown) with species poor hedgerow boundaries. Mature ash trees at N.W. corner of the site.	Badger signs (latrine, paths and push throughs). Mature ash tree has bat roost potential (Cat 2). Sub optimal terrestrial habitat for GCN and reptiles.	Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required. Badger surveys.	Dependent on results of species surveys	Site of low ecological value	None
MBC/150/15	Long Clawson	Waltham Lane A7, B20, C7	2.2	Yes	TN63, 64, 65, 66, 67 and 68	None	Mostly buildings. Numerous mature ash trees, extensive areas of scrub/tall ruderal vegetation. A drain is to the east boundary and a pond in the S.W. of the site. Active allotments towards the west boundary. Species poor hedgerow to the west; other boundaries not accessible.	Pond (not accessed) may have GCN potential. Scrub/ruderal mosaic and allotments suitable terrestrial habitat for GCN and reptiles. Bat roost potential in mature trees (Cat 2) and some buildings (high). Previous bat roost recorded in the vicinity	Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required. Bat assessments of trees and buildings. Badger surveys	Dependent on results of species surveys	Site of moderate ecological value. Mosaic of habitats present have potential to support numerous species of fauna.	None
MBC/169/15	Long Clawson	Canal Lane A7, B21, C7	1.5	Yes	TN69	Candidate LWS ref 90560 (pond) 230 m to N.W)	Working dairy farm buildings, slurry pits, tall ruderal vegetation, improved grassland and species poor hedgerows	Some buildings have bat roost potential. Grassland and ruderal vegetation are sub-optimal terrestrial habitat for GCN and reptiles.	Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required. Bat assessments of buildings.	Dependent on results of species surveys	Site of low ecological value	None
MBC/168/15	Long Clawson	Sand Pit Lane A7, B22, C7	2.6	No access granted. Viewed from the road. Assessment considered adequate	No	Candidate LWS Ref 90571 (mesotrophic grassland). Adjacent to the south.	Poor semi-improved grassland field (grazed) with species poor hedgerow boundaries.	Sub-optimal terrestrial habitat for GCN and reptiles	Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required.	Dependent on results of species surveys	Site of low ecological value	None
MBC/153/15a	Melton Mowbray	Snow Hill A8, B23, C8	8.6	Yes	TN70, 71, 72, 73 and 74	None	Active factory buildings. Disused railway line with scrub and woodland cover. Salford Brook (canalised) forms the east boundary.	Buildings have bat roost potential. Disused railway has terrestrial habitat for GCN (LWS 80080) and reptiles (records nearby). Salford Brook sub-optimal for otter, water vole and notable birds (LWS 80080).	Badger survey. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required. Bat assessment of buildings.	Retain scrub on railway embankments. Otherwise dependent on results of species surveys	Site of low ecological value	None

SHLAA Reference	Settlement	Location & Map Reference	Area (Ha)	Accessibility	Target Notes	Designated Sites	Habitats and Flora	Potential Protected & Notable Fauna	Further Survey Recommendations	Enhancement Recommendations	Ecological Assessment	pLWS Description
MBC/153/15b	Melton Mowbray	King's Road, A8, B24, C8	0.4	No access granted. Viewed from the road. Assessment considered adequate	No	LWS ref 80080 380 m to the north	Hard standing (car park)	None	None	None	Site of low ecological value	None
MBC/153/15c	Melton Mowbray	Snow Hill A8, B25, C8	1	No access granted. Viewed from the road. Assessment considered adequate.	No	LWS ref 80080 380 m to the north	Active factory buildings.	None	None	None	Site of low ecological value	None
MBC/048/13	Somerby	Borough Road A9, B26, C9	1.3	Viewed from public access only. Assessment considered adequate.	TN75	LWS ref 26153 (mesotrophic grassland) 350 m to N.E. LWS ref 26152 370 m west.	Poor semi-improved grassland field (grazed) with fence and species poor hedgerow boundaries. Mature trees on west boundary	Sub-optimal terrestrial habitat for reptiles and GCN. Foraging habitat for badger. Trees on west boundary may have bat roost potential (Cat 2)	Bat assessment of mature trees. Reptile surveys. HSI assessment for GCN of any ponds within 500m of site with subsequent presence /absence surveys if required.	Dependent on results of species surveys	Site of low ecological value	None
MBC/146/14	Somerby	Oakham Road A9, B27, C9	1.1	Yes	TN76 and 77	Candidate LWS ref 90719 (pond) 130 m east. LWS ref 54196 (mesotrophic grassland) 300m south.	Poor semi-improved grassland field with species poor hedgerows on north, east and west boundaries. Dry pond at south-east corner. Mature ash and oak trees on north and west boundaries.	Dry pond may have GCN potential (previous records for the species) and terrestrial habitat also present. Sub-optimal reptile habitat. Bat roost potential in mature trees (Cat 2) and bat commuting/ foraging habitat along hedgerows and trees.	HSI assessment for GCN of ponds within 500 m of site and subsequent presence/absence surveys if required. Reptile surveys. Bat assessment of trees.	Dependent on results of species surveys	Site of moderate ecological value. Trees with bat roost potential and pond with GCN records	None
MBC/054/13	Waltham on the Wolds	High Street, A10,B28,C10	0.7	Access restricted by herras fencing. View from road poor, aerial photography used.	No	None	Species poor hedgerow, scrub/ ruderal/grassland mosaic.	Suitable terrestrial habitat for GCN and reptiles. Habitat for nesting birds and badger.	Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required. Badger surveys.	Dependent on results of species surveys	Site of low ecological value	None
MBC/055/13	Waltham on the Wolds	Bescaby Lane, A10,B29,C10		Yes	TN79, 80 and 81	LWS ref 28467 (mesotrophic grassland) adjacent to east.	Field semi-improved but good fungal assemblage, mature / veteran trees, species-poor hedgerows	Bat roosts in mature trees (Cat 1/2), notable birds, dried out ponds may have GCN potential	Bat assessments of trees, amphibian surveys, reptile surveys. More detailed habitat surveys focusing on grassland and fungal species.	Retain veteran / mature trees	Site of moderate ecological value. Bat roost potential mature trees and fungal assemblage	Yes - Three potential veteran trees

SHLAA Reference	Settlement	Location & Map Reference	Area (Ha)	Accessibility	Target Notes	Designated Sites	Habitats and Flora	Potential Protected & Notable Fauna	Further Survey Recommendations	Enhancement Recommendations	Ecological Assessment	pLWS Description
MBC/164/15	Waltham on the Wolds	Melton Road, A10,B30,C10	4.7	Yes	No	None	Poor semi-improved grassland, young plantation broad-leaved woodland and species poor hedgerow	Sub-optimal terrestrial habitat for reptiles and GCN. Foraging habitat for badger. Trees on west boundary may have bat roost potential (Cat 2).	Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required.	Dependent on results of species surveys	Site of low ecological value	None
MBC/192/15	Waltham on the Wolds	Mill Lane, A10,B31,C10	0.9	Viewed from public access only. Assessment considered adequate.	TN 78	None	Partial access only. Arable, poor semi-improved grassland, species poor hedgerows, mature trees and dry pond	Dry pond may have potential for GCN. Sub-optimal terrestrial habitat for reptiles and GCN. Mature	Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required. Badger surveys.	Dependent on results of species surveys	Site of low ecological value	None
MBC/056/13	Wyomondham	Glebe Road / Rookery Lane, A11 B32, C11	6.4	Yes	TN82	None	Poor semi-improved grassland field, young plantation woodland within, species poor hedgerow and a belt of scrub with mature willow and pond.	Habitat for reptiles. Confirmed GCN pond and terrestrial habitat for GCN. Habitat for badger sett construction. Tree with bat roost potential (Cat 2)	HSI assessment for GCN of ponds within 500m of site and subsequent presence/absence survey if required. Reptile and badger .Bat tree roost assessment.	Dependent on results of species surveys	Site of moderate ecological value. Confirmed GCN pond and suitable terrestrial habitat on site.	None
MBC/070/13	Wyomondham	Brickyard Lane, A11,B33,C11	4	Yes	No	None	Poor semi-improved grassland, species poor hedgerows, mature trees	Potential badger, reptile and nesting bird habitat. Potential GCN terrestrial habitat	Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required. Badger surveys.	Dependent on results of species surveys	Site of low ecological value	None



APPENDIX D – Preferred SHLAA Target Notes



Appendix D, Target Notes for the SUE Sites

North SUE		
Target Note No.	Grid Reference	Description
TN1	SK 7371 2132	Potential veteran ash tree within hedgerow, may meet LWS criteria
TN2	SK 7440 2107	Dead mature tree with significant bat roost potential
TN3	SK 7436 2091	Mature ash tree with rot holes and splits in trunk, bat roost potential
TN4	SK 7441 2057	Mature ash with holes in dead major limbs, bat roost potential
TN5	SK 7460 2118	Two mature ash trees with rot holes, bat roost potential
TN6	SK 7563 2099	A line of five mature ash trees with bat roost potential
TN7	SK 7467 2173	A mature ash tree with rot holes; bat roost potential
TN8	SK 7480 2173	Mature ash tree with rot holes in dead branches; bat roost potential
TN9	SK 7473 2229	Hollow mature ash tree with bat roost potential
TN10	SK 7479 2173	Dead mature ash tree with bat roost potential
TN11	SK 7605 2139	Kingfisher seen near section of eroding river cliff providing nesting opportunities
TN12	SK 7613 2120	Mature ash tree with rot holes, bat roost potential
TN13	SK 7614 2195	Kingfisher seen along brook
TN14	SK 7659 2156	Mature ash tree with rot holes, bat roost potential
TN15	SK 7680 2160	Hollow mature ash tree with bat roost potential
South-East SUE		
Target Note No.	Grid Reference	Description
TN16	SK 7675 1751	Mature hollow ash tree with dead limbs; bat roost potential
TN17	SK 7678 5526	Badger evidence
TN18	SK 7700 1766	Manure heap near wet ditch providing egg-laying site for grass snake
North SUE		
Target Note No.	Grid Reference	Description
TN19	SK 7307 1741	Mature dead tree with dense ivy, bat roost potential
TN20	SK 7318 1780	Stand of invasive Himalayan balsam
TN21	SK 7329 17300	Mature ash tree with holes in major limbs; bat roost potential
TN22	SK 7340 1721	Buckwheat in arable field margin, rare in Leicestershire but not native
TN23	SK 7393 1692	Mature hollow ash tree with bat roost potential



TN24	SK 7419 1749	Mature ash tree with bat roost potential
TN25	SK 7455 1735	Mature dead tree with bat roost potential
TN26	SK 7485 1732	Mature ash tree with rot holes in trunk; bat roost potential
TN27	SK 7487 1725	Mature ash tree with dead limbs and loose bark, bat roost potential
TN28	SK 7550 1731	Mature ash tree with rot holes, bat roost potential
TN29	SK 7555 1704	Mature ash tree with holes in dead limbs, bat roost potential
TN30	SK 7581 1691	Mature hollow ash tree with bat roost potential
TN31	SK 7592 1684	Mature ash tree with woodpecker nest holes, bat roost potential
West SUE		
Target Note No.	Grid Reference	Description
TN32	SK 7339 2088	Badger evidence
TN33	SK 7365 2084	Mammal path
TN34	SK 7350 1876	Badger evidence, also rubble mound and other debris in habitat suitable for reptiles in the same location
TN35	SK 7356 1875	Rubble mound within suitable reptile habitat
TN36	SK 7385 1838	Invasive Himalayan balsam and water fern
TN37	SK 7368 1828	Old brick bridge with bat roost potential and wall rue fern
TN38	SK 7393 1872	Invasive Himalayan balsam on river bank
TN39	SK 7416 1882	Badger evidence
TN40	SK 7390 1882	Mature lime tree with woodpecker holes, bat roost potential
TN41	SK 7386 1892	Rubble mound within suitable reptile habitat
TN42	SK 7404 1904	Stand of invasive Himalayan balsam (cleared but seedlings still present)
TN43	SK 7412 1911	Stand of invasive Himalayan balsam on south river bank
TN44	SK 7429 1916	Stand of invasive Himalayan balsam on both river banks
TN45	SK 7434 1916	Greater duckweed in river (Rare Plant Register species) and fat duckweed (restricted distribution in the County)
TN46	SK 7453 1916	Potential veteran ash tree in hedgerow (old pollard)


Appendix D, Target Notes for the Preferred SHLAA Sites

Asfordby Hill			
Target Note No.	Site Reference	Grid Reference	Description
TN47	MBC/113/13	SK 72434 18893	Underground structure with overlying scrub. Potential bat hibernacula)
Bottesford			
Target Note No.	Site Reference	Grid Reference	Description
TN48	MBC/057/13	SK 80468 39430	Two dying mature ash trees with bat roost potential (Cat 1)
TN49	MBC/057/13	SK 80291 39491	Dying mature ash tree with bat roost potential (Cat 1)
TN50	MBC/057/13	SK 80258 39334	River Devon. Otter and water vole potential
TN51	MBC/057/13	SK 80416 39194	Farm buildings with bat roost potential (High)
TN52	MBC/057/13	SK 80427 39435	Field maple tree with bat roost potential (Cat 1)
TN53	MBC/057/13	SK 80492 39379	Ash tree with bat roost potential (Cat 1)
Croxton Kerrial			
Target Note No.	Site Reference	Grid Reference	Description
TN54	MBC/092/13	SK 83487 29452	Farm house and out-buildings with bat roost potential (High)
TN55	MBC/092/13	SK 83454 29463	Mature ornamental trees with bat roost potential
Long Clawson			
Target Note No.	Site Reference	Grid Reference	Description
TN56	MBC/026/15	SK 71721 26590	Badger evidence
TN57	MBC/026/15	SK 71835 26697	Pond with GCN potential
TN58	MBC/028/13	SK 72475 27141	Pond with GCN potential
TN59	MBC/028/13	SK 72492 27235	Two mature sycamore trees with bat roost potential
TN60	MBC/144/15	SK 71678 26975	Mature ash tree with bat roost potential
TN61	MBC/144/15	SK 71735 26906	Mammal paths and push through in hedge
TN62	MBC/144/15	SK 71702 26996	Badger evidence
TN63	MBC/150/15	SK 73124 27461	Mammal paths
TN64	MBC/150/15	SK 73018 27360	Mature ash trees with bat roost potential
TN65	MBC/150/15	SK 73018 27360	Pond with GCN potential



TN66	MBC/150/15	SK 73040 27493	Occupied house with bat roost potential
TN67	MBC/150/15	SK 73010 27450	Disused bungalow with bat roost potential
TN68	MBC/150/15	SK 72981 27522	Two occupied houses with bat roost potential
TN69	MBC/169/15	SK 72923 27623	Farm buildings with bat roost potential
Melton Mowbray			
Target Note No.	Site Reference	Grid Reference	Description
TN70	MBC/153/13a	SK 75581 19449	Factory building with bat roost potential
TN71	MBC/153/13a	SK 75709 19553	Factory building with bat roost potential
TN72	MBC/153/13a	SK 75748 19582	Factory building with bat roost potential
TN73	MBC/153/13a	SK 75756 19570	Scalford Brook – otter, water vole and white clawed crayfish potential
TN74	MBC/153/13a	SK 75740 19747	Disused railway embankments with potential to support protected species including badgers and herpetofauna
Somerby			
Target Note No.	Site Reference	Grid Reference	Description
TN75	MBC/048/13	SK 77389 10668	Mature ash trees with bat roost potential
TN76	MBC/146/14	SK 78338 10328	Mature ash and oak trees on the north and west site boundaries with bat roost potential.
TN77	MBC/146/14	SK 78358 10216	Pond with GCN potential
Waltham on the Wolds			
Target Note No.	Site Reference	Grid Reference	Description
TN78	MBC/192/15	SK 80278 24735	Dry pond with mature willow tree
TN79	MBC/055/13	SK 80795 25070	Mature ash tree with bat potential
TN80	MBC/055/13	SK 80942 25261	Mature ash tree with bat potential
TN81	MBC/055/13	SK 80709 24963	Mature pollard ash
Wymondham			
Target Note No.	Site Reference	Grid Reference	Description
TN82	MBC/056/13	SK 84683 18626	Known GCN Pond
TN83	MBC/068/13	SK 84791 18628	Dry pond



APPENDIX E – Biodiversity and Environmental Legislation, Conventions and Threatened Lists



Introduction

The UK has ratified a number of Conventions and implemented legislation pertaining to the protection of biodiversity and habitats, either independently or as member state of the European Union. These are defined and summarised below.

Lists of threatened, endangered and extinct species are also provided, together with a summary explanation of each.

Bern Convention (1982)

The *Convention on the Conservation of European Wildlife and Natural Habitats* (the *Bern Convention*) was adopted in Bern, Switzerland in 1979, and was ratified in 1982. Its aims are to protect wild plants and animals and their habitats listed in Appendices 1 and 2 of the Convention, and regulate the exploitation of species listed in Appendix 3. The regulation imposes legal obligations on participating countries to protect over 500 plant species and more than 1000 animals.

To meet its obligations imposed by the Convention, the European Community adopted the *EC Birds Directive* (1979) and the *EC Habitats Directive* (1992 – see below). Since the Lisbon Treaty, in force since 1st December 2009, European legislation has been adopted by the European Union.

Biodiversity Action Plan (BAP)

The UK Biodiversity Action Plan (UKBAP – UK Steering Group, 1995; UK Biodiversity Group, 1998 - 2000) lists and prioritises habitats and species and sets national targets to be achieved. The intent of the UKBAP, however, is much broader than the protection and enhancement of less common species, and is meant to embrace the wider countryside as a whole.

The UKBAP has recently undergone a review (Biodiversity Reporting and Information Group, June 2007) resulting in the identification of 391 'Priority' Species Action Plans (SAPs), 45 'Priority' Habitat Action Plans and 162 Local Biodiversity Action Plans.

The Natural Environment and Rural Communities (NERC) Act came into force on 1st Oct 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list has been drawn up in consultation with Natural England, as required by the Act.

The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

Fifty-six habitats of principal importance are included on the S41 list. These are all the habitats in England that were identified as requiring action in the UK Biodiversity Action Plan (UK BAP) and continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework. They include terrestrial habitats such as upland hay meadows to lowland mixed deciduous woodland, and freshwater and marine habitats such as ponds and subtidal sands and gravels.



There are 943 species of principal importance included on the S41 list. These are the species found in England which were identified as requiring action under the UK BAP and which continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework. In addition, the Hen Harrier has also been included on the list because without continued conservation action it is unlikely that the Hen Harrier population will increase from its current very low levels in England.

In accordance with Section 41(4) the Secretary of State will, in consultation with Natural England, keep this list under review and will publish a revised list if necessary.

Local Biodiversity Action Plans (LBAP) identify habitat and species conservation priorities at a local level (typically at the County level), and are usually drawn up by a consortium of local Government organisations and conservation charities.

Birds Directive (BD)

The *EC Directive on the Conservation of Wild Birds (791409/EEC)* or '*Birds Directive*' was introduced to achieve favourable conservation status of all wild bird species across their distribution range. In this context, the most important provision is the identification and classification of Special Protection Areas (SPAs) for rare or vulnerable species listed in Annex 1 of the Directive, as well as for all regularly occurring migratory species, paying particular attention to the protection of wetlands of international importance.

Birds of Conservation Concern (BoCC)

This is a review of the status of all birds occurring regularly in the United Kingdom. It is regularly updated and is prepared by leading bird conservation organisations, including the British Trust for Ornithology (BTO), Joint Nature Conservation Committee (JNCC) and The Royal Society for the Protection of Birds (RSPB).

The latest report was produced in 2009 (Eaton *et al*, 2009) and identified 52 red list species, 126 amber species, and 68 green species. The criteria are complex, but generally:

- Red list species are those that have shown a decline of the breeding population, non-breeding population or breeding range of more than 50% in the last 25 years.
- Amber list species are those that have shown a decline of the breeding population, non-breeding population or breeding range of between 25% and 50% in the last 25 years. Species that have a UK breeding population of less than 300 or a non-breeding population of less than 900 individuals are also included, together with those whose 50% of the population is localised in 10 sites or fewer and those whose 20% of the European population is found in the UK.
- Green list species are all regularly occurring species that do not qualify under any of the red or amber criteria are green listed

Bonn Convention



The Convention on the Conservation of Migratory Species of Wild Animals or '*Bonn Convention*' was adopted in Bonn, Germany in 1979 and came into force in 1985. Participating states agree to work together to preserve migratory species and their habitats by providing strict protection to species listed in Appendix I of the Convention. It also establishes agreements for the conservation and management of migratory species listed in Appendix II.

In the UK, the requirements of the convention are implemented via the *Wildlife & Countryside Act 1981* (as amended), *Wildlife (Northern Ireland) Order 1985*, *Nature Conservation and Amenity Lands (Northern Ireland) Order 1985* and the *Countryside and Rights of Way Act 2000* (CRoW).

Global IUCN Red List

The International Union for Conservation of Nature (IUCN) Threatened Species was devised to provide a list of those species that are most at risk of becoming extinct globally. It provides taxonomic, conservation status and distribution information about threatened taxa around the globe.

The system catalogues threatened species into groups of varying levels of threat, which are: Extinct (EX), Extinct in the Wild (EW), Critically Endangered (CE), Endangered (EN), Vulnerable (VU), Near Threatened (NT), Least Concern (LC), Data Deficient (DD), Not Evaluated (NE). Criteria for designation into each of the categories is complex, and consider several principles.

Habitats Directive

The *Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora*, or the '*Habitats Directive*', is a European Union directive adopted in 1992 in response to the Bern Convention. Its aims are to protect approximately 220 habitats and 1,000 species listed in its several Annexes.

In the UK, the *Habitats Directive* is transposed into national law via the *Conservation of Habitats and Species (Amendment) Regulations 2012* in England, Scotland and Wales, and via the *Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended)* in Northern Ireland.

Protection of Badgers Act 1992 (PBA 1992)

The main legislation protecting badgers in England and Wales is the *Protection of Badgers Act 1992* (the 1992 Act). Under the 1992 Act it is an offence to: wilfully kill, injure, take or attempt to kill, injure or take a badger; dig for a badger; interfere with a badger sett by, damaging a sett or any part thereof, destroying a sett, obstructing access to a sett, causing a dog to enter a sett or disturbing a badger while occupying a sett.

The 1992 Act defines a badger sett as: "any structure or place which displays signs indicating current use by a badger"



National Planning Policy Framework (2012)

Following the publication of the National Planning Policy Framework (NPPF) in March 2012, *Planning Policy Statement 9 (PPS9): Biodiversity and Geological Conservation (2005)* has been withdrawn. However, *ODPM 06/2005: Biodiversity and Geological Conservation – Statutory Obligations and their impact within the Planning System* (the guidance document that accompanied PPS9) has not been withdrawn and, where more detailed guidance is required than is given within the NPPF, local planning authorities will continue to rely on ODPM 06/2005.

This guidance requires local planning authorities to take account of the conservation of protected species when determining planning applications and makes the presence of a protected species a material consideration when assessing a development proposal that, if carried out, would be likely to result in harm to the species or its habitat.

In the case of European Protected Species such as bats, planning policy emphasises that strict statutory provisions apply (including the *Conservation of Habitats and Species (Amendment) Regulations 2012*), to which a planning authority must have due regard.

Where developments requiring planning permission are likely to impact upon protected species it is necessary that protected species surveys are undertaken and submitted to meet the requirements of paragraph 98 of ODPM Circular 06/2005 which states that:

'The presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat.'

General guidance within the body of the NPPF which are also potentially relevant to the possible presence of bats at the site includes the following statements:

"The planning system should contribute to and enhance the natural and local environment by:

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

"Local planning authorities should set criteria based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged."

"When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:



- *if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;"*

Species of Principal Importance in England

Section 41 (S41) of this Act requires the Secretary of State to publish a list (in consultation with Natural England) of habitats and species which are of principal importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as public bodies including local and regional authorities, in implementing their duty under Section 40 of the *Natural Environment and rural Communities (NERC) Act 2006*, to have regard to the conservation of biodiversity in England, when carrying out their normal (e.g. planning) functions. The S41 list includes 65 habitats of principal importance and 1,150 species of principal importance.

The Conservation of Habitats and Species (Amendment) Regulations 2012

The *Conservation of Habitats and Species (Amendment) Regulations 2012* came into force on 16th August 2012 and amends the *Conservation of Habitats and Species Regulations 2010* to ensure the various provisions of Directive 92/43/EC ('the Habitats Directive') are transposed in a clear manner.

Regulations place a duty on the Secretary of State to propose a list of sites which are important for either habitats or species (listed in Annexes I or II of the Habitats Directive respectively) to the European Commission. These sites, if ratified by the European Commission, are then designated as Special Protection Areas (SPAs) within six years. The 2012 amendments include that public bodies help preserve, maintain and re-establish habitats for wild birds.

The Regulations also make it an offence to deliberately capture, kill, disturb or trade in the animals listed in Schedule 2, or pick, uproot, destroy, or trade in the plants listed in Schedule 5 (see Table B1).

Table B1 Schedules of the Conservation of Habitats and Species (Amendment) Regulations 2012

Schedule 2 – European Protected Species of Animals		Schedule 5 – European Protected Species of Plant	
Common name	Scientific name	Common name	Scientific name
Horseshoe bats	Rhinolophidae - all species	Dock, Shore	<i>Rumex rupestris</i>
Common bats	Vespertilionidae - all	Killarney Fern	<i>Trichomanes speciosum</i>



Schedule 2 – European Protected Species of Animals		Schedule 5 – European Protected Species of Plant	
Common name	Scientific name	Common name	Scientific name
	species		
Wild Cat	<i>Felis silvestris</i>	Early Gentian	<i>Gentianella anglica</i>
Dolphins, porpoises and whales	Cetacea – all species	Lady’s-slipper	<i>Cypripedium calceolus</i>
Dormouse	<i>Muscardinus avellanarius</i>	Creeping Marshwort	<i>Apium repens</i>
Pool Frog	<i>Rana lessonae</i>	Slender Naiad	<i>Najas flexilis</i>
Sand Lizard	<i>Lacerta agilis</i>	Fen Orchid	<i>Liparis loeselii</i>
Fisher’s Estuarine Moth	<i>Gortyna borelii lunata</i>	Plantain, Floating-leaved water	<i>Luronium natans</i>
Newt, Great Crested	<i>Triturus cristatus</i>	Yellow Marsh Saxifrage	<i>Saxifraga hirculus</i>
Otter	<i>Lutra lutra</i>		
Lesser Whirlpool Ram’s-horn Snail	<i>Anisus vorticulus</i>		
Smooth Snake	<i>Coronella austriaca</i>		
Sturgeon	<i>Acipenser sturio</i>		
Natterjack Toad	<i>Bufo calamita</i>		
Marine Turtles	<i>Caretta caretta</i> , <i>Chelonia mydas</i> , <i>Lepidochelys kempii</i> , <i>Eretmochelys imbricata</i> , <i>Dermochelys coriacea</i>		



The Hedgerow Regulations 1997

The *Hedgerow Regulations 1997* were made under Section 97 of the *Environment Act 1995* and came into force in 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification. Important hedgerows are defined by complex assessment criteria, which draw on biodiversity features, historical context and the landscape value of the hedgerow.

Wildlife and Countryside Act 1981 (as amended)

This is the principal mechanism for the legislative protection of wildlife in the UK. This legislation is the chief means by which the *Bern Convention* and the *Birds Directive* are implemented in the UK. Since it was first introduced, the Act has been amended several times.

The Act makes it an offence to (with exception to species listed in Schedule 2) intentionally:

- kill, injure, or take any wild bird,
- take, damage or destroy the nest of any wild bird while that nest is in use, or
- take or destroy an egg of any wild bird.

In addition, the Act makes it an offence (subject to exceptions) to:

- intentionally or recklessly kill, injure or take any wild animal listed on Schedule 5,
- interfere with places used for shelter or protection, or intentionally disturbing animals occupying such places.
- The Act also prohibits certain methods of killing, injuring, or taking wild animals

Finally, the Act also makes it an offence (subject to exceptions) to:

- intentionally pick, uproot or destroy any wild plant listed in Schedule 8, or any seed or spore attached to any such wild plant,
- unless an authorised person, intentionally uproot any wild plant not included in Schedule 8,
- sell, offer or expose for sale, or possess (for the purposes of trade), any live or dead wild plant included in Schedule 8, or any part of, or anything derived from, such a plant.



Following all amendments to the Act, Schedule 5 'Animals which are Protected' contains a total of 154 species of animal, including several mammals, reptiles, amphibians, fish and invertebrates. Schedule 8 'Plants which are Protected' of the Act, contains 185 species, including higher plants, bryophytes and fungi and lichens. A comprehensive and up-to-date list of these species can be obtained from the JNCC website.

Part 14 of the Act makes unlawful to plant or otherwise cause to grow in the wild any plant which is listed in Part II of Schedule 9.

Table B2 provides a comprehensive list of plant species listed in this schedule. It is recommended that plant material of these species is disposed of as bio-hazardous waste, and these plants should not be used in planting schemes.

Table B2 Invasive plant species listed in Schedule 9 of the *Wildlife & Countryside Act 1981* (as amended)

Common name	Scientific name
Perfoliate alexanders	<i>Smyrniium perfoliatum</i>
Red algae	<i>Grateloupia luxurians</i>
Variagated yellow archangel	<i>Lamiastrum galeobdolon</i> subsp. <i>argentatum</i>
Yellow azalea	<i>Rhododendron luteum</i>
Himalayan balsam	<i>Impatiens glandulifera</i>
Wall Cotoneaster	<i>Cotoneaster horizontalis</i>
Entire-leaved cotoneaster	<i>Cotoneaster integrifolius</i>
Himalayan cotoneaster	<i>Cotoneaster simonsii</i>
Hollyberry cotoneaster	<i>Cotoneaster bullatus</i>
Small-leaved cotoneaster	<i>Cotoneaster microphyllus</i>
False Virginia creeper	<i>Parthenocissus inserta</i>
Virginia creeper	<i>Parthenocissus quinquefolia</i>
Purple dewplant	<i>Disphyma crassifolium</i>
Fanwort or Carolina water-shield	<i>Cabomba caroliniana</i>
Water fern	<i>Azolla filiculoides</i>
Hottentot fig	<i>Carpobrotus edulis</i>
Three-cornered garlic	<i>Allium triquetrum</i>



Common name	Scientific name
Giant hogweed	<i>Heracleum mantegazzianum</i>
Water hyacinth	<i>Eichhornia crassipes</i>
Giant kelp	<i>Macrocystis</i> spp.
Giant knotweed	<i>Fallopia sachalinensis</i>
Hybrid knotweed	<i>Fallopia japonica</i> × <i>Fallopia sachalinensis</i>
Japanese knotweed	<i>Fallopia japonica</i>
Few-flowered garlic	<i>Allium paradoxum</i>
Water lettuce	<i>Pistia stratiotes</i>
Parrot's-feather	<i>Myriophyllum aquaticum</i>
Floating pennywort	<i>Hydrocotyle ranunculoides</i>
Duck potato	<i>Sagittaria latifolia</i>
Floating water primrose	<i>Ludwigia peploides</i>
Water primrose	<i>Ludwigia grandiflora</i>
Water primrose	<i>Ludwigia uruguayensis</i>
Rhododendron	<i>Rhododendron ponticum</i>
Rhododendron	<i>Rhododendron ponticum</i> × <i>Rhododendron maximum</i>
Giant rhubarb	<i>Gunnera tinctoria</i>
Japanese rose	<i>Rosa rugosa</i>
Giant salvinia	<i>Salvinia molesta</i>
Green seafingers	<i>Codium fragile</i>
Californian red seaweed	<i>Pikea californica</i>
Hooked asparagus seaweed	<i>Asparagopsis armata</i>
Japanese seaweed	<i>Sargassum muticum</i>
Laver seaweeds (except native species)	<i>Porphyra</i> spp
Australian swamp stonecrop or New Zealand pygmyweed	<i>Crassula helmsii</i>
Wakame	<i>Undaria pinnatifida</i>
Curly waterweed	<i>Lagarosiphon major</i>
Waterweeds	<i>Elodea</i> spp.



APPENDIX F – Ecological Survey Season Calendar



Ecology Survey Calendar

This calendar is a guide to the typical seasonal survey windows within which we usually have to work – it reflects best practice guidance. A number of visits may be required throughout the survey period with factors such as weather and geography potentially impacting dates. We pride ourselves on our innovative approaches and ability to find solutions so please speak to our ecologists before scheduling any work.

■ Optimal
 ■ Sub-optimal
 ■ No Survey

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
Extended Phase 1 Habitat Survey	Sub-optimal		Optimal									Sub-optimal	
Botanical Surveys	Lower plants only (mosses & liverworts)			Detailed botanical surveys						Lower plants only (mosses & liverworts)			
Fungi			Early species only					All fungi including waxcaps					
Breeding Birds			4 x surveys spread throughout Mar to Jun										
Wintering Birds	4 x visits		Sub-optimal								Sub-optimal		
Migratory Birds	Sub-optimal										Sub-optimal		
Badgers	Survey methods are possible throughout the year, vegetation can obscure					evidence in the summer							
Bat Roost Assessment			Licensable period for disturbance										
Bats – Emergence and Activity	Hibernation surveys only		Sub-optimal		Activity & emergence surveys to be spaced throughout the season					Sub-optimal		Hibernation surveys only	
Dormice				Tube surveys are carried out between Apr to Nov Nut searches between Aug and Dec						Nut search only			
Red Squirrels	Visual surveys Dec to Mar			Hair tube surveys throughout the year									
Invertebrates				Optimal period varies between species, consult our team before scheduling						Sub-optimal			
Otters	Surveys are possible all year round, weather and vegetation cover can be limiting factors.												
Water Voles	Burrow survey only	Habitat suitability assessment		Two surveys required: the first Apr to end Jun, the second Jul to Sep (to identify breeding territories and latrines)					Habitat suitability assessment		Burrow survey only		
Reptiles			Sub-optimal		Optimal survey period Apr to Jun				Sub-optimal				
Great Crested Newts			4 x aquatic surveys (must include 2 surveys mid-Apr to mid-May); eDNA survey season mid Mar to end Jun			Sub-optimal							
White-Clawed Crayfish	Habitat suitability assessment only		Weather dependent		No survey - females release offspring		Optimal			Habitat suitability assessment only			
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	



APPENDIX G – Planting Species List



Locally Native Tree and Shrub Species		Non-native Tree and Shrub Species	
Common Name	Scientific Name	Common Name	Scientific Name
Alder	<i>Alnus glutinosa</i>	Beech	<i>Fagus sylvatica</i>
Ash	<i>Fraxinus excelsior</i>	Bird cherry	<i>Prunus padus</i>
Blackthorn	<i>Prunus spinosa</i>	Buddleja	<i>Buddleia davidii</i>
Broom	<i>Cytisus scoparius</i>	Cedar of Lebanon	<i>Cedrus libani</i>
Bullace	<i>Prunus domestica ssp instititia</i>	Cherry-laurel	<i>Prunus laurocerasus</i>
Crack willow	<i>Salix fragilis</i>	Cherry-plum	<i>Prunus cerasifera</i>
Dog rose	<i>Rosa canina</i>	Common lime	<i>Tilia x europaea</i>
Dogwood	<i>Cornus sanguinea</i>	Common whitebeam	<i>Sorbus aria</i>
Eared willow	<i>Salix aurita</i>	Deodar	<i>Cedrus deodara</i>
English elm	<i>Ulmus procera</i>	Domestic apple	<i>Malus pumila (domestica)</i>
Field maple	<i>Acer campestre</i>	Duke of Argyll's tea-plant	<i>Lycium barbarum</i>
Field rose	<i>Rosa arvensis</i>	European larch	<i>Larix decidua</i>
Goat willow	<i>Salix caprea</i>	False acacia	<i>Pseudacacia robinia</i>
Gorse	<i>Ulex europaeus</i>	Garden privet	<i>Ligustrum ovalifolium</i>
Grey sallow	<i>Salix cinerea</i>	Grey alder	<i>Alnus incana</i>
Guelder-rose	<i>Viburnum opulus</i>	Grey poplar	<i>Populus x canescens</i>
Hawthorn	<i>Crataegus monogyna</i>	Hornbeam	<i>Carpinus betulus</i>
Hazel	<i>Corylus avellana</i>	Horse chestnut	<i>Aesculus hippocastanum</i>
Holly	<i>Ilex aquifolium</i>	Hybrid black poplar	<i>Populus x canadensis</i>
Pedunculate oak	<i>Quercus robur</i>	Lawson's cypress	<i>Chamaecyparis lawsoniana</i>
Purging buckthorn	<i>Rhamnus catharticus</i>	Leyland cypress	<i>X Cupressocyparis leylandii</i>
Rowan	<i>Sorbus aucuparia</i>	Lilac	<i>Syringa vulgaris</i>
Silver birch	<i>Betula pendula</i>	Norway spruce	<i>Picea abies</i>
White willow	<i>Salix alba</i>	Red horse chestnut	<i>Aesculus carnea</i>



Wild (crab) apple	<i>Malus sylvestris</i>	Scot's pine	<i>Pinus sylvestris</i>
Wild cherry	<i>Prunus avium</i>	Spindle	<i>Euonymus europaeus</i>
Wild privet	<i>Ligustrum vulgare</i>	Swedish whitebeam	<i>Sorbus intermedia</i>
Wych elm	<i>Ulmus glabra</i>	Sweet chestnut	<i>Castanea sativa</i>
Yew	<i>Taxus baccata</i>	Sycamore	<i>Acer pseudoplatanus</i>
		Wayfaring tree	<i>Viburnum lantana</i>
		Western hemlock-spruce	<i>Tsuga heterophylla</i>
		White poplar	<i>Populus alba</i>
		Wild plum	<i>Prunus domestica</i>

Gardening for bats

Aim at having flowers in bloom throughout the year, including both annuals and herbaceous perennials. Below are some suggestions, but this is not an exhaustive list. Flowering times are approximate, varying dependent on region. Regular dead-heading extends flowering period in many flowers.

A=annual, HA= hardy, annual, HHA=half-hardy annual, P=perennial, W=wild flower.

Flowers for borders			
St. John's Wort	<i>Hypericum</i>	P	March
Marigolds	<i>Calendula</i>	H/A	March-October
Aubrietia	<i>Aubrietia deltoidea</i>	P	March-June
Honesty	<i>Lunaria rediviva</i>	HB	March
Forget-me-not	<i>Myosotis sp.</i>	A/P	March-May
Elephant ears	<i>Bergenia</i>	P	April
Wallflowers	<i>Erysimum</i>	B	April-June
Cranesbills	<i>Geranium sp.</i>	P	May-September
Yarrow	<i>Achillea</i>	P	May-
Poppies	<i>Papaver sp.</i>	A	May- July
Dames violet	<i>Hesperis matronalis</i>	P	May-August
Red Valerian	<i>Centranthus ruber</i>	P	May-Sept
Poached egg plant	<i>Limnanthes douglasii</i>	HA	June-August
Knapweed	<i>Centaurea nigra</i>	P	June-September



Phacelia	<i>Phacelia tanacetifolia</i>	HA	June-September
Ox-eye daisy	<i>Leucanthemum vulgare</i>	P	June-August
Evening primrose	<i>Oenothera biennis</i>	B	June-September
Candytuft	<i>Iberis amara</i>	HA	June-September
Sweet William	<i>Dianthus barbatus</i>	B	June-July
Blanket flowers	<i>Gaillardia</i>	P	June -
Argentine Vervain	<i>Verbena bonariensis</i>	HHA	June-October
Scabious	<i>Knautia arvensis</i>	P	July-August
Night-scented stock	<i>Mattiola bicornia</i>	HA	July-August
Pincushion flower	<i>Scabious</i> sp.	A/P	July-September
Cherry pie	<i>Heliotrope</i>	HHA	July-October
Mexican aster	<i>Cosmos</i> sp.	A/P	July-October
Cone flower	<i>Rudbeckia</i> sp.	A/P	August-November
Mallow	<i>Lavatera</i> sp.	P	August-October
Michaelmas daisy	<i>Aster</i> sp.	P	August-September
Ice plant 'Pink lady'	<i>Sedum spectabile</i>	P	September
Herbs – both leaves and flowers are fragrant			
Fennel	<i>Foeniculum vulgare</i>		July-September
Bergamont	<i>Monarda didyma</i>		June-September
Sweet Cicely	<i>Myrrhis odorata</i>		April-June
Hyssop	<i>Hyssopus officinalis</i>		July-September
Feverfew	<i>Tanacetum parthenium</i>		June-September
Borage	<i>Borago officinalis</i>		May-September
Rosemary	<i>Rosmarinus officinalis</i>		March-May
Lemon balm	<i>Melissa officinalis</i>		June-July
Coriander	<i>Coprianrum sativum</i>		June-August
Lavenders	<i>Lavendula</i> sp.		June -August
Marjoram	<i>Origanum</i> sp.		July-September
Trees, shrubs and climbers important to insects			
Oak	<i>Quercus</i> sp.		large gardens only



Silver birch	<i>Betula pendula</i>		
Common alder	<i>Alnus glutinosa</i>		Suitable for coppicing
Hazel	<i>Corylus avellana</i>		Suitable for coppicing
Elder	<i>Sambucus nigra</i>		Small
Goat willow	<i>Salix caprea</i>		Suitable for coppicing
Hawthorn	<i>Crataegus monogyna</i>		Suitable for coppicing
Honeysuckle	<i>Lonicera sp.</i>		Grow a variety for succession
Dog rose	<i>Rosa canina</i>		Climber
Bramble	<i>Rubus fruticosus</i>		Climber
Ivy	<i>Hedera helix</i>		Climber
Buddleia	<i>Buddleja davidii</i>		Shrub
Guelder rose	<i>Viburnum opulus</i>		Shrub
Gorse	<i>Ulex sp.</i>		Shrub
Plants for pond edges and marshy areas			
Purple loosestrife	<i>Lythrum salicaria</i>	W	June-August
Meadow sweet	<i>Filipendula ulmaria</i>	W	June-September
Lady's smock	<i>Cardamine pratensis</i>	W	April-June
Water mint	<i>Mentha aquatica</i>	W	July-September
Angelica	<i>Angelica sylvestris</i>	W	July-September
Hemp agrimony	<i>Eupatorium cannabinum</i>	W	March-May
Marsh marigold	<i>Caltha palustris</i>	W	June-September
Creeping Jenny	<i>Lysimachia nummularium</i>	W	May-August
Fringed water lily	<i>Nymphoides peltata</i>	W	June-September
Water forget-me-not	<i>Myosotis scorpioides</i>	W	June-September

Allow part lawns to grow long in summer and cut in autumn, removing the clippings. Avoid using fertilisers. Compost heaps are food producers of insects too.

(Source: 'Gardening for bats', Bat Conservation Trust, 2004)



APPENDIX H – Phase 1 Habitat Survey Codes

Based on: Joint Nature Conservation Committee (JNCC) (2003). Handbook for Phase 1 habitat survey – a technique for environmental audit. JNCC: Peterborough.



Symbol	Habitat	Description
	Target notes	Used to provide supplementary information on features of interest e.g. Non-native plants which are detrimental to UK habitats, such as Japanese knotweed
	Scattered scrub	Occasional scrubby plants such as bramble
	Coniferous tree	Evergreen trees such as pine
	Broad-leaved tree	Deciduous trees, which lose their leaves over winter, such as oak
	Species-rich intact hedgerow	Continuous hedgerow containing many species of plants
	Defunct species-rich hedgerow	Broken hedgerow containing many species of plants
	Species-poor intact hedgerow	Continuous hedgerow containing few species of plants
	Defunct species-poor hedgerow	Broken hedgerow containing few species of plants
	Open water ditch or stream	Water course, with arrow denoting direction of flow
	Marginal vegetation	Vegetation growing adjacent to/emerging from water's edge
	Wall	Man-made boundary feature, such as dry stone wall
	Dry ditch	Ditch feature lacking water
	Fence	Man-made boundary feature, such as barbed wire fencing
	Pioneer or ephemeral vegetation	Short growing areas of weeds, often associated with derelict urban habitats
	Open water	Standing water such as ponds, lakes and canals
	Flush	Spring habitat on gently-sloping ground
	Swamp	Tall vegetation, such as bulrush, usually in standing water
	Tall ruderal	Tall weedy vegetation, such as stinging nettles
	Dense or continuous scrub	Blocks of scrubby plants, such as bramble
	Buildings within allocated sites	Man-made structures, such as houses



ADDENDUM 1 - Allocation and Reserve Sites

Addendum to Melton Borough Council Biodiversity and Geodiversity Study

Issued December 2015

This addendum presents the Biodiversity and Geodiversity study information for the Additional and Reserve SHLAA Sites.



APPENDIX I – Allocation and Reserve Site Survey: List of Figures and Figures A12- A24, B34-B67 and C12-C24



APPENDIX J – Allocation/Reserve Site Survey Results



Appendix J – Allocation/Reserve Site Survey Results

Allocation/ Reserve Site Name	Settlement	Location & Map Number	Area (Ha)	Accessibility	Target Notes	Designated Sites	Habitats and Flora	Potential Protected & Notable Fauna	Further Survey Recommendations	Enhancement Recommendations	Ecological Assessment	pLWS Description
ABK1	Ab Kettleby	A606 Figures: A12 B12 C12	0.3	No access granted, view from road.	None	LWS known as Browns Hill (ref 7323 mesotrophic grassland) is located 1 km east.	Poor semi-improved grassland, species poor hedges.	Potential badger and reptile habitat. Potential GCN terrestrial habitat	Badger surveys. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required.	Dependent on results of species surveys	Site of low ecological value	None
ASF1	Asfordby	West of Klondyke Way Figures: A13 B13 C13	1.6	Yes from public access	None	Four cLWS are located within 1 km. The closest is a pond located 0.2 km north-west (ref 91185).	An arable field with species poor arable margins. Second field of semi-improved grassland containing pond (dry in September) and surrounded by species poor hedge. Woodland belt along northern boundary and River Wreake abuts the southern boundary.	Potential badger and reptile habitat. Some bat roost potential in trees along northern boundary and good connectivity for foraging bats. Grassland suitable for foraging barn owl.	Badger surveys. Reptile surveys. HSI assessment for GCN of pond onsite, followed by presence/absence surveys if required. Bat roost of any trees to be removed.	Dependent on results of species surveys Retain woodland on northern boundary Retain hedgerows Buffer	Site of low ecological value	
ASF2	Asfordby	A6006 & east of Saxleby Road Figures: A13 B14 C13	3.2	No - viewed from road. Assessment based largely on aerial interpretation.	None	Three cLWS within 1km. The closest is located 0.9 km south (ref 68804, wetland).	Most of the site does not appear to be managed. Semi-improved grassland, tall ruderal and scrub with hedgerows and mixed tree species.	Potential badger, foraging barn owl, hedgehog, breeding birds and reptile habitat.	Badger survey. Reptile survey. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required. Breeding bird survey. Bat assessment of trees and bat activity survey.	Dependent on results of species surveys	Site of moderate ecological value. Terrestrial habitat with potential to support reptiles, badgers, amphibians and foraging bats.	None



Allocation/ Reserve Site Name	Settlement	Location & Map Number	Area (Ha)	Accessibility	Target Notes	Designated Sites	Habitats and Flora	Potential Protected & Notable Fauna	Further Survey Recommendations	Enhancement Recommendations	Ecological Assessment	pLWS Description
ASF3	Asfordby	A6006 & Loughborough Road Figures: A13 B15 C13	1.0	Yes - via footpath	TN83	Three cLWS or are located approximately The closest is 0.6 km south-west (ref 91185, pond).	Poor semi-improved grassland paddock heavily grazed by horses. Boundaries include woodland to north, line of mature trees to east and hedges to south and west. Beech tree in school grounds to south.	Potential badger, foraging barn owl, hedgehog, reptile habitat. Bat roost potential in trees.	Badger survey. Reptile survey. HSI assessment for GCN of adjacent pond followed by presence/absence surveys if required. Hedgerow survey along southern boundary. Bat roost assessment if trees are to be effected.	Retain the woodland (including root protection) and enhance the pond along the northern boundary. Opportunity to install bat and bird boxes in the woodland. Protect the roots of the Beech tree.	Site of moderate ecological value. Site is located adjacent to a woodland and contains terrestrial habitat with potential to support reptiles, badgers, amphibians and other foraging animals.	None
ASFH1	Asfordby Hill	Glebe Road Figures: A14 B16 C14	1.6	Yes	None	LWS located 0.5 km north (ref 39275, Calcareous grassland). Two cLWS the closest is 0.5 km north.	Arable, bare ground, species poor hedgerows, scrub and tall ruderal vegetation. Housing development in progress (Sept'16).	Potential badger and reptile habitat. Potential GCN terrestrial habitat.	Badger surveys. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required.	Dependent on results of species surveys. Retain hedges.	Site of low ecological value	None
ASFH2	Asfordby Hill	Compton Road Figures: A14 B17 C14	1.9	Yes	TN 47	LWS located 0.6 km north (ref 39275, calcareous grassland). Two cLWS the closest is 0.7 km north-west.	Arable, species poor hedgerows, scrub and tall ruderal vegetation. Underground structure.	Underground structure may have potential for hibernating bats. Potential badger and reptile habitat. Potential GCN terrestrial habitat.	Badger surveys. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required. Bat hibernacula survey.	Dependent on results of species surveys. Retain hedges.	Potential bat hibernacula otherwise site of low ecological value	None



Allocation/ Reserve Site Name	Settlement	Location & Map Number	Area (Ha)	Accessibility	Target Notes	Designated Sites	Habitats and Flora	Potential Protected & Notable Fauna	Further Survey Recommendations	Enhancement Recommendations	Ecological Assessment	pLWS Description
ASFH 3 Asfordby Hill Site NP Draft Allocation	Asfordby Hill	Welby Road Figures: A14 B18 C14	10.1	Yes	TN 6	Three LWS (ref 39275 calcareous grassland and woodland), two areas are within the site and a third is to the east of the site. A LWS abuts the east boundary, and two cLWS abut the west (ref. 90718) and north (ref. 90717) site boundary.	Woodland and open mosaic of habitats including bare ground, ephemeral vegetation, scrub and early succession woodland (silver birch and willow) vegetation. Moss, lichen and fungi also recorded amongst wooded and ephemeral habitats.	Desk Study identified notable Plant - Deptford pink, (<i>Dianthus armeria</i>) onsite. Potential habitat for badger, a range of invertebrates, foraging bats, breeding and foraging birds reptile and terrestrial habitat for amphibians.	NVC botanical survey, bryophyte, lichen and fungi survey, invertebrate survey (including butterfly transect, nocturnal moth survey and general sweep netting), bat activity transects, badger survey, terrestrial surveys for reptile and amphibian.	Dependent on results of species surveys and development proposed.	Site of high ecological value. Potential Priority Habitat – Open Mosaic Habitats on Previously Developed Land Adjacent to other cLWS and wet woodland. The site supports a notable plant (Desk study) and potential to support a range of protected species.	Yes Broadleaved woodland and Open Mosaic Habitats on Previously Developed Land
BOT1	Bottesford	Belvoir Road Figures: A15 B19 C15	1.0	No	None	Eight cLWS, the closest is 0.4 km NE and is a dead ash tree (ref 90544).	N/A - Area under development.	N/A - Area under development.	N/A Area under development.	N/A Area under development.	N/A Area under development	No
BOT2	Bottesford	South of Devon Farm Figures: A15 B20 C15	1.0	Yes – footpath crosses the site Land to west not visible.	None	Eight cLWS within 1 km. 2 mature trees cLWS are adjacent to the southern boundary (ref 90544 and 90545).	Poor semi – improved grassland. Species poor and defunct hedges with trees.	Potential badger, nesting birds and reptile habitat. Potential GCN terrestrial habitat.	Badger surveys. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site (north) followed by presence /absence surveys if required. Bat roost assessment if trees are to be effected.	Dependent on results of species surveys. Retain and enhance hedges. Retain and protect trees.	Site of low ecological value	None



Allocation/ Reserve Site Name	Settlement	Location & Map Number	Area (Ha)	Accessibility	Target Notes	Designated Sites	Habitats and Flora	Potential Protected & Notable Fauna	Further Survey Recommendations	Enhancement Recommendations	Ecological Assessment	pLWS Description
BOT3	Bottesford	Grantham Road Figures: A15 B21 C15	1.6	No – limited view from road	TN7	Five cLWS are located within 1k of the site. The western half of the site is a cLWS ref 91368 (Mesotrophic grassland).	West field – tall ruderal and scrub. East field - managed poor semi-improved grassland. Japanese knotweed recorded in the east of the site. Hedge unmanaged to the road side with dry ditch.	Potential badger, breeding birds and reptile habitat. Potential GCN terrestrial habitat Terrestrial habitat also suitable for foraging bats.	Badger surveys. Hedgerow Assessment. Reptile surveys. Bat activity surveys. Bat roost assessment if any trees are to be effected. Japanese Knotweed Survey.	Dependent on results of species surveys. Retain and enhance hedges. Remove / treat Japanese Knotweed. Provide native flowering plants and fruit bearing trees in landscaping plan.	Poor visibility of site, however the site appears to be of low ecological value	None
BOT4	Bottesford	Rectory Farm, Figures: A15 B22 C15	9.5	Yes	TN 49 TN 50 TN 52	LWS ref 54206 (mesotrophic grassland) 30 m to west. Six cLWS (two 1 km south, two 0.9 km south-east and two 9-1 km SE).	Poor semi-improved grassland, species poor hedgerows, mature trees and tall ruderals. River Devon crosses the site and along the southern boundary. Evidence of Ridge and furrow in east fields and a railway line abuts the site to the north.	Potential badger and reptile habitat. Potential GCN terrestrial habitat. River Devon -, water vole and white-clawed crayfish. Mature trees and with potential bat roosts.	Full assessments for bats, otter, water vole and white-clawed crayfish. Badger survey on adjacent railway embankments. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required.	Dependent on results of species surveys.	Site of moderate ecological value. Combination of different habitats with potential for roosting bats (trees), riparian species (River Devon) and other wildlife along the dis-used railway	None
BOT5	Bottesford	East of Normanton Lane Figures: A15 B23 C15	2.9		None	LWS ref 54206 (mesotrophic grassland) 1 km west. Five cLWS (one 0.9 km south-east, two 0.7 km south and two 0.7-0.8 km SE).	Arable field with sown semi-improved grassland field margin on south and east boundary. Line of trees along eastern boundary and gappy hedge along western boundary.	Potential habitat for badger, foraging barn owl, hedgehog, breeding birds and reptile habitat.	Badger surveys. Reptile surveys. Bat activity surveys. Bat and barn owl roost assessment if any trees are to be effected and the adjacent signal box.	Dependent on results of species surveys. Retain and protect trees wildlife corridors north of Station Road and along the railway line. Avoid lighting these two wildlife corridors.	Assuming the tress / wildlife corridor are protected - site of low ecological value	



Allocation/ Reserve Site Name	Settlement	Location & Map Number	Area (Ha)	Accessibility	Target Notes	Designated Sites	Habitats and Flora	Potential Protected & Notable Fauna	Further Survey Recommendations	Enhancement Recommendations	Ecological Assessment	pLWS Description
EAST1	Bottesford Easthorpe	Green Lane, East Figures: A15 B24 C15	1.1	No Viewed from road.	None	Eight mature tree all cLWS within 1km of the site, the closest is 0.2 km north ref 90543.	Amenity grassland and shrubs(garden), mature trees, buildings (Pre-1900) with improved grassland and semi- improved grassland in the south of the site.	Potential badger, nesting birds, hedgehog, roosting bats, barn owl, reptile and amphibians habitat (no ponds within 500m).	Badger surveys. Reptile surveys. Bat activity surveys. Bat and barn owl roost assessment if any trees and the building is to be developed.	Dependent on results of species surveys. Retain and protect the mature trees, including those along Green Lane. Avoid lighting along the Green Lane.	Site of low ecological value	None
EAST2	Bottesford Easthorpe	Green Lane, West Figures: A15 B25 C15	1.4	No Viewed from road.	None	Eight mature tree all cLWS within 1 km of the site, the closest being 0.2 km north ref 90543.	Poor semi-improved grassland with mixed plantation woodland along N and W boundary and species poor hedges along the other boundaries.	Potential badger, nesting birds, hedgehog, roosting bats, barn owl, reptile and amphibian habitat.	Badger surveys. Reptile surveys. Bat activity surveys. Bat and barn owl roost assessment if any trees effected.	Dependent on results of species surveys. Retain woodland along boundaries. Avoid lighting along the woodland corridor.	Site contains a narrow woodland belt, if this is protected -the rest of the site is of low ecological value	
CROX1	Croxton Kerrial	Saltby Road, Figures: A16 B26 C16	1.4	Yes (2015) Viewed from road in 2016	None	SSSI Croxton Park (ancient woodland and unimproved grassland) 1km West. LWS ref 40278 (Mesotrophic grassland) 0.5 km SE. Eleven cLWS, the closest being 0.4 km west ref 90518 (mature tree).	Improved grassland with fenced boundaries.	Habitat has some potential for badger, breeding birds and reptile. Terrestrial habitat suitable for amphibians, however the nearest pond is over 300m away and beyond buildings.	Badger surveys. Reptile surveys.	Dependent on results of species surveys.	Site of low ecological value	None



Allocation/ Reserve Site Name	Settlement	Location & Map Number	Area (Ha)	Accessibility	Target Notes	Designated Sites	Habitats and Flora	Potential Protected & Notable Fauna	Further Survey Recommendations	Enhancement Recommendations	Ecological Assessment	pLWS Description
CROX2	Croxton Kerrial	Saltby Road Figures: A16 B27 C16	0.3	No - Assessment made from road and aerial photography.	None	LWS ref 40278 (Mesotrophic grassland) 0.8 km SE. Ten cLWS within 1 km of the site the closest is 0.3 km west ref 90518 (mature tree).	Not accessed., amenity grassland, poor semi-improved paddock, tall ruderal vegetation and mature trees.	Trees with potential for bats. Potential for badger, reptile and GCN in terrestrial habitat.	Bat roost assessments of trees. Badger survey. Reptile surveys. Nesting bird surveys.	Dependent on results of species surveys. Protect and retain trees.	Site of low ecological value	None
CROX3	Croxton Kerrial	The Nook Car park Figures: A16 B28 C16	0.5	Yes from car park	None	SSSI Croxton Park (ancient woodland and unimproved grassland) 0.6 km SW. LWS ref 40278 (Mesotrophic grassland)0.6 km SE. Eleven cLWS within 1 km, the closest is 0.1 km west ref 90518 (mature tree).	Hardstanding (car park) and poor semi- improved grassland surrounded by species poor hedge with trees.	Potential badger and reptile habitat. Potential GCN terrestrial habitat.	Badger survey. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required.	Dependent on results of species surveys. Retain / protect hedges and trees.	Site of low ecological value	None
FRIS1	Frisby on the Wreake	Great Lane Figures: A17 B29 C17	2.1	Yes (2015) Viewed from road in 2016	TN 84 TN 85 TN 86	cLWS located 1km NE from the site near Asfordby.	Improved grassland (with ridge and furrow marks), species poor hedgerows and mature trees.	Potential badger and reptile habitat. Potential GCN terrestrial habitat onsite and ponds within 200m.	Badger survey. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required.	Dependent on results of species surveys. Protect mature trees on boundary. Retain hedgerow along roads.	Site of low ecological value	None



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FRIS2	Frisby on the Wreake	Water Lane Figures: A17 B30 C17	0.9	No – viewed from road	None	SSSI ref SK686173 (Frisby marsh) 0.6 km south-west.	Poor semi-improved grassland with patches of tall ruderal. Young ash and elder trees along the railway line. Hedges with trees, southern hedge appears to be unmanaged and gappy.	Potential habitat for badger, reptile GCN (terrestrial), bats and barn owl. Pond located 200m SE of site.	Badger survey. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required Bat activity transects and bat roost assessment of trees around the site boundary	Dependent on results of species surveys. Protect mature trees on boundary. Retain hedgerow and planting up the gaps in hedgerows.	Site of low ecological value	None
FRIS3	Frisby on the Wreake	Rotherby Lane - south Figures: A17 B31 C17	0.6	Yes – access via footpath	None	SSSI ref SK686173 (Frisby marsh) 0.8 km west.	An amenity grassland (school) surrounded by trees. Grazed field of semi-improved grassland surrounded by hedges. Dry pond onsite, several within 200m. Hard standing along track and farm yard in east of site.	Potential habitat for badger, reptile (including refugia) GCN (terrestrial and dry pond), bats.	Badger survey. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required. Bat activity transects and bat roost assessment of trees.	Dependent on results of species surveys. Protect mature trees on boundary. Retain hedgerow Retain and enhance pond.	Site of low ecological value	None
FRIS4	Frisby on the Wreake	Rotherby Lane - north Figures: A17 B32 C17	0.9	No , viewed from road.	TN 8 TN 9	SSSI ref SK686173 (Frisby marsh) 0.6 km south-west.	Semi- improved grassland with managed species poor hedges.	50+ swallows foraging onsite and using the western barns. Buildings within the east of the site and two ash trees on roadside boundary with 'low – moderate' bat roost potential.	Badger survey. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required. Bat roost assessment of trees and buildings, followed by nocturnal surveys where appropriate.	Dependent on results of species surveys. Protect mature trees on boundary. Retain hedgerow. Retain and enhance pond. Swallow nest boxes.	Site of moderate ecological importance. Presence of foraging swallows and possible nesting sites in the buildings. Potential presence of bat roosts onsite.	Potentially – limited visibility, presence of a traditional orchard.



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GADD1	Gaddesby	Rearsby / Chapel Lane Figures: A18 B33 C18	0.3	No- viewed from road	None	Nine LWS located within 1 km of the site. Two are located 0.2 km west, ref 26012 and 49849 (Hedgerow Mesotrophic grassland).	Mixed woodland with mature trees and species poor hedge along the road.	Badger, roosting bats, nesting birds and amphibians (ponds within 85m W and 150m N). The desk study has records of grass snake nearby.	Badger survey. Reptile surveys. Breeding bird survey. HSI assessment for GCN of ponds within 500 m of the site (to north and west) followed by presence/absence surveys if required. Bat roost assessment of trees, followed by nocturnal surveys where appropriate.	Dependent on results of species surveys. Protect mature trees on boundary or consider offsite mitigation. Bat and bird boxes.	Site of moderate ecological importance. Presence woodland onsite Potential presence of protected species onsite.	
GADD2	Gaddesby	Ashby Road, north Figures: A18 B34 C18	2.0	No – viewed from road and footpath	None	Eleven LWS located within 1km of the site, the closest being Gaddesby brook (ref 49866) located 0.1 km east.	Poor semi improved grassland with hedge containing a line of trees (mostly ash) along the road. A drain bisects the east of the site.	Grass snake was recorded in adjacent fields. Habitat also suitable for badger, roosting bats, nesting birds and terrestrial habitat for amphibians.	Badger survey. Reptile surveys. Hedgerow assessment. HSI assessment for GCN of ponds within 500 m of the site (to north and east) followed by presence/absence surveys if required. Bat roost assessment of trees, followed by nocturnal surveys where appropriate.	Dependent on results of species surveys. Protect mature trees and hedge along the road. Enhance the wildlife connectivity, possibly along the drain linked to the woodland to the NE.	Site of low ecological value	
GADD3	Gaddesby	Pasture Lane / Rotherby Rd Figures: A18 B35 C18	0.4	No – viewed from road	None	Seven LWS located within 1 km of the site, the closest is 0.3 km NE and is two areas of mesotrophic grassland (ref 26011 and 51236).	Poor semi improved grassland surrounded by hedges (at least 5 species) with occasional trees. 2- 3m wide grass road verge and a dry ditch under the hedge along Rotherby Rd. Pond onsite appeared to be dry.	Badger, roosting bats, nesting birds and amphibians (>10 potential ponds within 500m). The desk study has records of grass snake nearby.	Badger survey. Reptile surveys. Hedgerow and road verge assessment. HSI assessment for GCN of ponds within 500 m of the site (to north and east) followed by presence/absence surveys if required. Bat roost assessment of trees, followed by nocturnal surveys where appropriate.	Dependent on results of species surveys. Retain hedgerow and Protect mature trees on boundary.	Site of low ecological value	No



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HAR1	Harby	Kimberley Lodge, Boyer's Orchard Figures: A19 B36 C19	0.8	No – viewed from access path	None	SSSI Grantham canal, 0.6 km NE. LWS ref 25995 (Mesotrophic grassland) 1 km SW. Nine cLWS the closest is 0.5 km north.	Poor semi-improved grassland, species poor hedgerows with mature trees.	Potential badger, roosting bat (trees), reptile and nesting bird habitat. Potential GCN terrestrial habitat.	Badger survey. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site (to north and east) followed by presence/absence surveys if required. Bat roost assessment of trees, followed by nocturnal surveys where appropriate.	Dependent on results of species surveys. Protect mature trees on boundary. Retain hedgerow.	Site of low ecological value	No
HAR2	Harby	Tythby Farm , Langer Lane Figures: A19 B37 C19	0.5	No - viewed from road.	None	SSSI Grantham canal, 0.6 km NE. LWS ref 25995 (Mesotrophic grassland)0.7 km south. cLWS in 0.1 km north.	A building site. One building retained, others demolished. with an areas of hardstanding and bare ground, Species- poor hedgerows to north and west with immature trees in the northern hedge.	Potential for nesting birds and roosting bats.	Bat roost assessment of buildings, followed by nocturnal surveys where appropriate.	Dependent on results of species surveys. Bat and bird boxes.	Site of low ecological value	No
HAR3	Harby	Kimberley Farm Strathern Road Figures: A19 B38 C19	1.3	No - viewed from south.	None	SSSI ref SK768345 (Grantham canal)0.6 km NE. LWS ref 25995 (Mesotrophic grassland) 1 km SW. Nine cLWS in 1km nearest is 0.5 km north.	Poor semi-improved grassland, species poor hedgerows on all boundaries with ash trees within west and east hedgerows.	Potential badger, roosting bat (trees), reptile and nesting bird habitat. Potential GCN terrestrial habitat.	Badger survey. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site (to north and east) followed by presence/absence surveys if required. Bat roost assessment of trees, followed by nocturnal surveys where appropriate.	Dependent on results of species surveys. Bat and bird boxes. Retain hedgerow.	Site of low ecological value	No



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HAR4	Harby	Colston Lane Figures: A19 B39 C19	0.7	No - viewed from road, field to north- east not seen.	None	SSSI ref SK768345 (Grantham canal) 0.4 km NE. LWS ref 25995. (Mesotrophic grassland) 0.4 km south. Three cLWS within 2km.	Series of farm outbuildings building surrounded by hard standing, species- poor gappy hedge with young trees and a dry ditch adjacent to the roadside hedge. Wide managed grass verge.	Potential badger, roosting bat and barn owl, reptile and nesting bird habitat. Potential GCN terrestrial habitat.	Badger survey. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site (to NW) followed by presence/absence surveys if required. Bat and barn owl roost assessment, followed by nocturnal surveys where appropriate.	Dependent on results of species surveys. Bat and bird boxes.	Site of low ecological value	No
HAR5	Harby	Colston Lane Figures: A19 B40 C19	1.8	None - from aerial imagery	TN 5	SSSI ref SK768345 (Grantham canal) 0.3 km NE. LWS ref 25995 - 0.5 km south. Three cLWS within 2km.	Species poor hedge and dry ditch along the road. Wide managed grass verge Tall ruderals, hedges, a pond and scattered mixed trees. Possible pond located in the middle of the site.	Assessment not possible due to limited access.	Assessment not possible due to limited access.	Dependent on results of habitat and species surveys. Retain and enhance pond.	Site of moderate ecological value , pond present onsite and no access to complete a more thorough assessment.	Unknown
HAR6	Harby	Wharflands Dairy, Colston Lane Figures: A19 B41 C19	3.1	No - viewed from road,	None	SSSI ref SK768345 (Grantham canal) 0.4 km NE. LWS ref 25995 (Mesotrophic grassland) 0.4 km south. cLWS Grantham Canal adjacent to site.	Series of farm outbuildings building surrounded by hard standing in east of site, grassland (un- assessed) in west. Tall unmanaged hedges, mature trees surrounding the site and a broad-leaved woodland along the canal (west). Wide managed grass verge.	Potential badger, roosting bat and barn owl, reptile and nesting bird habitat. Potential GCN terrestrial habitat. Potential habitat for otter along the canal.	Badger Survey, Reptile surveys, Breeding birds. Habitat survey (grassland and trees). Riparian species survey along canal corridor. HSI assessment for GCN of ponds within 500 m of the site (to east) followed by presence/absence surveys if required. Bat and barn owl roost assessment, followed by nocturnal surveys where appropriate.	Dependent on results of further habitat and species surveys. Protect mature trees and woodland. Bat boxes.	Site of high ecological value. Adjacent to canal , a Grand union cLWS, and woodland. The site also has potential to support a range of protected and notable species.	No



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HOS1	Hose	North of Canal Lane Figures: A20 B42 C 20	2.0	No-view from road and path to west	TN 19	cLWS Grantham canal (ref 90608) 0.5 km NW. Five cLWS located within 1 km of the site. The closest being 0.2 km SW (ref 90577, mature tree). Two LWS located off Waltham Lane -1km to NE.	Poor semi-improved grassland, species- poor hedge and tall ruderals. Potential pond in NE corner surrounded by tall ruderals.	Potential badger, reptile and nesting bird habitat. Potential GCN terrestrial and aquatic habitat.	Badger survey. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site (onsite and to north) followed by presence/absence surveys if required.	Dependent on results of further habitat and species surveys.	Site of moderate ecological value. Potential pond present onsite and no access to complete a more thorough assessment.	No
HOS2	Hose	South of Canal Lane and Rear of Rose and Crown Figures: A20 B43 C20	0.6	No – Limited views from public access	None	cLWS Grantham canal (ref 90608) 0.5 km north-west. Five cLWS within 1km the closest being 0.2 km south- west ref 90577 (mature tree).	Poor semi-improved grassland, amenity grassland, species poor hedge with trees, broad-leaved woodland and dense, continuous scrub onsite. Wooden frame structure only within site, attached to farm outbuilding.	Potential badger, roosting bat and barn owl, reptile and nesting bird habitat. Potential GCN terrestrial and aquatic habitat. Habitat suitable for small mammals including hedgehog.	Badger survey. Reptile surveys. Breeding bird surveys. HSI assessment for GCN of ponds within 500 m of the site (within and to south) followed by presence/absence surveys if required. Bat and barn owl roost assessment, followed by nocturnal surveys where appropriate.	Dependent on results of further habitat and species surveys. Provision for nesting bird and bat boxes. Retention / enhancement of the pond. Deadwood piles.	Site of moderate ecological value. Potential pond present onsite and broadleaved- woodland.	No



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HOS3	Hose	Land off Bolton Lane Figures: A20 B44 C20	0.3	No – limited view from footpaths	None	LWS Grantham canal (ref 90608) 0.5 km north-west. Five cLWS within 1 km of the site, the closest being 0.2 km west ref 90577 (mature tree).	Tall ruderals, mature trees, scrub, dry ditch.	Potential habitat for badger, roosting bat and barn owl, reptile and nesting bird habitat. Potential GCN (terrestrial) and small mammals including hedgehog.	Badger survey. Reptile surveys. Breeding bird surveys. HSI assessment for GCN of ponds within 500 m of the site (to south) followed by presence/absence surveys if required. Bat and barn owl roost assessment, followed by nocturnal surveys where appropriate.	Dependent on results of further habitat and species surveys. Provision for nesting bird and bat boxes. Deadwood piles.	Site of moderate ecological value. Potential pond present onsite and broadleaved- woodland.	No
LONG1	Long Clawson	Rear of properties off Melton Road Figures: A21 B45 C21	1.3	Yes (2015) viewed from road in 2016	TN 57	cLWS ref 90568 (mesotrophic grassland) 260 m to west. Two cLWS 0.5 km east, ref 90572 7 90571	Poor semi-improved grassland field, tall ruderals and species poor hedgerow and a pond/wet grassland within (no open surface). Faint ridge and furrow marks.	Badger signs (latrines and paths). Pond may have GCN potential. Some habitat for reptiles.	Badger survey. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site (onsite and surrounding) followed by presence/absence surveys if required.	Dependent on results of species surveys. Retain and enhance pond.	Site of low ecological value	None
LONG2	Long Clawson	Back Lane Figures: A21 B46 C21	0.9	Yes (2015) viewed from public access in 2016	TN 58 TN 59	cLWS ref 90560 (pond) 0.9 north- west. Two cLWS ref 90568 & 90571 (mesotrophic grassland) in 1km km south.	Poor semi-improved grassland field (grazed) with species poor hedgerow boundaries. Pond on south boundary surrounded by scrub.	HSI score for pond 'below average'. Sub- optimal terrestrial habitat for GCN and reptiles.	Badger survey. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site (onsite and surrounding) followed by presence/absence surveys if required. Daytime bat assessment (trees).	Dependent on results of species surveys. Retain and enhance pond.	Site of low ecological value	None



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LONG3	Long Clawson	Waltham Lane Figures: A21 B47 C21	2.2	Yes (2015) viewed from road in 2016	TN 63 TN 64 TN 65 TN 66	C LWS ref 90560 (pond) 0.9 km north- west and cLWS 1 km south.	Mostly buildings. Numerous mature ash trees, extensive areas of scrub/tall ruderal vegetation. A drain to the east and a pond in the S.W. of the site. Active allotments to the west boundary. Species poor hedgerow to the west; other boundaries not accessible. Stream to east not viewed.	Pond (not accessed) Suitable terrestrial habitat for GCN and reptiles. Bat roost potential (BRP) in mature trees (low- moderate) and some buildings (high BRP). Previous bat roost recorded in the vicinity. Potential riparian animal habitat to east.	Badger survey. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site (onsite and surrounding) followed by presence/absence surveys if required. Riparian animal (water vole and White-clawed crayfish) survey.	Dependent on results of species surveys. Retain and enhance pond. Retain and protect mature trees.	Site of moderate ecological value. Mosaic of habitats present have potential to support numerous species of fauna.	None
LONG4	Long Clawson	Sand Pit Lane Figures: A21 B48 C21	2.6	No access granted. Viewed from the road. Assessment considered adequate.	None	cLWS Ref 90571 (mesotrophic grassland) adjacent to the south. cLWS ref 90568 (mesotrophic grassland) 0.9 km to west. cLWS 0.1 km south and cLWS ref 90560 (pond) 1 km to north- east.	Poor semi-improved grassland field (grazed) with species poor hedgerow boundaries.	Potential badger, reptile and nesting bird habitat. Potential GCN terrestrial and aquatic habitat.	Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site (onsite and surrounding) followed by presence/absence surveys if required.	Dependent on results of species surveys.	Site of low ecological value	None



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LONG5	Long Clawson	Canal Lane, Canal Farm Figures: A21 B49 C21	1.6	Yes (2015) viewed from road in 2016	TN69	cLWS ref 90560 (pond) 230 m to N.W). cLWS 0.8 km to south and 0.9 km to south-east.	Working dairy farm buildings, slurry pits, tall ruderal and scrub vegetation, improved grassland and species poor hedgerows.	Some buildings have bat roost potential. Terrestrial habitat for GCN and reptiles.	Badger survey. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site (onsite and surrounding) followed by presence/absence surveys if required. Bat and nesting bird (barn owl) roost assessment, followed by nocturnal surveys where appropriate.	Dependent on results of species surveys.	Site of low ecological value	None
MEL1	Melton Mowbray	Figures: A22 B50 C22	6.4	No- viewed from road.	None	LWS located 0.5 km north- west ref 45397 (hedgerow). Two candidate LWS located 0.3 km north- west ref 90958 and 90959 (mature trees).	Poor semi-improved grassland surrounded by hedges with mature trees and lines of trees. A brook flows south across the site and along the SE boundary. Several ponds within and adjacent to the site.	Potential badger, reptile and nesting bird habitat. Potential habitat for amphibians and riparian species e.g. water vole and crayfish.	Badger Survey. Reptile surveys. Breeding bird survey. Bat activity surveys across the site and around Sysonby Lodge. Hedgerow assessment. Riparian habitat assessment followed by appropriate protected species survey e.g. water vole. HSI assessment for GCN of ponds within 500 m of the site (onsite and surrounding) followed by presence/absence surveys if required. Bat roost and nesting bird assessment at trees, followed by nocturnal surveys where appropriate.	Dependent on results of species surveys. Retain and enhance pond and brook. Maintain wildlife corridors - through the site along the brook and to the woodland and along the SW boundary. Retain and protect mature trees.	Site of moderate ecological value. Mosaic of habitats present have potential to support numerous species of fauna. Water courses within and adjacent to the site. Woodland abut the southern site boundary	None



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MEL2	Melton Mowbray	St Edward School and grounds Figures: A22 B51 C22	5.6	Yes	None	LWS located 0.6 km north ref 72565 (river). SSSI River eye ref SK7821850 located 0.7 km north-east.	Former school with several buildings surrounded by areas of hard standing, shrubs, amenity grassland and playing field. Line of trees along and to rear of properties off Burton Road.	Known bat roosts at several of the buildings onsite. Several buildings and a trees with bat roost potential Evidence of fox onsite in the woodland.	Update bat roost and nesting bird assessment at buildings and tree, followed by nocturnal surveys where appropriate. Natural England EPS license required, including alternative provision for known bat roosts.	Provision for foraging bats and birds. Retain linear tree line and woodland on eastern boundary. Maintain dark corridor for bats around the site.	Site of moderate ecological value. Known bat roost present in several buildings and a small woodland in the NE corner of the site.	
MEL3	Melton Mowbray	St Mary's Hospital Figures: A22 B52 C22	1.1	Yes	None	LWS located 0.4 km south ref 72565 (river). SSSI River eye ref SK7821850 located 0.6 km south-east.	Former hospital buildings surrounded by hard standing and amenity grassland.	Almost all the buildings onsite have some bat roost potential.	Bat roost and nesting bird assessment at buildings, followed by nocturnal surveys where appropriate.	Dependent on results of species surveys. Provision for roosting bats and nesting birds to be provided.	Site of low ecological value	None
MEL4	Melton Mowbray	Figures: A22 B53 C22	2.1	No – viewed from road	None	LWS located 0.1 km north ref 45397 (hedgerow). Two candidate LWS located 0.2 km east ref 90958 and 90959 (mature trees).	Heavily grazed semi- improved grassland with hedge on east boundary and lines of planted trees and scrub along the road and rear of properties off Southwell Close.	Limited habitat potential for badger and reptile. Habitat suitable for nesting bird habitat and amphibian onsite including a pond to 200m west. Scrub suitable for hedgehog.	Badger survey. Habitat assessment for reptile and surveys if site is considered suitable. Hedgerow assessment (west). HSI assessment for GCN of ponds within 500 m of the site (onsite and surrounding) followed by presence/absence surveys if required.	Dependent on results of species surveys. Retain and protect habitats along the boundary of the site.	Site of low ecological value	None



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MEL5	Melton Mowbray	Figures: A22 B54 C22	3.7	No viewed from road	None	LWS located 0.2 km north ref 45397 (hedgerow). Two c LWS located 0.2 km east ref 90958 and 90959 (mature tree).	Heavily grazed semi- improved grassland with a line of planted trees and scrub along the road northern site boundary.		Badger survey. Habitat assessment for reptile and surveys if site is considered suitable.	Dependent on results of species surveys. Retain and protect trees and scrub along the boundary of the site.	Site of low ecological value	None
MEL6	Melton Mowbray	Kirby Lane Figures: A22 B55 C22	0.5	Yes	TN 14 TN 15 TN 16 TN 17	LWS ref 26149 (Mesotrophic grassland) located 0.6 km north-west. Candidate LWS ref 91186 (hedgerow) located 0.1 km west.	Improved / amenity grassland former paddocks and farm with stables. Amenity grass and shrubs in garden. Few forbs present in the road side verge. Several ash trees and a sycamore on the boundary and a walnut tree in centre of the paddock. Semi-mature broad leaved woodland along N and E boundary.	Farmhouse and Annex building assessed with moderate – high bat roost potential. Stables assessed with low – moderate bat roost potential. Anecdotal evidence of swallows and swifts in stables.	Day time bat and bird assessment of mature trees and buildings followed by nocturnal surveys for bats where appropriate. Badger survey in woodland. HSI assessment for GCN of ponds within 500 m (north) of the site followed by presence/absence surveys if required.	Dependent on results of species surveys. Protect the roots of the retained trees onsite and in adjacent woodland. Provision for swallows and swifts.	Site of moderate ecological value. Site adjacent to woodland and considered likely to support roosting bats.	None
MEL7	Melton Mowbray	Scalford Rd, Silverdale Building Figures: A22 B56 C22	0.4	Yes	TN 2 TN 3 TN 4	LWS Ref 80080 (mesotrophic grassland and lake) 0.7 km north-east.	Building surrounded by hard standing and amenity grassland with mature trees. Species poor hedge along the road, small patch of scrub.	Habitat suitable to support hedgehog, roosting bats and nesting birds.	Daytime assessment of buildings and trees for nesting birds and roosting bats.	Dependent on results of species surveys. Provision for nest boxes and bat bricks/boxes.	Site of low ecological value. Assuming the mature trees can be retaining.	Potential veteran trees Red wood and willows See target notes



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MEL8	Melton Mowbray	Scalford Rd Allotments Figures: A22 B57 C22	1.1	Yes – but no access through dense scrub.	TN 10	LWS Ref 80080 (mesotrophic grassland and lake) 0.6 km east.	Former allotments with dense scrub, young trees, and sheds. Potential traditional orchard.	Potential badger, hedgehog, reptile, foraging bats and nesting bird habitat.	Badger survey. Reptile survey. Bat activity transects. Breeding bird surveys.	Dependent on results of species surveys. Provision for nest boxes and bat bricks/boxes.	Site of moderate ecological value. Site is densely covered in scrub limiting the surveyors access, potential to support various protection and notable species and a traditional orchard is present onsite.	Potential priority habitat – Traditional Orchard onsite
MEL9	Melton Mowbray	Dee Close Figures: A22 B58 C22	0.4	Yes	None	LWS located 0.5 km south ref 72565 (river). SSSI River eye ref SK7821850 located 0.6 km south-east.	Stock yard, all hard standing with a building in good condition onsite.	None	None	None	Site of low ecological value.	None
MEL10	Melton Mowbray	Burton Street Figures: A22 B59 C22	0.2	No- view from road	None	LWS located 0.5 km south- east ref 72565 (river). SSSI River eye ref SK7821850 located 0.9 km south-east.	Several buildings with associated hard standing. Some scattered scrub and tall ruderal also present.	'Low-Moderate; potential for roosting bats. Potential for nesting birds.	Daytime assessment of buildings for nesting birds and roosting bats.	Dependent on results of species surveys. Provision for nest boxes and bat bricks/boxes.	Site of low ecological value.	None



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MEL11	Melton Mowbray	Snowhill Figures: A22 B60 C22	0.5	Yes	TN 11 TN 12 TN 13	LWS Melton Country Park ref 80080 0.4 km to the north.	Mixed mature woodland, amenity grassland , pond and buildings with hard standing.	Anecdotal evidence of hedgehog and common frog. Habitat suitable to support reptile (grass and shrub cuttings). Pond HSI score `Poor` due to the presence of goldfish. Moderate - High bat roost potential in buildings.	Reptile surveys. Update HSI assessment for GCN of ponds within 500 m of the site followed by presence / absence surveys if required. Daytime assessment of trees and buildings for nesting birds and roosting bats.	Dependent on results of species surveys. Provision for nest boxes and bat bricks/boxes. Retention of woodland edge. Provision for species such as hedgehog and frog onsite.	Site of moderate ecological value. Woodland edge onsite and potential to support a range of protected species.	None
MEL12	Melton Mowbray	Dalby Road, B6047 Figures: A22 B61 C22	0.7	Yes	TN 1 TN 18	LWS located 0.9 km north- east ref 72565 (river). LWS ref 26149 (Mesotrophic grassland) located 0.7 km west.	Grassland managed for amenity (lawn) in the north and poor semi improved grassland in south. The site is divided by a line of trees with a wet pond (`poor` HSI score). Small orchard containing a walnut and five apple trees. Site surrounded by species poor hedges with encroaching scrub and tall ruderals.	Anecdotal evidence of fox in scrub. No evidence of GCN from previous surveys of pond onsite or adjacent garden pond. Negligible bat roost potential in trees. Site is suitable for foraging bats. Potential for badger, nesting birds and common reptiles.	Badger/ Fox surveys. Reptile surveys. Bat and breeding bird activity transects.	Dependent on results of species surveys. Provision for nest boxes and bat bricks/boxes. Retention of replacement planting for the orchard and other trees. Enhancement (removal of some shading) or creation of replacement pond.	Site of low ecological value	None



Allocation/ Reserve Site Name	Settlement	Location & Map Number	Area (Ha)	Accessibility	Target Notes	Designated Sites	Habitats and Flora	Potential Protected & Notable Fauna	Further Survey Recommendations	Enhancement Recommendations	Ecological Assessment	pLWS Description
MEL13	Melton Mowbray	King's Road Snow Hill Figures: A22 B62 C22	10	Yes	TN 71 TN 72 TN 73 TN 74	LWS located 0.6 km south- east ref 72565 (river). SSSI River eye ref SK7821850 located 0.9 km south-east. LWS Melton Country Park ref 80080 0.4 km to the north	Active factory buildings surrounded by hardstanding Disused railway line with scrub and woodland cover. Scalford Brook (canalised) forms the east boundary.	Buildings have bat roost potential. Disused railway has terrestrial habitat for GCN (LWS 80080) and reptiles (records nearby). Scalford Brook sub-optimal for otter, water vole and notable birds (LWS 80080).	Badger survey. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required. Bat assessment of buildings.	Retain scrub on railway embankments. Otherwise dependent on results of species surveys	Site of low ecological value	None
OLD1	Old Dalby	North Lodge Farm Figures: A23 B63 C23	1.6		None	LWS ref 25990, 50821, 80007 and 25992 (Mesotrophic grasslands) located <1 km south.	Improved grassland with fenced boundaries and mature trees.				Site of low ecological value	
OLD2	Old Dalby	Station Lane Figures: A23 B64 C23	0.6	No – view from road	None	LWS ref 25990, 50821, 80007 and 25992 (Mesotrophic grasslands) located 0.5 km south. LWS ref 91203 (Mesotrophic grassland) located 0.7 km north-east.	Poor semi-improved grassland surrounded by species poor hedges. Encroaching scrub and tall ruderal on eastern boundary.	Habitat suitable to support foraging badger , reptile and amphibians Ditch on western boundary not visible.	Badger surveys. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required.	Dependent on results of species surveys.	Site of low ecological value	No



Allocation/ Reserve Site Name	Settlement	Location & Map Number	Area (Ha)	Accessibility	Target Notes	Designated Sites	Habitats and Flora	Potential Protected & Notable Fauna	Further Survey Recommendations	Enhancement Recommendations	Ecological Assessment	pLWS Description
OLD3	Old Dalby	Hollow Cottage , Longcliffe Hill Figures: A23 B65 C23	0.9	No – view from road	None	LWS ref 25990, 50821, 80007 and 25992 (Mesotrophic grasslands) located 1 km south.	Poor semi-improved grassland surrounded by species poor hedges. Rundle Beck on northern boundary.	Habitat suitable to support foraging badger , reptile and amphibians Potential ponds 175m SW and 200m NE of site.	Badger surveys. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required.	Dependent on results of species surveys. Tree root protection along adjacent woodland.	Site of moderate ecological value. Site abuts a woodland and half the site could not be viewed from the road.	No
SOM1	Somerby	Oakham Road Figures: A24 B66 C24	1.1	Yes	TN 76 TN 77	Candidate LWS ref 90719 (pond) 130m east. LWS ref 54196 (mesotrophic grassland) 300m south.	Poor semi-improved grassland field with species poor hedgerows on north, east and west boundaries. Dry pond at south-east corner and second pond adjacent outside the site. Mature ash and oak trees on north and west boundaries.	Dry pond and terrestrial habitat has GCN potential (previous records for the species). Sub-optimal reptile habitat. Trees - Bat roost potential (low-moderate) and bat commuting/ foraging habitat along hedgerows.	Badger surveys. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required. Daytime assessment of trees for nesting birds and roosting bats.	Dependent on results of species surveys. Bat and bird boxes.	Site of moderate ecological value. Trees with bat roost potential and pond with GCN records	None
SOM2	Somerby	Manor Lane – High Street Figures: A24 B67 C24	2.2	No. Viewed from Road	None	Two LWS ref 26152 & 26153 (Mesotrophic grassland) located 0.5 km west & north. cLWS ref 91370 (Mesotrophic grassland) located 0.4 km north.	Amenity grassland to the north-east, Poor-semi improved grassland in the middle and east of the site. Limited access to assess hedges. Several mature trees on the field boundaries and woodland to the east. A building visible from aerial imagery, not seen.	Habitat suitable to support foraging badger , reptile, roosting and foraging bats, nesting birds and amphibians. Potential pond located 150m east of site.	Badger surveys. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required. Daytime assessment of trees and building for nesting birds and roosting bats.	Dependent on results of species surveys. Protect woodland to east and minimize lighting this habitat. Bat and bird boxes.	Site of moderate ecological value. Woodland to the east and limes access to the site to assess hedges and grassland.	



Allocation/ Reserve Site Name	Settlement	Location & Map Number	Area (Ha)	Accessibility	Target Notes	Designated Sites	Habitats and Flora	Potential Protected & Notable Fauna	Further Survey Recommendations	Enhancement Recommendations	Ecological Assessment	pLWS Description
SOM3	Somerby	Borough Road Figures: A24 B68 C24	1.3	No. Viewed from public access only. Assessment considered adequate.	TN 75	LWS ref 26153 (mesotrophic grassland) 0.4 km to NE. LWS ref 26152 (mesotrophic grassland) 0.3 km west. cLWS ref 91370 (mesotrophic grassland) located 0.4 km NE.	Poor semi-improved grassland field (grazed) with fence and species poor hedgerow boundaries. Mature trees on west boundary.	Habitat suitable to support reptiles and amphibians. Foraging habitat for badger. Trees on west boundary may have bat roost potential. No pond shown on maps within 500m of the site.	Badger surveys. Reptile surveys. Daytime assessment of trees for nesting birds and roosting bats.	Dependent on results of species surveys. Retain and protect trees. Bat and bird boxes.	Site of low ecological value	None
STAT1	Stathern	Point Farm Figures: A25 B69 C25	2.0	No – view from Main Street only. Aerial image used.	None	cLWS ref 90472 (mature trees) located 0.3 km west. Series of LWS & cLWS 0.5 km SE, incl. woodland, grassland and road verges.	Poor semi-improved grassland bounded by species poor hedges. Farm building in north of site. Rundle Beck on northern boundary.	Habitat suitable to support foraging badger , reptile and amphibians. Pond located to south of site.	Phase 1 Habitat Survey Badger surveys. Reptile surveys. Water vole survey. Bat roost assessment of trees and building. HSI assessment for GCN of ponds within 500 m of the site (south) followed by presence/absence surveys if required.	Dependent on results of species surveys. Retain and protect trees.	Site of low ecological value	No
STAT2	Stathern	Harby Lane Figures: A25 B70 C25	0.7	No – view from road	None	cLWS ref 90472 (mature trees) located 0.1 km south. Series of LWS & cLWS 0.8 km SE, incl. woodland, grassland and road verges.	Poor semi-improved grassland bounded by species poor hedges and trees on the boundary. No access to assess pond onsite.	Habitat suitable to support foraging badger , roosting bats (tree), nesting birds reptile and amphibians. Potential pond located onsite and to east of site.	Phase 1 Habitat Survey Badger surveys. Reptile surveys. Hedgerow assessment (west). Bat roost assessment of trees and building. HSI assessment for GCN of ponds within 500 m of the site (south) followed by presence/absence surveys if required.	Dependent on results of species surveys. Retain and protect trees.	Site of low ecological value	No



Allocation/ Reserve Site Name	Settlement	Location & Map Number	Area (Ha)	Accessibility	Target Notes	Designated Sites	Habitats and Flora	Potential Protected & Notable Fauna	Further Survey Recommendations	Enhancement Recommendations	Ecological Assessment	pLWS Description
THOR1	Thorpe Arnold	A607, north of cemetery Figures: A26 B71 C26	1.1	No – viewed from adjacent land	None	LWS ref 45396 (wet grassland) located 0.5 km west.	Poor semi-improved grassland bounded by species poor hedges. Eastern hedge is very gappy.	Habitat suitable to support foraging badger, reptile and amphibians Potential pond located 250m E of site.	Badger surveys. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site followed by presence/absence surveys if required.	Dependent on results of species surveys. Potential offsite enhancement opportunities in woodlands to the west of the site.	Site of low ecological value	No
THOR2	Thorpe Arnold	A607 north of Home Farm Figures: A26 B72 C26	2.0	No – viewed from footpath	None	LWS ref 45396 (wet grassland) 0.6 km south- west.	Grazed poor semi- improved grassland with species poor hedges, managed along the road. Scattered trees in field.	Habitat suitable to support foraging badger, reptile and barn owl. Limited potential for foraging bats.	Badger surveys. Reptile surveys. Bat roost assessment of trees.	Dependent on results of species surveys. Tree root protection around retained trees.	Site of low ecological value	
WAL1	Waltham on the Wolds	High Street, Figures: A27 B73 C27	0.7	Access restricted by herras fencing. View from road. Aerial photography used.	None	LWS ref 28467 (mesotrophic grassland) located 0.5 km east. SSSI Stonesby quarry ref SK812251 located 0.7 km east.	Poor semi-improved grassland with tall ruderal and dense patches of scrub surrounded by species poor hedgerow with trees.	Suitable terrestrial habitat for GCN and reptiles. Habitat for nesting birds and badger.	Badger surveys. Reptile surveys. Breeding bird surveys. HSI assessment for GCN of ponds within 500 m (south) of the site followed by presence/absence surveys if required.	Dependent on results of species surveys. Tree root protection around retained trees.	Site of low ecological value	None



Allocation/ Reserve Site Name	Settlement	Location & Map Number	Area (Ha)	Accessibility	Target Notes	Designated Sites	Habitats and Flora	Potential Protected & Notable Fauna	Further Survey Recommendations	Enhancement Recommendations	Ecological Assessment	pLWS Description
WAL2	Waltham on the Wolds	Melton Road, Figures: A27 B74 C27	4.1	Yes	None	LWS ref 28207 (mesotrophic grassland) located 0.6 km west. SSSI Stonesby quarry ref SK812251 located 0.9 km north-east.	Poor semi-improved grassland, young plantation broad- leaved woodland and species poor hedgerow.	Suitable terrestrial habitat for GCN and reptiles. Habitat for nesting birds and badger. Trees on west boundary may have bat roost potential.	Badger surveys. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site (NE and south) followed by presence/absence surveys if required.	Dependent on results of species surveys. Retain woodland on western boundary.	Assuming the plantation woodland on western boundary, is retained - site of low ecological value	None
WAL3	Waltham on the Wolds	Mill Lane, Figures: A27 B75 C27	9.0	Viewed from public access only. Assessment considered adequate.	TN 78	LWS ref 28467 (mesotrophic grassland) located 0.4 km north-east. SSSI Stonesby quarry ref SK812251 located 0.7 km north-east. cLWS Hedge along Stonesby Road 20m east.	Partial access only. Arable, poor semi- improved grassland, species poor hedgerows, mature trees and dry pond.	Suitable terrestrial habitat for amphibians and reptiles. Habitat for nesting birds and badger.	Badger surveys. Reptile surveys. Breeding bird surveys. HSI assessment for GCN of ponds within 500 m of the site (onsite and to south) followed by presence/absence surveys if required.	Dependent on results of species surveys.	Site of low ecological value	None
WYM1	Wyndham	Glebe Road Figures: A28 B76 C28	0.3	Accessed in 2015. Viewed from public access only in 2016.	None	None	Grazed poor semi- improved grassland with gappy unmanaged hedge and wide grass verge along Glebe Road. Site is adjacent to a small woodland.	Suitable habitat for amphibians, reptiles, nesting birds, foraging barn owl and badger (on boundary). Desk study record of reptile nearby.	Badger surveys. Reptile surveys/avoidance measures. Hedgerow and grass verge survey. HSI assessment for GCN of ponds within 500 m of the site (to south-east and west) followed by presence/absence surveys if required.	Dependent on results of species surveys. Enhance wildlife connectivity through tree planting around the site boundary.	Site of low ecological value	



Allocation/ Reserve Site Name	Settlement	Location & Map Number	Area (Ha)	Accessibility	Target Notes	Designated Sites	Habitats and Flora	Potential Protected & Notable Fauna	Further Survey Recommendations	Enhancement Recommendations	Ecological Assessment	pLWS Description
WYM2	Wyndham	Butt Lane / Station Rd Figures: A28 B77 C 28	0.4	Accessed in 2015. Viewed from public access only in 2016.	None	LWS ref 28477 and 28478 (Stream and mesotrophic grassland) located 0.7 km east.	Heavily grazed poor semi- improved grassland, with managed species poor hedges. A single storey derelict brick building is present onsite. Lines of trees/woodland and scrub are located adjacent to the site.	Suitable habitat for amphibians, reptiles, nesting birds , foraging barn owl, bats and badger (on boundary). Building – has negligible – low bat roost potential Desk study record of notable bird and bat nearby.	Badger surveys. Reptile surveys Bat and barn owl (nesting bird) survey of building. HSI assessment for GCN of ponds within 500 m of the site (potential pond in woodland east of site and to north) followed by presence/absence surveys if required.	Dependent on results of species surveys. Enhance wildlife connectivity through tree planting along the western boundary and north boundary (disused railway).	Assuming the trees located adjacent to the site are protected. Site of low ecological value	
WYM3	Wyndham	Brick Yard Lane Figures: A28 B78 C28	4.0	Accessed in 2015. Viewed from public access only in 2016.	None	LWS ref 28477 and 28478 (Stream and mesotrophic grassland) located 0.9 km east.	Poor semi-improved grassland surrounded by established species poor hedges and trees. Tall ruderal and scrub also present onsite.	Suitable habitat for amphibians, reptiles, nesting birds , foraging barn owl, bats and badger (on boundary).	Badger surveys. Reptile surveys. HSI assessment for GCN of ponds within 500 m of the site (to north-east) followed by presence/absence surveys if required.	Dependent on results of species surveys. Retain hedgerow and trees on boundary.	Site of low ecological value	



APPENDIX K – Allocation/Reserve Site Target Notes



Appendix K, Target Notes for the Allocation/Reserve Sites

Asfordby			
Target Note No.	Site Reference	Grid Reference	Description
TN83	ASF3	SK70331 19293	Mature beech tree overhanging the site.
Asfordby Hill			
Target Note No.	Site Reference	Grid Reference	Description
TN47	ASFH2 (MBC/113/13)	SK 72434 18893	Underground structure with overlying scrub. Potential bat hibernacula)
TN 6	ASFH3	SK 72509 19918	Lichen (<i>Cladonia</i> sp), moss and fungi
Bottesford			
Target Note No.	Site Reference	Grid Reference	Description
TN49	BOT4	SK 80291 39491	Dying mature ash tree with bat roost potential (High)
TN50	BOT4	SK 80258 39334	River Devon. Otter and water vole potential
TN52	BOT4	SK 80427 39435	Field maple tree with bat roost potential (High)
TN 7	BOT3	SK 81499 38805	Japanese Knotweed (Schedule 9 W&CAct 1981, non native and invasive species)
Frisby on the Wreake			
Target Note No.	Site Reference	Grid Reference	Description
TN84	FRIS1	SK 69997 17630	Hollow ash tree with potential for roosting bats
TN85	FRIS1	SK 69992 17657	Ash tree with rot holes suitable for roosting bats



TN86	FRIS1	SK 69964 17847	Ash tree with rot holes suitable for roosting bats
TN 8	FRIS4	SK 69265 17560	Mature tree (viewed from road) – to be assessed for bat roost potential
TN 9	FRIS4	SK 69417 17585	Potential abandoned orchard, several fruit trees noted. Area over grown with tall ruderal.
Harby			
Target Note No.	Site Reference	Grid Reference	Description
TN5	HAR5	SK SK 74140 31208	Pond
Hose			
Target Note No.	Site Reference	Grid Reference	Description
TN 19	HOS1	SK 73712 29616	Dry pond
Long Clawson			
Target Note No.	Site Reference	Grid Reference	Description
TN 57	LONG1	SK 71833 26694	Pond
TN 58	LONG2	SK 72467 27136	Pond
TN 59	LONG2	SK 72489 27234	Mature trees with potential features for roosting bats.
TN 63	LONG3	SK 73130 27460	Mammal paths
TN 64	LONG3	SK 73020 27359	Mature trees with potential features for roosting bats.
TN 65	LONG3	SK 73031 27387	Pond with GCN potential
TN 66	LONG3	SK 73023 27444	Occupied house with bat roost potential



TN69	LONG5	SK 72938 27606	Farm buildings with bat roost potential
Melton Mowbray			
Target Note No.	Site Reference	Grid Reference	Description
TN 14	MEL6	SK 74260 17499	Mature Sycamore tree and mature Walnut tree (retain)
TN 15	MEL6	SK 74308 17509	Mature Ash tree
TN 16	MEL6	SK 74321 17511	Mature Ash tree
TN 17	MEL6	SK 74325 17527	Mature Ash tree, previously struck by lightning
TN 2	MEL7	SK 75214 20097	Mature red wood veteran status potential
TN 3	MEL7	SK 75194 20095	Mature red wood veteran status potential
TN 4	MEL7	SK 75253 20079	Mature Willow tree
TN 10	MEL8	SK 75055 20411	Traditional orchard, five apple trees and a walnut tree.
TN 11	MEL11	SK 75478 19681	Pond
TN 12	MEL11	SK 75455 19639	Potential reptile refugia
TN13	MEL11	SK 75447 19672	Potential reptile refugia
TN1	MEL12	SK 74956 18417	Fox Den
TN18	MEL12	SK 75043 18384	Traditional Orchard
TN71	MEL13	SK 75700 19515	Factory building with bat roost potential
TN72,	MEL13	SK 75763 19595	Factory building with bat roost potential
TN73,	MEL13	SK 75689 19459	Scalford Brook – otter, water vole and white-clawed crayfish potential



TN74	MEL13	SK 75759 19740	Disused railway embankments with potential to support protected species including badgers and herpetofauna
Somerby			
Target Note No.	Site Reference	Grid Reference	Description
TN 76	SOM1	SK 78275 10339	Mature ash and oak trees on the north and west site boundaries with bat roost potential
TN 77	SOM1	SK 78354 10218	Pond with GCN potential
TN 75	SOM3	SK 77393 10661	Mature ash trees with bat roost potential
Waltham on the Wolds			
Target Note No.	Site Reference	Grid Reference	Description
TN 78	WAL3	SK 80266 24736	Dry pond with mature willow tree